

viii. ADDITIONAL CONSIDERATIONS

Guide To Beginning ONE CALL–ONE CLICK Transportation Services

This chapter provides additional information on selected topics:

- Technology
- Quality Customer Service
- Marketing and Outreach



Intelligent Transportation System (ITS) applications need to be deployed in logical phases. There exist certain logical orders of ITS deployment in order to achieve maximum benefits. For example, without computer-aided dispatch (CAD), automatic vehicle locator (AVL) functions will be compromised. Without AVL, the value of Mobile Data Computers (MDC) cannot be fully realized, etc.

- Yehuda Gross 

Each of these topics is important to establishing a successful one-call or one-click service. It is suggested that this background information be reviewed as you work through the Community Self-Assessment. This will also enhance your understanding of the functionalities and protocols that you need to consider when deciding what services you will include.

TECHNOLOGY

New technology and innovations in services have made great advances possible for public, community, and specialized transportation; ridesharing; and other modes of travel, such as bicycle sharing.

Of note, most of the one-call centers surveyed said they were interested in taking advantage of intelligent transportation system (ITS) technologies in the future, if they were not already doing so.

One call–one click transportation services can use a variety of technologies, ranging from simple business telephone systems and the Internet to highly sophisticated ITS hardware and software systems custom-designed for transit and consolidated transportation systems.

Selecting the right technologies for a new one-call or one-click transportation service depends on particular characteristics including:

- Geographic size of the service area and telephone tolling structure,
- Anticipated call volume,
- Number and type of transportation resources in the service area,
- Scope and purpose of the service,
- Functions to be undertaken by the service, and
- Relationship between information and referral (I&R), reservations, scheduling, service delivery, and customer service.

It is useful to have a working knowledge of how technological components are used in one-call centers. Common types of technology include:

viii. ADDITIONAL CONSIDERATIONS

Guide To Beginning ONE CALL-ONE CLICK Transportation Services

- Web-based information and reservations for transportation services
- Automated interactive voice response (IVR) telephone systems
- Computer-aided dispatch (CAD)
- Real-time automatic vehicle location (AVL) capability using a global positioning system (GPS)
- Digital communications and data transmission between dispatchers and drivers using mobile data computers (MDC). (Some types of information can be sent via personal digital assistants [PDA] or “smart phones.”)
- Access to providers’ reservations and scheduling systems (“read only” and/or “read-write” access)
- Customer notification via e-mail or text message
- Web-based carpool- and vanpool-matching software

“Scalability” and “interoperability” are important considerations when evaluating technologies to add to your one-call or one-click service. Scalability refers to the ability to easily increase the number of users of a particular technology. Interoperability refers to the ability of different technologies to work together or “talk” to one another. Keep these in mind as you integrate ITS components into one-call center operations. Be sure that the systems you acquire will accommodate future expansion in case customers, programs, and service providers want to become a part of the service in the future.

Table VIII-1 shows a potential technological framework adapted from the generic technological system described by the Mobility Services for All Americans (MSAA) program initiative.

TABLE VIII-1: Technological Components

ELEMENT	COMPONENTS
System Backbone	<ul style="list-style-type: none"> - Database with information on funding, eligibility requirements, fares, customer information, etc. - Data dictionary that allows for information exchange among systems and agencies
Travel Planning	<ul style="list-style-type: none"> - Reservation system - Scheduling and dispatch system - Fare payment and management system - Eligibility subsystem
Operations and Customer Service	<ul style="list-style-type: none"> - Transfer connection protection (TCP) system - Vehicle-visibility subsystem that supports both scheduling activities and real-time information - Safety and security subsystem such as on-board cameras and recording, collision detection, silent alarms, etc.
Financial Transactions	<ul style="list-style-type: none"> - Reporting - Reimbursements - Smart card fare collection - Payments, etc.
Traveler Information System	<ul style="list-style-type: none"> - Provides information to travelers before they make their trip
System Activities after Service is Provided	<ul style="list-style-type: none"> - Invoicing which automatically allocates costs across programs - Develops reports
Human and Technical Resources	<ul style="list-style-type: none"> - Live help desk (staffed by a person) - Smart Card technology

viii. ADDITIONAL CONSIDERATIONS

Guide To Beginning ONE CALL–ONE CLICK Transportation Services

TELEPHONE SYSTEMS

Telephones are a baseline technological component. The phone system may be stand-alone or part of a 2-1-1, ADRC, or 5-1-1 call center, and may also communicate via the Internet using a personal computer, web-enabled cell phone, or PDA. The surveyed one-call transportation services managed telephone interactions using a combination of automated and human response. The need for more automation increases considerably when the one-call service provider is also a transportation service provider.

Commercially available telephone systems vary significantly in complexity and capabilities.

