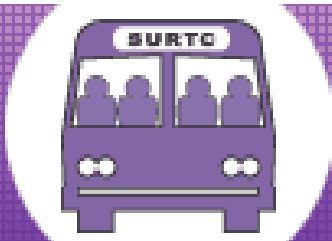


**Small Urban &
Rural Transit Center**

ITS Transit Case Studies: Making a Case for Coordination of Community Transportation Services Using ITS

**March 23, 2006
Transportation Research Forum
Annual Meeting
New York, New York**

**David Ripplinger
Associate Research Fellow
Small Urban & Rural Transit Center
Upper Great Plains Transportation Institute
North Dakota State University**



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Three locations, three unique experiences

SMART

(Suburban Mobility Authority for Regional Transportation)

A mobility management innovator in SE Michigan

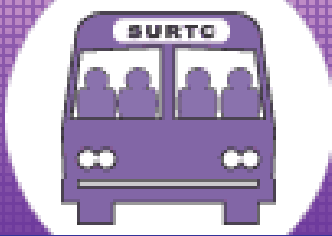
R.Y.D.E.

(Reach Your Destination Easily)

A rural public transportation broker in Kearney, Nebraska

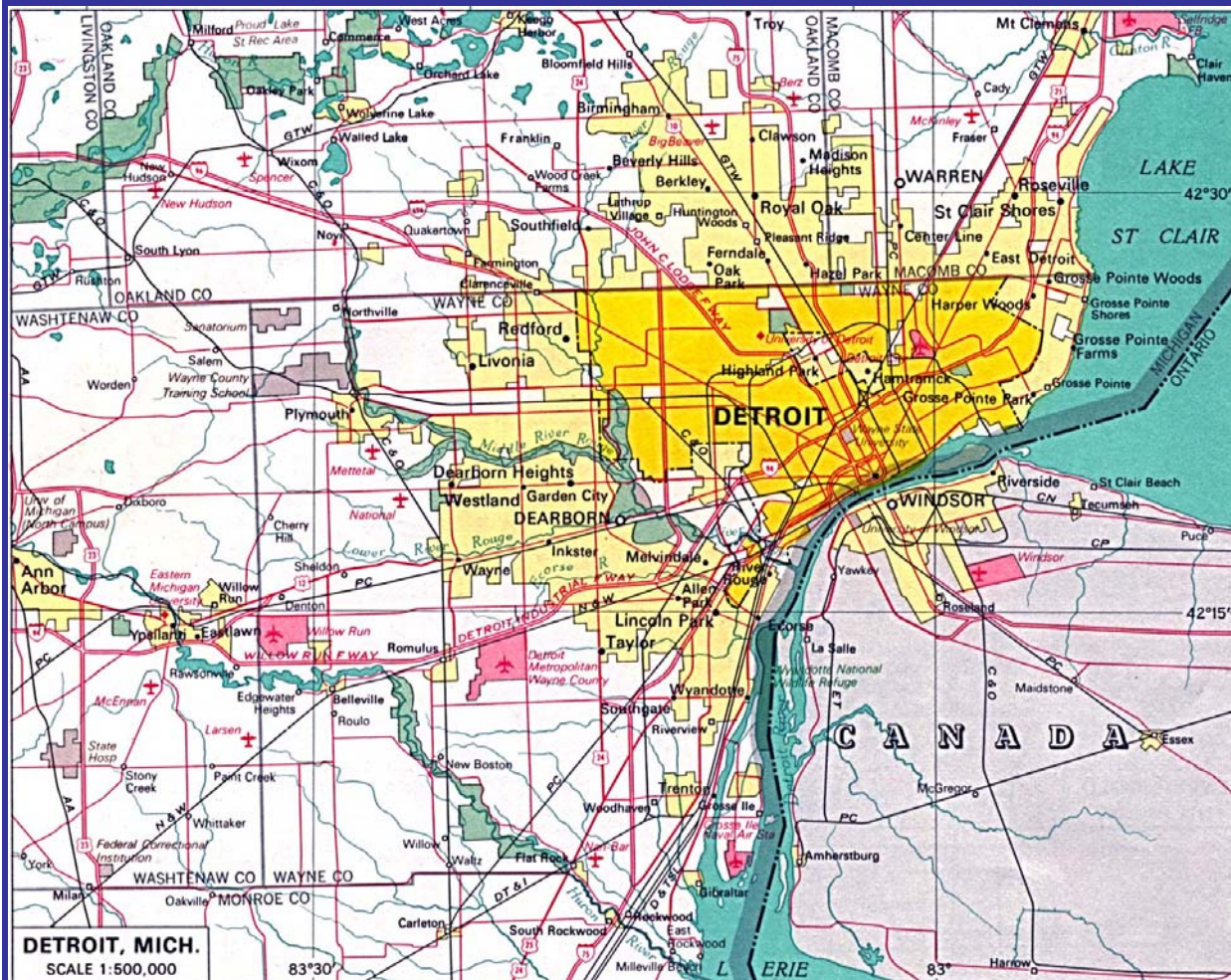
NDinfo.org

An Online Travel Information Center in North Dakota



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The Setting

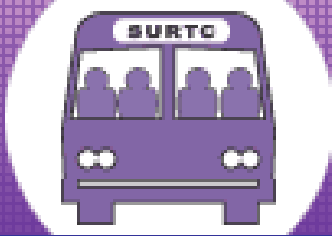


Wayne, Macomb,
and Oakland
County in SE
Michigan

Home to 2.3
million people

1,536 square miles

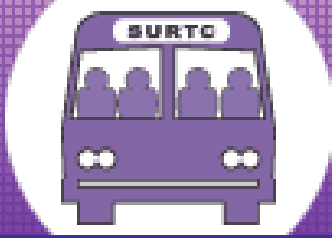
Depressed urban
center



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SMART Beginnings

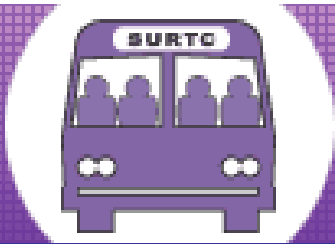
- ❖ The system was designed to provide traditional mass transit service, ie work related commutes from suburbs to urban core
