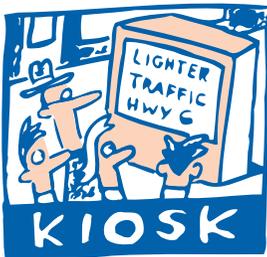


Choosing the Route to Traveler Information Systems Deployment



Decision Factors for Creating
Public-Private Business Plans

An Action Guide



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Foreword

The balance of public and private sector roles and responsibilities has been a principal topic of debate within the Advanced Traveler Information Systems Committee of the Intelligent Transportation Society of America (ITS America) for many years.

In February 1994, the ATIS Committee sponsored its first major effort in this area, a workshop on *Service Delivery Models for ATIS*. The process revealed a solid consensus on the basic functions and information flows involved in collecting, consolidating or fusing, and communicating traveler information.

In 1995 and 1996, as the National ITS Architecture took shape, the concept of information service providers (ISP) as consolidators and communicators of traveler information emerged.

By 1997, it became clear that public officials who were leading efforts to interact with the private sector to provide ATIS services in their region or state were doing so without much assistance, save the personal contacts they may have had with officials from other areas of the country who were grappling with the same issues.

What was missing was a collected body of information that would present the entire set of issues that needs to be considered when agencies plan their role in ATIS. *Choosing the Route to Traveler Information Systems Deployment* is meant to serve as that body of information. This Action Guide is a précis of that document, which was written by Mark Hallenbeck and the staff of the Washington State Transportation Center.

Much of the raw material for the report was derived from the ATIS Committee's October 1997 workshop, *Business Models for Advanced Traveler Information Systems Deployment*. A steering committee of approximately 50 volunteers reviewed drafts of the report and contributed to its completion. Funding and participation by the U.S. Department of Transportation made this effort possible. In particular, George Schoene of the Federal Highway Administration, Secretary to the ATIS Committee, and Mac Lister of the ITS Joint Program Office, the JPO's liaison to the ATIS Committee, provided essential support, guidance, and assistance.

There are probably more factors to be considered, some knowledgeable people we neglected to consult, and some important business and contracting models that were overlooked. However, these documents represent the best information presently available, and we are confident that anyone who reads them will benefit from the experience.

Sorting out the roles, responsibilities and relationships of the public and private sectors is the key challenge to successfully launching Advanced Traveler Information Systems (ATIS).

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Why Advanced Traveler Information Systems?

Congestion is building on the nation's streets and highways. And experts predict it will get worse.

At the same time, there has never been a better opportunity to understand traffic and transit conditions, present multimodal options to travelers and improve the operation of transportation networks. And more people than ever have access to the tools that deliver this information.

The tools to accomplish this synthesis are called Advanced Traveler Information Systems (ATIS).

Simply put, ATIS is about providing citizens, businesses and commercial carriers with the right information at the right time to improve the quality and convenience of their trip and the overall performance of the transportation system.

A Need for Information

From a technical standpoint, ATIS has three steps: **collecting** data (e.g., using loop and other detection systems as well as cameras), **consolidating** that information then **communicating** the “unified” information to various agencies and/or the public.

Vendors already are providing devices that can deliver ATIS to people in vehicles, offices and homes. Travelers are using palm top devices for scheduling or they are reading displays at bus shelters and on free-standing kiosks.

It is important to remember that the exact mix of technologies for **collecting**, **consolidating** and **communicating** information depends on your region’s unique needs and, ultimately, on the broader trends in the information services industry.

But ATIS always has the potential to involve the public and private sectors and consumers. Usually, this requires the use of partnerships, including public-public and public-private efforts. In most instances, the public sector has the lead in determining the most effective partnership.

Where Do We Start?

Start by defining the primary purpose of your ATIS.

Is it intended to help agency professionals better manage the elements of the overall transportation system?

Or is it intended to provide the public with new sources of information to increase their options when traveling?

In most cases, both approaches play a role in developing an ATIS. The primary emphasis, however, will determine its overall design and operation; you cannot expect to optimize both (see the Issues section, p. 15).

The Basics of a Business Plan

Creating a business plan will sort out the relationships needed to successfully deploy an ATIS.

The business plan should:

- define the target market,
- define the information to be collected,
- determine how to distribute the consolidated information,
- show where the funding will come from and how it will be used,
- estimate the costs of doing business.

The business plan also should:

- describe the business structure, including the various roles, responsibilities and relationships to be considered,
- list the goals and risks/rewards in the market, and
- prove that a good business opportunity exists.

The business plan also must be flexible and account for your region's changing needs and future technologies.

But Who Pays?

What everyone immediately wants to know is how to pay for the collecting, consolidating and communicating of ATIS-related data. Especially since the ATIS market still is maturing and it is not known what the ultimate size or worth will be.

In the near term, government funding may be necessary to deploy and operate ATIS.

But in the foreseeable future, the industry is optimistic that private resources will be able to support these services.

In the meantime, the key is to start collecting, consolidating and communicating the information these services require.



Your ATIS Framework

As of mid-1998, at least 15 major U.S. regional sites have Advanced Traveler Information Systems applications in place (see Map, p. 78).

And each has done it differently. That is the point.

You choose what ATIS features and structures are best for your region and those who travel it. The business plan is the tool for making those choices.

Ideally, ATIS components should be included in the region's transportation plan. This ensures they will be coordinated with other intelligent transportation systems (ITS) activities taking place in the region, and the benefits of all ITS components are compounded when they reach across jurisdictions.

Developing an ATIS business plan requires making trade-offs between the competing goals and objectives of the different participants.

