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# Section II

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## **STRATEGIES FOR ACHIEVING THE ECONOMIC BENEFITS OF COORDINATED TRANSPORTATION SERVICES**

Attempts to coordinate transportation services are more likely to succeed when specific coordination objectives are identified and appropriate strategies are employed. Major strategies addressed in this section include tapping currently unused sources of funding, decreasing the direct costs of providing transportation, increasing transportation system productivity, and expanding transportation services. Detailed case studies document how coordination efforts have achieved significant economic benefits in particular communities.

A key issue is how the benefits derived from coordination are actually used. Frequently, the typical efficiency and productivity benefits of coordination are used to expand services to previously unserved portions of the community, unserved client types, or unserved hours and days.

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# Chapter 3

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## COORDINATION PRACTICES WITH MEASURABLE ECONOMIC BENEFITS

Section I examined the types of economic benefits that can be expected from coordinated transportation services.

Section II focuses on the “how did they do that?” question, with this chapter providing an overview of possible coordination strategies. Although no one “formula for success” is obvious, a number of key strategies can provide substantial benefits, depending on local objectives and conditions.

### KEYS TO SUCCESS

Certain strategies are often associated with transportation operations that generate large economic benefits from

coordinated operations. These strategies include

- Tapping currently unused sources of funding, including
  - Using new funds to expand services and
  - Using new funds to provide and upgrade existing services;
- Decreasing the direct costs of providing transportation;
- Increasing the productivity and utilization of vehicles on the road;
- Achieving the benefits (and avoiding the disbenefits) of economies of scale;
- Capturing the opportunities available from multiple providers and multiple modes of travel; and

- Instituting transportation services in areas lacking such services.

Use of these strategies appears to be much more important in generating economic benefits than the following issues:

- Who is the lead agency (for example, a public transit authority, a human service agency, a nonoperating brokerage, or a planning agency);
- Which services are emphasized (for example, ADA paratransit services, welfare to work trips, agency trips, general public trips, Medicaid trips, or others); and
- What particular coordination technique is used (coordination, consolidation, or brokerage, for example).

## HIGH-IMPACT COORDINATION STRATEGIES FOR TRANSPORTATION OPERATORS

Case studies were used to generate information about high-impact transportation coordination strategies. Information was gathered on more than 60 potential coordination examples; the sites that were chosen

- Demonstrated a potential for measurable economic benefits and in-depth data to support benefit calculations;
- Were interested in cooperating with this study;

- Were continuing their coordination efforts;
- Demonstrated coordination strategies or outcomes not duplicated at other sites; and
- Offered new information not available in other reports.

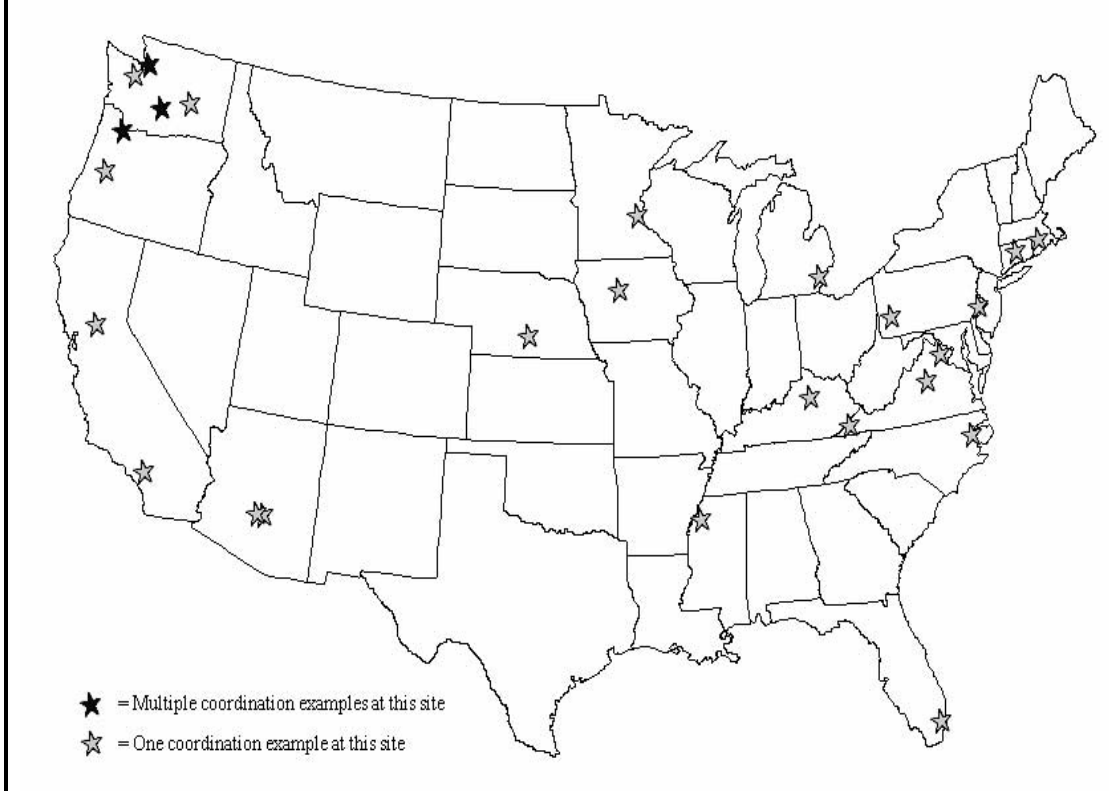
In the end, 28 cases at 25 sites were found with sufficient data to estimate the economic benefits of coordination there. In-depth personal interviews and written reports were used as the primary sources of information; on-site visits were made to several sites. Case study locations are shown in Figure 1.