Standard Systems for small businesses typically offer several incoming lines to wired or wireless phones. Features may include voicemail, teleconferencing, call forwarding, remote programming, on-hold music, and speakerphone. These systems may allow headset use and contain basic data-processing capability to compile call history logs and other information.

Call-Processing Systems network multiple lines through a core processor controlling the routing of incoming calls. These systems collect more detailed information than standard systems. Interactive capabilities may be layered into these more advanced telephone systems, and most vendors will customize the telephone system to specific needs.

Telephone-Management Software includes features such as call/contact client tracking, call data reporting, resource maintenance, and directory publication.

Web-Based Tools: Telephone systems may be linked to personal computers using Voice over Internet Protocol (VoIP) technology and to cell phones and other devices using wireless (Wi-Fi) solutions.

MOBILITY MANAGEMENT SOFTWARE

Reservations and scheduling software for paratransit and specialized services have been used by public transit and taxicab industries since the mid-1970s. Commercial software products have become “smart” and increasingly are electronically linked to other ITS technologies. Types of mobility management software are described in Table VIII-2.

Scheduling software is valuable for two reasons:

- Automated scheduling improves vehicle productivity, which means that more rides are available from the same number of vehicles. Generally, the more vehicles that are placed under a common automated scheduling system, the more productive the fleet is likely to become.
- When integrated with other ITS hardware and software systems, such as CAD/AVL, scheduling software makes it possible for customers to have better information about actual departure and arrival times and more convenient access to reservations and customer service.

viii. ADDITIONAL CONSIDERATIONS

Guide To Beginning ONE CALL–ONE CLICK Transportation Services

TABLE VIII-2: Mobility Management Software

TECHNOLOGY	COMPONENTS
AVL/MDC Communications	<ul style="list-style-type: none">- Pinpoints current and past vehicle locations via GPS- Enables drivers to log on at the beginning of their shifts- Sends/receives trip information- Transmits text messages and emergency alarm messages
Fixed-Route Scheduling Software	<ul style="list-style-type: none">- Works with fixed-route data and verifies customer eligibility by location- Supports graphic display of fixed routes and ADA service boundaries
Intermodal Trip Planning	<ul style="list-style-type: none">- Builds optimal trip itineraries- Considers multiple modes, routes, service schedules, and fare structures- Considers travel constraints
Web Client and IVR	<ul style="list-style-type: none">- Customers receive password-protected access to their recent trip history- Allows customers to request a trip via e-mail or automated call-back

COMPUTER-AIDED DISPATCH/ AUTOMATIC VEHICLE LOCATION (CAD/AVL)

CAD/AVL enables schedulers, dispatchers, and operators to know where buses are at any given time. Dispatchers are able to monitor bus locations in real-time without voice radio communications, and intervene as necessary to keep fixed-route buses on schedule and evenly spaced between one another. Dispatchers also can expedite operation of paratransit vehicles running on flexible schedules.

There is no “one size fits all” CAD/AVL solution. Every agency conducts its operations, planning, and scheduling functions in distinctive ways. There are different tiers of CAD/AVL vendor solutions with vastly different functions and associated implementation costs. The major CAD/AVL vendors offer robust and extremely feature-rich solutions, while “second tier” CAD/AVL vendors offer more affordable solutions that provide the fundamental CAD/AVL functionality that smaller agencies require.

The “right solution” will balance a system that supports future expansion and long-term operational desires with budgetary requirements. It will minimize the risk of including functionality that will not provide an operational value to the agency.

REAL-TIME BUS ARRIVAL AND DEPARTURE INFORMATION

Transit traveler information systems are typically supported by an underlying infrastructure that provides schedule information, route and stop location data, vehicle position, and service “awareness” (e.g., service disruptions due to vehicle breakdowns or winter weather conditions). The level of accuracy and sophistication of the information that is provided is contingent on these underlying tools. For example, scheduled bus-arrival information can be provided from a scheduling software package directly, but merging real-time position and schedule-adherence data requires the added intelligence of a CAD/AVL system.

MOBILE COMMUNICATIONS

Nearly all transportation service providers need high-quality, reliable voice communications between drivers and dispatchers to operate safely and efficiently. Some radio systems also support digital communications at a level appropriate to the particular needs of the

viii. ADDITIONAL CONSIDERATIONS

Guide To Beginning ONE CALL–ONE CLICK Transportation Services

transportation service provider.

Transportation one-call service providers that are part of the service-delivery chain (e.g., travel management coordination centers and transit agencies) may require a more advanced radio system to support CAD/AVL and mobile data computers (MDC) applications. A reliable wireless data link is required for frequent transmission of GPS coordinates over the radio network and digital messaging between drivers and dispatchers.

AUTOMATIC PASSENGER COUNTERS

Used primarily on fixed-route systems in urban areas, these are devices for recording passenger boarding and alighting activity at each stop along a route. The benefits of this system include reduced costs when collecting ridership information and an increase in the consistency and comprehensiveness of the information gathered.