It is an iterative process.

Deciding on the primary purpose of your region's ATIS deployment is the fundamental issue.

Will you deploy ATIS to manage the infrastructure of the entire transportation system better? Or will ATIS be used to provide travelers with new multimodal information so they can make better choices? Most ATIS efforts want to accomplish both these goals. But the two goals involve different emphases.

For instance, when ATIS is focused on infrastructure and operations management, the public sector will provide significantly more financial and managerial input. Also, this approach means the public sector will fund the creation and, in some cases, the operation of services that meet public policy goals but have only limited commercial appeal.

On the other hand, a commercially oriented approach will center on delivering ATIS to the largest number of consumers. But this approach may focus on fewer modes of travel at the expense of some policy goals, such as increasing transit ridership. Consumer electronics manufacturers are more likely to support this approach than the public-policy approach.

Issues - Overview

As you explore an ATIS, you will find there are several intertwined issues. It is best to tackle them simultaneously. They are:

- the role of the ATIS,
- leadership of the effort,
- prospective participants and their roles,
- perspectives of the ATIS participants,
- coordination among participants,
- infrastructure (availability, planned facilities and needs),
- revenue (needs and sources),
- legal and administrative issues, and
- structuring public-private partnerships.

Two leadership roles are involved. The first is a public-sector leader. The second is the primary operator of the ATIS data source, which can be filled by either the public or private sectors. Both roles require strong, talented and committed individuals to create, adopt and implement a successful ATIS business plan and subsequent deployment.

The Public-Sector Leader: This agency, acting as an “arranger,” is the primary facilitator of the ATIS efforts. This leadership role does not require that this agency actually provide ATIS products or services. But the role of the public-sector traveler information leader should fall under an agency’s existing financial, legal or political mandate.

The lead agency defines the problems and assembles the resources that others in the public and private sectors use to solve regional problems. Simply put, the lead agency functions as a broker rather than a service provider. To date, state departments of transportation and metropolitan planning organizations most commonly are the public-sector leaders of ATIS efforts.

Sometimes, however, the private sector already has begun providing some level of ATIS information in your region. As a public sector leader emerges, it must recognize that its activities *will* impact the existing providers and that impact needs to be considered as you move forward.

The Lead ATIS Operator: This organization, from either the public or private sector, is in charge of the day-to-day implementation and operation of the overall ATIS effort. Choosing the right organization is one of the most challenging tasks for public agencies. It is a matter of balancing advantages, disadvantages and alternative strategies.

Some general advantages of having a private sector company be the lead ATIS operator are: They have more incentives and a better business culture for attracting new firms as partners and customers who will use the service. They tend to be more inventive at resolving problems and making technical advances.

Some general advantages of having a public agency be the lead ATIS operator are: They are more secure financially — there is little chance of a state DOT going bankrupt. They control the vast majority of the transportation infrastructure, and many of the data used to describe the performance of those facilities come from their control systems.

Successful ATIS efforts have operated under either approach.

Issues - Prospective Participants

It is important to involve all potential participants in ATIS at the outset, for instance in discussions on data availability.

Both private and public sector groups can collect data, add value to it then disseminate information to customers. So deciding what groups to include in the ATIS is more an “inclusive” than “exclusive” process, with the selection process coming down to the question, ‘Who adds net value?’.

Participants in the 15 major ATIS deployments in the United States include port authorities, toll facilities, wireless communications companies, railroads, taxicab companies, trucking companies, transit agencies, electronic device manufacturers, information service providers, state and local governments and the federal government.

Each participant will look at the costs and the benefits to be gained then decide whether the net benefits warrant the commitment of scarce resources.

Issues - Prospective Participants

The likelihood is great that there will be very different perspectives on almost all aspects of the ATIS. The keys to developing a successful business plan and then operating a successful ATIS are:

- recognizing these differences exist,
- understanding what is important to all participants,
- creating decision-making mechanisms that account for these differences, and
- establishing channels of communication so that differences in perspective become readily known and quickly understood by all.

Issues - Coordinating Among Participants

Coordinating so many potential perspectives can be done by:

- defining the participants' roles and expectations,
- identifying the issues requiring the most coordination, and
- creating a management structure to resolve conflicts and carry out this coordination.



Issues - Coordinating Among Participants

The benefits of coordination could include:

- fewer conflicts,
- cost savings from less duplication of efforts,
- cost savings from pooled purchasing of equipment and software,
- cost savings from heeding lessons learned by other experienced partners, and
- accurate, reliable and compatible data in multiple jurisdictions.

Issues - Coordinating Among Participants

Coordination is often most difficult among the public sector participants. Often there are different perceptions among these agencies of the value of sharing data or the requirements for data confidentiality.

One proven method of fostering coordination is to create ATIS management teams similar to those used for multi-agency incident management.

The process often centers around creating a technical team and a policy team. These teams provide a forum for program development without directly challenging traditional agency roles and responsibilities.

These teams are especially effective in the early stages of program development because they are informal, problem-oriented and do not require agencies to commit to a formal reorganization.

Issues - Infrastructure

Infrastructure, or the lack of it, determines the types of ATIS services that can be provided.

Some private partners will *only* be willing to participate if the data are already available to support their application or device.

Other private partners may actually be attracted to areas that lack infrastructure. In such a situation, the appropriate ATIS business plan may be a turn-key approach where the private sector designs and constructs the infrastructure.

If your region lacks both infrastructure and the resources needed to construct it, you may want to consider having the private sector select its own monitoring techniques to meet the needs of its customers, one of which would be the public sector.