The case studies described in the following chapters show that there are strategies that can generate large economic benefits for public transit operators and human service agencies involved in coordinated transportation systems (and their communities too):

- **The transit authority contracts to provide trips to Medicaid or other human service agency clients.** In many communities, Medicaid agencies have not made full use of fixed route transit services, opting for more costly paratransit services instead. As shown in numerous cases, moving only a small proportion of Medicaid clients to fixed route transit service saves the Medicaid agency very large sums of money, substantially increases revenues of the transit authority at no additional operating cost, and provides mobility benefits for Medicaid clients. Public transit providers can also coordinate

**Figure 1**

**LOCATIONS OF CASE STUDIES USED TO ESTIMATE ECONOMIC BENEFITS  
OF COORDINATED TRANSPORTATION OPERATIONS**



with local school districts to transport students for regular classes or for special purposes or special events. Welfare to work programs will also benefit from coordination with transit providers. These can be considered to be key **business expansion** strategies.

- **Human service providers provide ADA paratransit services under contracts to transit authorities.** In a number of communities, human service agencies have been providing paratransit services for a longer period of time than have transit agencies. Typically operating as private nonprofit organizations, the human service agencies often have cost structures that are less expensive than those of the transit agencies and can thus create significant savings for the transit agencies in providing the ADA-mandated services. (Using volunteers for drivers or other staff positions is one important way that human service agencies can generate large cost reductions.) For transit operators, contracting with human service transportation providers can be considered to be a key **cost reduction** strategy.
- **Transit authorities and/or human service providers offer incentives to paratransit riders to use fixed route transit services.** Paratransit trips are often substantially more expensive than fixed route trips. By offering incentives, including travel training, to frequent paratransit users, some of those paratransit riders will switch their regular travel mode to the fixed route service. This strategy has real **cost reduction** benefits for the paratransit program, the fixed route operator, human service agencies who sponsor trips for particular clients, and the riders themselves.
- **Human service agencies coordinate or consolidate their separate transportation services and functions to create a general public transportation system.** Sometimes referred to as the “classic” coordination example, human service agencies band together to form a “critical mass” of service that can qualify for general public funding and offer real travel options throughout the entire community. This is a key **productivity enhancement** strategy that can be referred to as a **synthesis** or **synergy** strategy. It is often combined with cost reduction, service enhancement, and mobility enhancement strategies.
- **Transportation providers institute a community-wide coordinated dispatching operation so that all vehicles in use can accommodate all types of passengers at all times.** Often entitled “ridesharing,” this technique ensures the most cost-effective application of driver and vehicle resources. Judiciously applied, it can eliminate the typical precoordination situation of overlapping and inefficient routes and schedules. In particular, the benefits of providing trips for ADA paratransit clients at the same time and on the same vehicle as other traveler creates much lower per trip costs, thus generating real savings for public transit operators. This is a key **productivity enhancement** strategy.
- **Travel services are expanded to more residents of the community through a variety of low-cost strategies.** Some of the largest dollar savings evidenced in the case studies of coordinated systems are those generated by the effective use of volunteers. Volunteers are most cost effectively used when specific trips have special requirements, such as

the need for hands-on or escorted services; when providing the trip would ordinarily tie up a vehicle and a driver for a relatively long time; or in other circumstances where ridesharing would be difficult to implement. This is a key **service expansion** strategy that strongly relates to some cost reduction strategies.

Key coordination strategies at each of the sites are shown in Table 3. Most of these sites had applied multiple coordination strategies. Only the strategy for which economic benefits were calculated is indicated in the table.

Just as there are transportation coordination strategies to embrace, there are also significant transportation service strategies to avoid. Most characterize situations of little or no coordination. They include

- **Vehicles and drivers used to serve only one client or trip type:** agencies provide trips for only their own clients; agencies provide trips only to certain destinations (e.g., medical facilities) and not to other needed destinations.
- **Multiple dispatch facilities and other administrative operations:** each agency using dispatch personnel dedicated to only the needs of that particular agency; multiple agencies in the same community investing in independently operated geographic information systems (GISs) and AVL systems.
- **The existence of significant unutilized vehicle capacity: routes being run with less than full passenger capacity;** vehicles idle during large portions of the day.

- **Low productivities (passengers per hour, passengers per mile):** performance statistics significantly below other operations of a similar nature in similar communities.
- **Duplication of routes and services:** vehicles of different agencies running the same routes, perhaps even at the same times of day (this is especially a problem when there are also areas lacking any service at all in a given community); and
- **Unusually high per trip costs:** per trip costs significantly higher than other operations of a similar nature in similar communities.