AUTOMATIC VEHICLE ANNUNCIATION

Automatic vehicle annunciation (AVA) systems allow transit agencies to use an automatic way to fulfill Americans with Disabilities Act requirements for notification of bus routes, stops, transfer points, and major intersections to passengers with cognitive, visual, and auditory disabilities. With AVA, these announcements cease to be the role of the bus driver.

TECHNOLOGY PLANNING

Defining the preferred ITS architecture for a transportation one-call or one-click service is part of the planning process. The system design should be driven by the characteristics of the service itself within a broad structure defined by the U.S. DOT Research and Inno-

vative Technology Administration (RITA). When evaluating technology, consider the following:

Will the ITS investment serve to create more rides through increased productivity?

How will customers be better served?

How will front-line transportation/call center employees be empowered to do their jobs more effectively?

Does the lead agency have the capacity to implement and maintain the investment?

viii. ADDITIONAL CONSIDERATIONS

Guide To Beginning ONE CALL–ONE CLICK Transportation Services

Is transportation one-call a stand-alone function focused primarily on customer information and referral, or is it part of a coordinated system that integrates one-call into the larger service delivery process?

TECHNOLOGY RESOURCES

Each of the following resources is distributed by RITA, which coordinates the U.S. DOT research and education programs. RITA is working to bring advanced technologies into the transportation industry. The main website is <http://www.rita.dot.gov>.

Information on intelligent transportation system technology can be found at <http://www.its.dot.gov/msaa> and Mobility Services for All Americans Phase 2 Foundation Research at http://www.its.dot.gov/msaa/TMCC_ConOps.htm.

Please refer to the resource document “Key Organizations, Topics and More” for additional links to technology resources.

QUALITY CUSTOMER SERVICE

Your one-call service will rely on a series of protocols and processes to ensure that activities are carried out reliably and correctly. These protocols need to serve customers well and meet the needs of partner organizations. It is important to put in place regular reporting and tracking mechanisms so you can measure effectiveness and moni-

tor outcomes. All one-call services need to address basic issues of standards, protocols, and organizational competency, whether the one-call service is limited to information and referral services or if it incorporates other major functions.

A foundation of good management practices will result in an organization that individuals and partners can trust to provide quality service. You build trust and credibility by completing the activities that you decide to take on in a timely manner and by listening and responding to concerns that arise. Having a decision-making process that results in fair and equitable use of resources is also important.

Consider the following for each of the functions your one-call service will offer:

- What protocols, policies, and forms will be needed to carry out the function reliably and correctly? How will these be developed and approved by partner organizations? Provisions for updating systems will be needed as conditions change.
- What training programs will be needed for your one-call service staff? What training of others, such as staff at workforce development agencies, human service agencies, medical centers, or community-based agencies, may be desirable?
- How will success or improvement be measured? What information will be needed to track progress toward goals? This may include measures oriented to customers and to partner agencies.
- How will information (both on paper and in databases) be updated to maintain reliability?
- What organizational support will be needed to operate and maintain services?
- How will you communicate with customers and with partners? What information will be available on your web page?

viii. ADDITIONAL CONSIDERATIONS

Guide To Beginning ONE CALL–ONE CLICK Transportation Services

Local practitioners share their experience: Most case study interview participants said that it took much longer to establish their one-call services than they had first imagined. It is easy to overlook the many small steps associated with setting up a good quality program until one is in the midst of planning and implementation.

QUALITY ASSURANCE RESOURCES

The National 2-1-1 Collaborative, a partnership of United Way and the Alliance of Information and Referral Systems (AIRS), leads the way in developing protocols and standards for information and referral services. An excellent resource to help you understand what you are taking on with an information and referral service is “AIRS Standards For Professional Information & Referral and Quality Indicators.” It is available at the AIRS website, <http://www.airns.org>. This document covers a wide range of topics, including service delivery, reports and measures, cooperative relationships, and organizational effectiveness. Reading through this manual will also help you understand the importance of the existing resources in your community.

A wide range of resources are available through the Aging and Disability Resource Center (ADRC) technical assistance website, <http://www.adrc-tae.org>. The program focuses on individuals who are elderly or have disabilities but, like AIRS, ADRCs have addressed the organizational foundation necessary for providing effective services. The ADRC network has a strong focus on assessment, eligibility determination, and options counseling. Its resources provide a useful framework for communities considering joint eligibility determination for transportation services.

Resources for specific transportation functions are not located in a single place. Most have been developed through initiatives to support the coordination of human service agency transportation and public transit. The resources usually include information on organizational requirements, objectives, metrics, and training.

For example, if you are interested in establishing travel training as part of your one-call center, you can find a variety of resources, including a report titled “Competencies for the Practice of Travel Training and Travel Training Instruction” at the Easter Seals Project ACTION website, <http://projectaction.easterseals.com>.