The potential for revenue from the private sector is determined by the size of the ATIS market. But experts agree that the ATIS market is so immature that significant revenue is unlikely to be generated for public sector use anytime soon.

But if you need to consider revenue, consider barter arrangements of goods and services because many public agencies face restrictions on cash payments. Similar arrangements have been used in shared-resource projects involving telecommunication installations in publicly controlled right-of-way.

Keep in mind the desire for revenue must be balanced against the transportation policy-related benefits of ATIS.

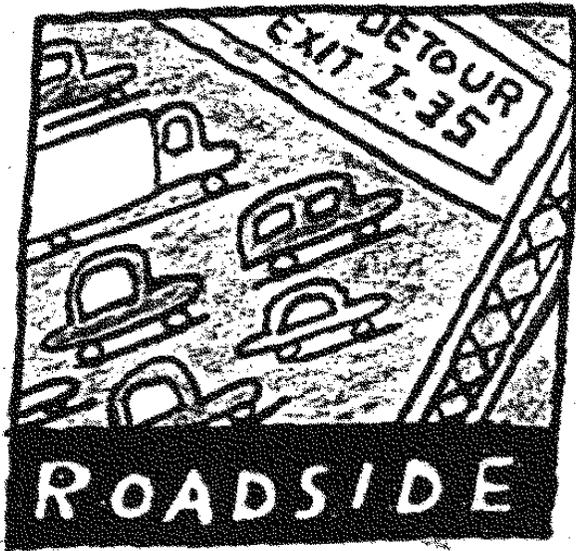
Ultimately, larger issues such as the development of national standards to ensure interoperability and the emergence of the wider information services industry will affect the growth of the ATIS market.

There is a very basic legal question you must answer as you begin an ATIS.

Are we allowed to do this?

The question refers to both the public sector's actions and to the mechanisms used to perform that action.

Basically, you must determine if the lead public agency has the legal authority to undertake the desired actions.



An agency needs either express authority or implied authority to undertake a given action.

A legal statute grants express authority.

Implied authority means the act in question is necessary to achieve the express purpose or objective of the statute. For example, the actions contribute to the safe operation of the highway system.

State departments of transportation generally have broad expressed authority to contract for construction, perform maintenance and planning, or for developing and improving roads. Implied authority may exist to carry out these functions, but it is not always clear how far that implied authority extends.

So far, for most state DOTs many ATIS functions have been assumed to fall under the umbrella of implied authority, but this is not the case for all public agencies and jurisdictions.

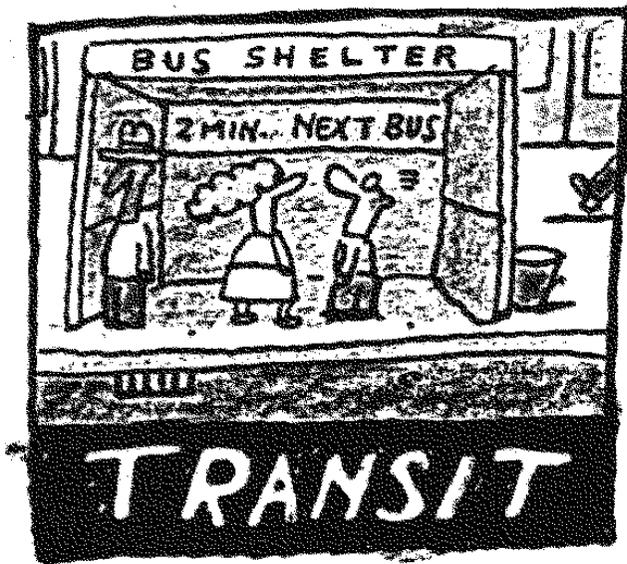
Sometimes, another agency will have to step forward if the lead agency does not have the necessary authority.

And there is another related question: is the mixture of public and private actions and relationships legal?

Assistance from a state's attorney general may be required because the lines between appropriate governmental and private activities may blur. Essentially, the individual states have to determine what can or cannot be done. Issues such as exclusivity and public-private partnerships are often major legal hurdles for agencies deploying an ATIS.

Much of the concern about setting up public-private relationships stems from three issues:

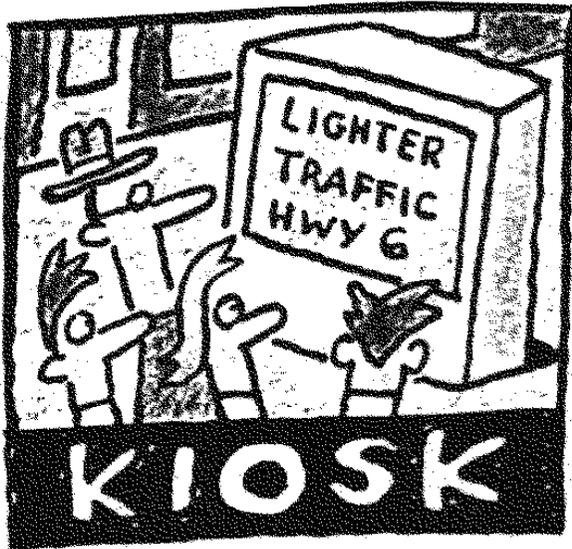
- distribution of money—who pays for what and how,
- intellectual property rights—who owns what and who has access to that knowledge, and
- access to information—who can access public information and how?



In many cases, attorneys general have had problems approving particular actions because they lack precedents to review.

Expect an element of legal uncertainty.