If any of these conditions are present in a locality, their presence should be taken as a clue that the coordination of human service transportation and public transit services may bring real benefits. These strategies are summarized in Table 4.

## HOW TO USE THE BENEFITS OF COORDINATION

There are basically two ways to use the efficiency and productivity benefits of coordination. The first is to take the cost savings on a unit cost basis—that is, cost per trip, per mile, or per hour—and use the savings from these greater efficiencies to **serve more passengers**. This is the approach used by the vast majority of communities because transportation services in most communities usually meet only a fraction of the total travel needed. The most frequent use of coordinated transportation’s economic

**Table 3**  
**Coordination Strategies Studied at Specific Sites**

SYSTEM/PROGRAM	LOCALITY	STATE	<i>Save Costs</i>				<i>Increase</i>	<i>Expand</i>	
			<i>Increase Revenues</i>	<i>Efficiency, Productivity</i>	<i>Services</i>				
			TRANSIT AGENCIES SERVE HS CLIENTS	ESTABLISH CONTRACTS WITH SCHOOLS	HS AGENCIES PROVIDE ADA TRIPS	SHIFT PARATRANSIT RIDERS TO FR	HS AGENCIES COORDINATE	RIDESHARE / COORDINATE DISPATCHING	EXPAND TRANSIT SERVICES
Miami Dade Transit	Miami	FL							
King County Metro Medicaid Pass Program	Seattle	WA							
Lane Transit District	Eugene	OR							
Philadelphia, Pennsylvania	Philadelphia	PA							
State of Connecticut	Hartford	CT							
State of Rhode Island	Providence	RI							
Tri-Met Medical Transportation Program	Portland	OR							
Dodger Area Rapid Transit System	Fort Dodge	IA							
Mason County Transportation Authority	Shelton	WA							
People for People (Mabton school program)	Yakima	WA							
ACCESS	Pittsburgh	PA							
Dakota Area Resources and Tr Services	Dakota County	MN							
Ride Connection	Portland	OR							
STAR Paratransit	Arlington	VA							
CTS / JAUNT	Charlottesville	VA							
Phoenix Travel Training	Phoenix	AZ							
Sacramento RT Contract w Paratransit, Inc.	Sacramento	CA							
Kentucky Coordinated HS Tr System	Lexington	KY							
Martin County Transit	Williamston	NC							
R.Y.D.E.	Kearney	NE							
King County Metro / DSHS Demo	Seattle	WA							
People for People	Yakima	WA							
People for People	Moses Lake	WA							
Delta Area Rural Tr. System (DARTS)	Clarksdale	MS							
Enabling Transportation (ET)	Mesa	AZ							
Mountain Empire Transit	Big Stone Gap	VA							
SMART	Detroit region	MI							
TRIP	Riverside	CA							

benefits is the expansion of service to previously unserved portions of the community, to previously unserved client types, or to previously unserved hours and days.

Another way to apply the cost per trip benefits is to return the money that some agencies may save through coordination to those agencies. Because these cases are not frequent, they are notable. The use of transit passes to serve Medicaid clients needing frequent trips is a key example of such savings. Transit passes cost only a fraction of comparable paratransit trips; the Medicaid program saves money, the transit agency receives more revenue (while seldom incurring any marginal cost increases), and the Medicaid clients receive additional mobility. Lee County, North Carolina (Community Transportation Association, 1994), and

Sweetwater County, Wyoming (Burkhardt, 2000), are examples of cases where all human service agencies participating in the coordinated transportation services paid less on a per trip basis after coordination. Some agencies actually paid less in total for their trips after services were coordinated, but other agencies simply purchased more trips for the same or even increased levels of expenditure.

## CONCLUSION

There are numerous viable strategies for coordinating the operations of human service transportation and public transit operations. Many of these strategies generate significant economic benefits. The next several chapters discuss these strategies in detail.



**Table 4**  
**Strategic Approaches to Coordinating Transportation Services**

<i>General Category</i>	<i>Examples of Detailed Operating Strategies With Economic Consequences</i>
<i>Strategies to adopt</i>	<p>Transit authority contracts to provide Medicaid, other human service agency trips, or school trips.</p> <p>Human service agencies provide ADA paratransit services under contract to local transit authorities.</p> <p>Incentives are offered to paratransit riders to shift their trips to fixed route services.</p> <p>Human service agencies coordinate/consolidate to create general public transportation system.</p> <p>Transportation providers coordinate dispatching and promote ridesharing among cooperating agencies.</p> <p>Transportation services are expanded to previously unserved areas by using volunteers and other low-cost strategies.</p>
<i>Strategies to avoid</i>	<p>Only one type of passenger/client on the vehicles.</p> <p>Multiple vehicles and dispatch/administrative/intelligent transportation system or GIS facilities.</p> <p>Significant unused vehicle capacity.</p> <p>Duplication of routes and services.</p> <p>Unusually high per trip costs.</p>