OUTREACH AND MARKETING

A primary purpose of one call–one click services is to simplify access for the customer and agency personnel. Therefore, marketing is an important activity. Customers need to know how to contact you by phone or through your website. Agency staff need to know where to direct customers or how to obtain information for their clients.

Different types of transportation services often take very different approaches to marketing. Rideshare services may put significant effort into marketing and incentives because the more commuters there are in the rideshare pool, the more likely it is that matches will be found. While transit agencies market their services, other providers of specialized services may not market services because they do not have adequate resources to meet the needs of their potential clientele. Human service agencies operating independently may rely on program staff to provide information to clients. With a one-call service, your marketing program will need to match the services you promote, and set reasonable expectations for service availability.

viii. ADDITIONAL CONSIDERATIONS

Guide To Beginning ONE CALL–ONE CLICK Transportation Services

If you have decided that a one-call service has value for your community but you also face the reality of limited resources, it will be important for you to include strategies to help agencies and customers make better use of available resources. This brings us full circle to the importance of an overall program to improve coordination with a one-call service as just one of several coordination activities. It is important to identify the marketing and outreach activities that will be necessary to make your program a success.

CONSIDERATIONS

Your marketing program will reflect the specifics of your one-call service. It may also be a part of the lead agency's overall marketing program. In selecting a lead agency, consider how it will be able to market services. For example, both transit agencies and 2-1-1 services already have a significant marketing presence. In most communities these local agencies engage in promotional activities, so the public is aware of the availability of their services. In addition, there are national campaigns that promote both of these services periodically.

- How will the lead agency market the one-call service?
- Will its existing marketing efforts provide adequate public awareness for one-call services?
- Will its existing marketing efforts provide adequate agency awareness of transportation resources?

GAUGING COMMUNITY AWARENESS

As you assess conditions in your community, identify the level of awareness and information that customers and agency staff (e.g., staff of workforce development agencies, human service agencies, local government offices) have about transportation services. The

same gauge is necessary for employees and business employee assistance professionals. This will help to identify the most critical issues around which you can focus your marketing efforts. It will also provide a baseline against which you can measure the success of your marketing and outreach efforts.

You may be able to add some questions to assessment surveys being conducted for another program or in another jurisdiction to obtain information on customer awareness of transportation services in order to identify the problems customers face in accessing these services.

To assess agency awareness, you may need to conduct a simple survey of your own or meet with agency staff to discuss their knowledge base and where they think assistance is needed. A brown bag lunch can be a great way to accomplish this. Identifying your community's baseline awareness of transportation services can be simple and straightforward. Agency staff members who work with customers who may need transportation services might be asked questions such as:

- How well do your customers seem to know about transportation options? Do they have the information they need to access available services?
- Which transportation options are you aware of that are available to meet client needs? For each of these:
 - o Do you know to direct others on how to use the service and, if needed, to obtain eligibility?
 - o Are you able to provide accurate information to clients on the fares, services available, and hours of service?

viii. ADDITIONAL CONSIDERATIONS

Guide To Beginning ONE CALL-ONE CLICK Transportation Services

- o What is the level of customer satisfaction?
- Are there any geographic areas in which clients report having difficulty finding transportation?
- For which types of trips do clients have trouble finding transportation?
- What issues exist?

DEVELOPING OUTREACH OBJECTIVES

Use the information gathered above, in “Gauging Community Awareness,” as well as the information gleaned from previous steps to develop your outreach and marketing objectives. Keep in mind the importance of a strong focus on customers and the functions your one-call or one-click service will include. Consider the importance of:

- Working with agencies and institutions to increase their staff’s knowledge about available services and how to use those services,
- Marketing directly to the public and to agencies and businesses to create awareness of your one-call service for transportation information, and

- Identifying the marketing activities that might be needed to build awareness of how an existing one-call service has expanded to provide additional services.

Your outreach and marketing objectives will reflect the goals of the one-call service and the needs of the community for all target customers.

Ultimately, an outreach and marketing program is essential for every one-call service, big or small, and should be included in your development plans.

An available resource that can help communities empower both customers and front-line agency staff to learn about transportation services and reduced fare programs is the **Transportation Solutions: Linking People with Their Community** training. This training teaches mobility managers, transportation coordinators, and agency staff how to set up a system in their communities to deliver one-on-one trip planning services. For more information visit: www.ctaa.org/transportation_solutions .

The “One Call–One Click Transportation Services Toolkit” was created with United We Ride funding from the Office of Disability Employment Policy, U.S. Department of Labor, through a cooperative agreement between the Community Transportation Association of America and the Federal Transit Administration. The opinions and conclusions expressed herein are solely those of the authors and should not be construed as representing the opinions or policy of any agency of the federal government. Dec 2010.