But experience to date indicates lawyers are playing a less significant role in ATIS than initially anticipated.



Issues - Structuring the Relationship

Each region must consider its own unique features when structuring the business relationships between the ATIS participants. These include:

- how much infrastructure is in place,
- what funding is available,
- how many public jurisdictions and agencies are participating, and
- the size (population, demographic and geographic) of the area to be covered.

Other features that make each ATIS unique include:

- the views of political leaders toward privatization of public services,
- the opinions of area citizens and leaders on potential ATIS-related goals such as social equity and equal access to public information,
- the level of technical expertise in the public sector and its availability, and
- the importance of ensuring the success of ATIS.

Issues - Structuring the Relationship

In every case, structure your ATIS relationships to allow for change.

Consider using:

- escape clauses,
- sunset clauses, and
- periodic operational reviews.

Basically, your business plan should describe the decision-making process that the public sector will follow to determine its response to any given initiative.

*Business relationships must account
for many competing factors.*

*It is important to decide what you
really want to achieve.*

Business Relationships

Here are five models illustrating how you can structure a business plan. All the models provide the same basic services and involve the same basic participants. What differs is **who performs** the consolidation or fusion of the information, **who pays** for that function and **who provides** the subsequent data feed for getting the information out to the public.

These models are illustrative. There are many variations of each with many options. So far, each regional site is using a different model. The models, which entail increasing levels of private-sector control, are:

- public-centered operations,
- contracted operations,
- contract fusion with asset management,
- franchise operations, and
- private, competitive operations.

Business Relationships

All five share these common assumptions:

- significant data collection takes place in the public sector,
- the private sector collects at least some data and these data are available with the main ATIS data fusion process, and
- the public sector provides some data free to the public, but the private sector performs most of the data dissemination and is assumed to generate revenue unless otherwise noted.

Business Relationships

In each of the following illustrations every interaction (shown by an arrow) represents a business relationship between the agencies or agency and a company.

Each business relationship needs to have its own formal agreement, such as a memorandum of understanding or contract, and each can have a separate contractual form.

This means an almost infinite number of permutations are possible within the range of business models.



Public-Centered Operations:

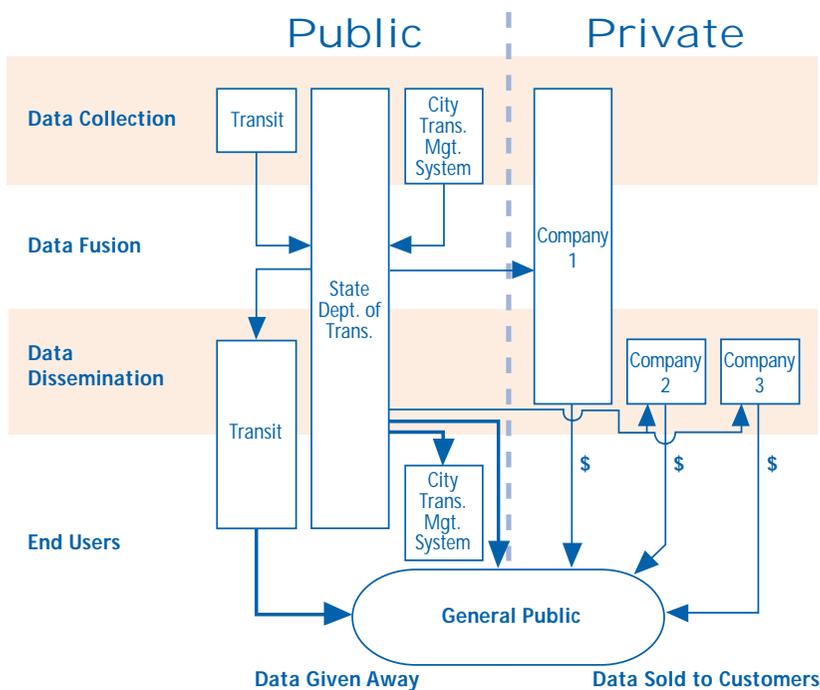


Figure 3-1. Public Centered Fusion

Public-Centered Operations give the public sector the greatest measure of control over ATIS, helping direct its benefits toward meeting public policy goals, but generate the least amount of revenue while requiring the greatest amount of public expenditure.

Public-Centered Operations:

This approach best fits situations where the ultimate purpose of ATIS is to meet the region's public policy goals.

This example assumes the state DOT has the expertise and interest to control a significant portion of the ATIS and it operates the data fusion process. But any other agency could, potentially, perform that.

In this example, however, the public sector often decides to disseminate as much data as possible to help meet public policy goals. This reduces the market potential for the three private companies.

As illustrated, three companies have opted to obtain the data, repackage them and sell them to customers. In addition, Company 1 collects additional data to supplement the DOT's data—thus providing Company 1's customers with “better” information than is available through companies 2 and 3.

Contracted Operations:

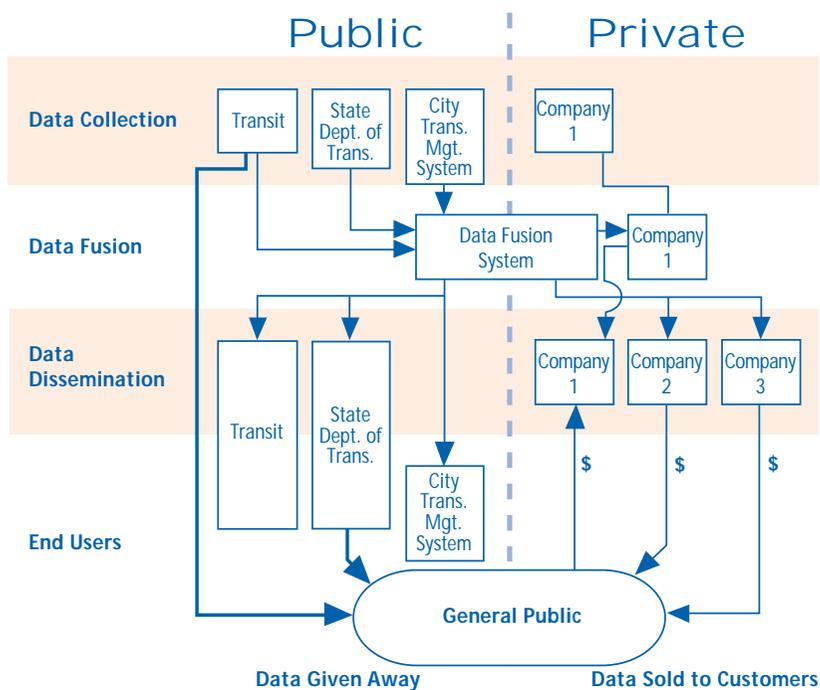


Figure 3-2. Contract Fusion

Contracted Operations allow the public sector to maintain overall control of the ATIS. This approach gives improved access to the private sector’s technical expertise and staffing, but gives the DOT freedom to apply the constraints it believes are important for the system.

Contracted Operations:

The major difference between this approach and the previous one is that the data fusion process is contracted to the private sector—possibly through a turn-key agreement or with the private sector owning the data fusion software.

The public sector, however, still provides large amounts of traveler information to the general public.

So aside from the data fusion service, the potential for revenue for the private sector is limited.

Contracted Fusion with Asset Management:

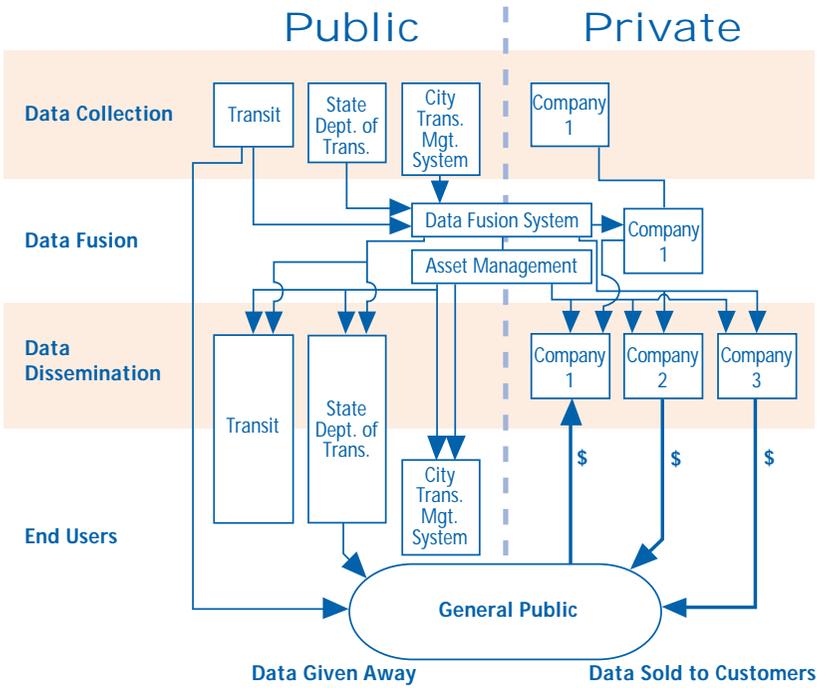


Figure 3-3. Contract Fusion with Asset Management

Contracted Fusion with Asset Management uses the same basic business structure as Contracted Operations but has different emphases. The first is a significant reduction in the amount of information given to the public. The second is the addition of an “asset manager” function besides the data fusion function. Asset management combines product development, marketing and sales functions.

Contracted Fusion with Asset Management:

The asset manager's responsibilities include:

- working with the data fusion provider to create data products that meet user requirements, and
- selling those public sector data products to clients, creating new services that can use these data products and maximizing the revenue generated and shared, from these products.

The asset manager also may work with the lead public agency to bring new agencies on board and add new data collection devices to the system to increase the value of the public sector's data.

The goal of this model is to increase the revenue generated for public sector use. The asset manager is needed specifically to undertake the task of finding and exploiting new uses (and revenue sources) of the available public sector data.

Franchise Operations:

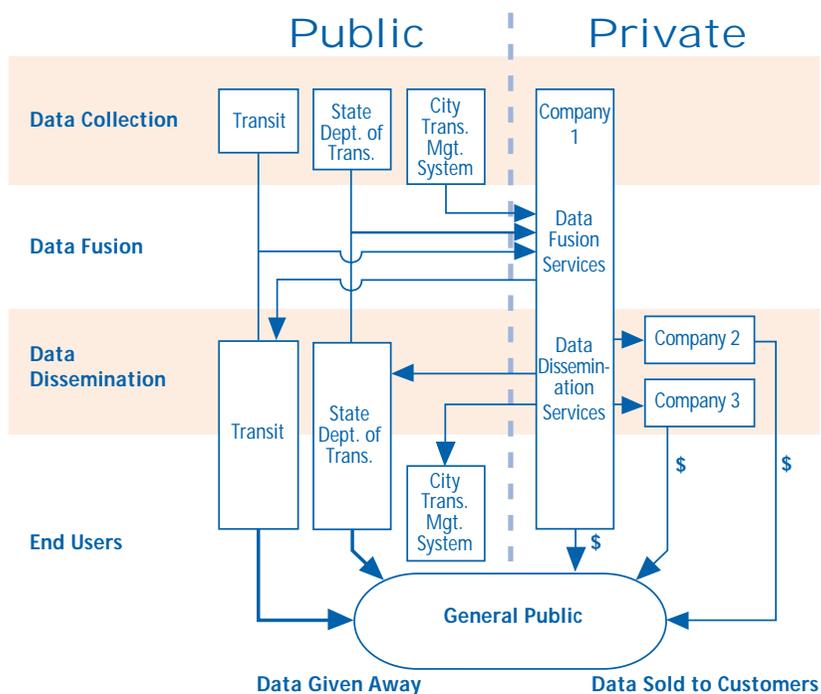


Figure 3-4. Franchised Fusion

Franchise Operations make use of the private sector’s technical skills and marketing capabilities. In this example, the public sector essentially removes itself from the data fusion process.

Franchise Operations:

In return for exclusive access to the public sector's data, the private sector company that is fusing the data agrees to provide that data back to the public sector free of charge—the company also sells the data to other private sector partners.

To help create a revenue stream, the public sector cuts back on the availability of free information.

With this approach, costs to the public sector are reduced considerably as is operating complexity, while the potential for private sector revenue is maximized.

Under this approach, the public has to pay for much of the information and the public sector agencies are totally reliant on the private sector for the fused data, which are the essence of the ATIS.

Private, Competitive Operations:

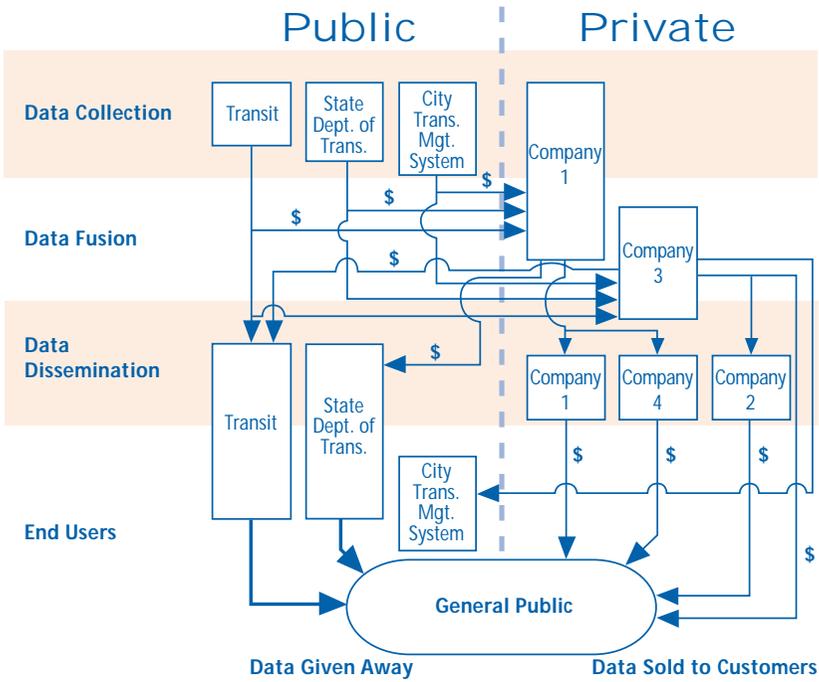


Figure 3-5. Competitive Fusion

Private, Competitive Operations maximize the competition within the ATIS market, and are aimed at lowering consumer costs and maximizing private sector innovation. This approach assumes the public sector makes its data available to more than one company willing to provide data fusion services. It can be provided free or for a fee. The companies then add value according to their own business approaches and resell the data to the public and other information service providers.

Private, Competitive Operations:

This model is based on how the National Weather Service provides access to publicly collected weather information.

Agencies purchase data and information from competing private sector firms, depending on which company best meets the needs of travelers or businesses.

The advantage is that the competition should intensify the companies' incentives to provide better, lower-cost services.

The disadvantage is that if the market is not large enough to sustain multiple companies, the revenue stream may be too small to achieve the growth needed to bring about better, lower-cost services.

Business Relationships

Once you have decided on the most appropriate business model, you can select the *contracting mechanisms* that form the individual pieces of that business model.

In general, each agency and company will have an agreement that defines its relationship with the “system”—normally considered to be either the lead public agency or the ATIS operator, which has as one of its roles the contracting responsibilities for the ATIS.

Each public agency will have its own agreement within the ATIS.

Each private company will have its own agreement within the ATIS.

Business Relationships

Contracting mechanisms cover the following items:

- the participants' interactions,
- the use of and restrictions on the data,
- the costs, and
- how any revenues will be generated and shared.

Business Relationships

Some of the *contracting mechanisms* that have worked for others include:

- *public agency relationships*: most commonly done when one agency either contracts for services with another or they work cooperatively on a joint project that benefits both,
- *contracting for services*: used when the public sector hires the private sector to provide services the public sector cannot do (through consulting contracts and purchase agreements),
- *innovative public-private partnerships*: specially tailored working arrangements that blend public and private sector capabilities and strengths,
- *joint ownership*: to forge more equal public-private relationships,

Business Relationships

- *transferal of public responsibility to the private sector:* usually includes some type of regulatory oversight to ensure the public sector interests in the markets are not lost as a result of the private sector's approach, and
- *private-company-to-private-company relationships:* used if the public sector is promoting high levels of private-sector involvement but providing little input into the actual development or operation of the systems.

These different options will give different levels of control and incentives to both the public and private sectors. But it is important to realize that just because a service arranger (usually a public agency) prefers a specific contracting mechanism that does not mean a potential service provider (usually a company) will be willing to accept it.

Often the private sector responds to a public proposal by submitting alternative contracting mechanisms that could result in greater financial incentives to the public sector. So it is very important to be flexible when considering the appropriate contracting mechanism.

Business Relationships

Also, focusing on who the ATIS consumer is will affect which contracting mechanism is best for a given service or function.

ATIS consumers are travelers, businesses or commercial carriers receiving traffic and transit information or a public agency using the same information for traffic management purposes.

They all have differing needs.

In a very real sense knowing who your ATIS consumers are will reinforce your choices of how to proceed every step of the way—from the initial decision about the purpose of your ATIS through to the final contractual details that will begin to put the ATIS services in place.

Every region must share a vision of an integrated end state that has buy-in from a majority of the region's public and private players.

The final integrated system will not be purchased or acquired all at one time; it will be pieced together bit by bit, with each agency or company contributing components, data and infrastructure.

To avoid building a hodgepodge, everyone must work with roughly the same end vision in mind and think total travel options— not just highway travel, not just transit travel.

Christine Johnson, director, ITS Joint Program Office, U.S. DOT.

Creating the Plan

There is no single business model that applies to all ATIS efforts. There is no single, linear process that a region can follow to produce a successful business plan for ATIS.

Rather, the ATIS business planning process involves a series of ongoing, parallel efforts.

Conclusions drawn in one area have ramifications for the other areas, and each new piece of information can necessitate revisiting previous decisions.

At the same time, although each ATIS business planning effort may follow a slightly different decision-making sequence, the same basic decisions will have to be made.

Creating the Plan

The first step is to gain a solid understanding of the regional market for travel information, including business and personal travel and the flow of commercial goods.

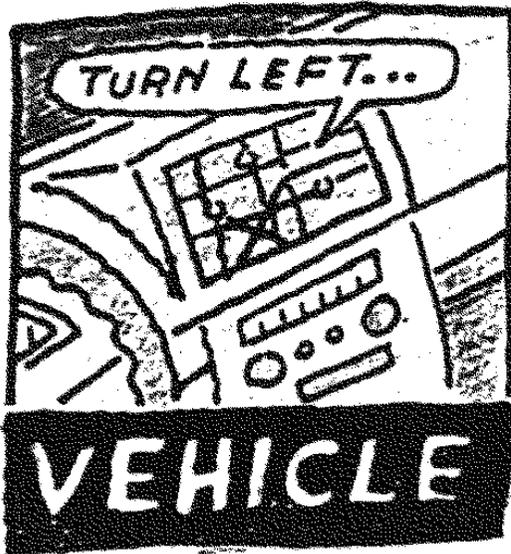
Investigate:

- the geographic size of the market,
- the level of congestion,
- the availability of both public and private infrastructure, existing and planned, to collect and disseminate traveler information, and
- the private sector's interest in reaching the market.

Creating the Plan

Market potential drives:

- the level of private sector interest,
- the types of ATIS services that can be provided, and
- the time frame in which these services can be introduced.



Creating the Plan

The next step involves the potential participants exploring the roles each wishes to undertake.

Any of the primary functions—collecting, consolidating and communicating information—can be performed by multiple participants.

Also, it is necessary to understand the roles that will not willingly be undertaken by the current participants and that, consequently, require the recruitment of new partners or resources.

The lead public agency facilitates the selection of participants to fulfill many of these roles.

Creating the Plan

Once a preliminary business structure has been developed, participants must ensure that the structure operates within the appropriate legal and political boundaries.

Investigate the legal questions about the intended business relationships and obtain political buy-in for those relationships.

These investigations also will help confirm the availability of the resources needed to implement the intended business structure.

Creating the Plan

The basic questions you must ask about the business structure are:

- Can it be legally implemented?
- Will it be politically supported?
- Will it produce the necessary level of private sector involvement?

The conclusions you reach may necessitate changes in the original business structure.

Creating the Plan

Once the general business structure has been established, you must work on the details of the contractual relationships.

Be sure to focus on these aspects of the relationships:

- how the relationships meet the overall goal of the ATIS,
- the risks inherent in the contractual arrangements, and
- the costs associated with the contractual arrangements.

The final agreements are likely to be heavily influenced by the legal and political constraints.

Creating the Plan

The final business structure and contractual relationships can significantly affect the development of revenue generating products.

The ATIS business structure will determine the extent to which the private sector must compete against government-supported information services.

In turn, this affects the amount of revenue that the private sector can be expected to contribute toward construction or operation of the ATIS.

And this may significantly affect the design of the ATIS business structure and, ultimately, the role of the ATIS.



Creating the Plan

Keep in mind that the ATIS management structure is primarily an outgrowth of the mix of public agencies and private companies and their respective roles.

Sometimes adopting specific management conditions may alleviate the need for particular clauses in contractual agreements, giving participants more freedom to operate while ensuring the system continues to function as intended.

Specifically, your management structure should provide the means for:

- reaching consensus on technical aspects,
- spending resources owned by the “ATIS” as opposed to being owned by any one participant, and
- assuring the operational reliability of the system.

Creating the Plan

The end product of all this work is the business plan.

It describes what the ATIS is intended to accomplish and how the supporting business relationships help it reach that goal.

The business plan describes these relationships in detail and the contracting mechanisms that bind them and build the ATIS.

It describes the costs associated with operating the ATIS and the source of the revenue to meet those costs.

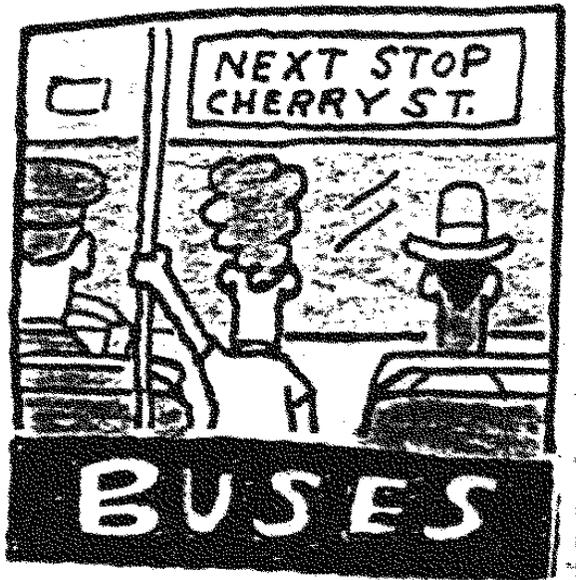
Creating the Plan

Do not expect the business plan to be a static document.

As new developments take place, changes will occur in the business relationships that support the system.

As revenue streams appear or disappear, the ATIS structure will have to react.

As the market matures these changes will occur less frequently but in the near future changes in the business structure should be expected.



*ATIS is a good example of people
using technologies in transportation
to save lives, time and money.*

John Collins, president and CEO, ITS America

Glossary:

APTS - Advanced Public Transportation Systems: groups and systems of technologies that support the use of public transportation systems and shared-ride transportation modes.

ATIS - Advanced Traveler Information Systems: groups and systems of technologies that aid in the collection, collation and dissemination of traveler information before and during trips.

ATMS - Advanced Traffic Management Systems: an array of institutional and human elements, and hardware and software components designed to monitor, control and manage traffic on streets and highways.

Business plan - A summary document that outlines the basic goals, relationships, and financial underpinnings of a given business venture. It is a document that defines the market, describes how revenue will be generated, estimates the cost of doing business, lists who will be involved in the effort, and describes the risks and rewards inherent in the market.

Business relationship - The specific roles two cooperating businesses/agencies undertake to accomplish their respective objectives. Business relationships are defined through specific contracts and/or memoranda of understanding. Business relationships can range from one company selling goods to another, to a joint venture that uses staff from two companies to develop a product that both companies have rights to.

Glossary:

Business structure - A collection of business relationships involving many companies/agencies that must work together to accomplish a common set of business goals. It also is a more generalized description of the roles that each of these inter-related companies will undertake.

Data fusion, server - the computer or computer network that performs the fusion function for either ATIS or ATMS.

Fusion, data - the process of combining traffic information collected from numerous sources, analyzing the data to check for errors and formatting the data into a standard format for users.

ISP - Information Service Provider: a company or agency that obtains data, adds value to the data through customization or packaging and then provides that data to customers.

ITS - Intelligent Transportation Systems: integrated applications of advanced surveillance, communications, computer, display and control-process technologies at ports, on the roadways and in transit vehicles that save lives, time and money.

Raw data - data provided by various surveillance devices that can be used to create specific performance measurements (e.g., vehicle speeds, volumes, incident reports or bus locations). Raw data have not been verified, combined with other related information or modified (e.g., recorded for use by individuals or firms).

Potential Roles Agencies May Undertake*

Public Sector

Federal Transportation Agencies (provide funding, and technical assistance)

Federal Highway Administration

Federal Transit Administration

Other Federal Agencies (provide data, disseminate information)

National Park Service

National Weather Service

State Agencies (provide, fuse, disseminate, consume data)

State department of transportation

Research institutes and universities

Finance and Economic Development

Local Agencies (provide, fuse, disseminate, consume data)

Regional planning organizations

Transit agencies

Local jurisdictions (elected and agency officials):
planning, public works, transportation, finance

Police and fire departments

Sheriff's office

Emergency service operators

Airports

Tourism office

Marine ports

continued

*The listings in this table are only a broad example of roles that different public agencies and private companies might undertake when participating in an ATIS.

Local Agencies (consume data/interested in system performance)

Community-based transportation groups or alliances
Community transportation groups

Private Sector

Design, Build, Collect Data, Operate Systems

Traffic Condition Monitoring and Reporting
Companies

Design and/or Build Data Systems

Transportation planning/engineering consulting firms
Research institutes and universities

Systems integrators

ATIS specialist companies

Supply ATIS functionality

Cable companies

Cellular telephone operators

Telecommunications companies

Electronics vendors

Software developers

Disseminate Data to End Users

Independent service providers that market information

Over wireless services: cellular, FM subcarrier, paging

Or through specific devices: in-vehicle navigation
services, other personal digital assistant
manufacturers

Over the Internet or other wire-based
communications service

Media (radio, TV, Internet, newspaper)

Cable companies

continued

Makers of ATIS Components/Equipment

- Traffic equipment vendors
- Automotive companies
- Electronics companies
- Computer hardware manufacturers
- Traffic signal vendors

Consumers of Information

- Commercial trucking organizations
- Parcel delivery firms
- Logistics firms
- Fleet management systems
- Railroads
- Large employers



Major ATIS Deployments

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