 - ❖ Not enough demand
- ❖ Southeast Michigan Transportation Authority
 - ❖ Established in 1967
 - ❖ Commercial and public bus and rail service
- ❖ Became “SMART” (Suburban Mobility Authority for Regional Transportation) in 1989
- ❖ Not so SMART
 - ❖ saw budget deficits of \$19.6 million in '93-'94



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An Innovative Solution

- ❖ SMART needed increased financial support to remain in existence
- ❖ Most of the wealth in the Detroit metropolitan area resided in the suburbs, an area underserved by SMART
- ❖ Needed buy-in
- ❖ The Answer: The Community Partnership Program

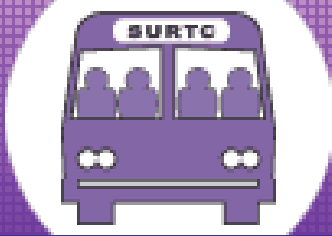


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An Innovative Solution

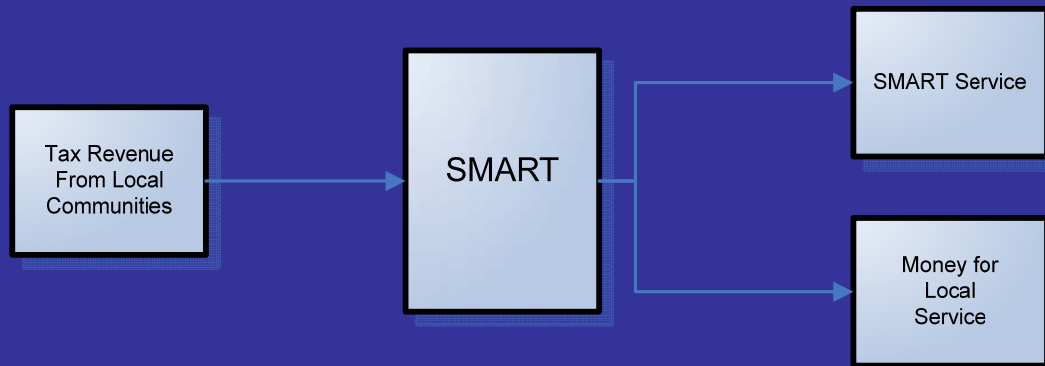
- ❖ Traditional mass transit does not meet the needs of suburban tax payers
 - ❖ Low density
 - ❖ Predominantly mobility independent
 - ❖ Numerous demand locations and trip purposes

- ❖ Need information, a system to manage it, and people capable of doing so



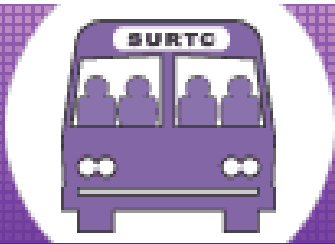
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Financing & Organization: Community Credit Program



A rebate on monies
spent by local agencies

May be spent on
operating or capital costs



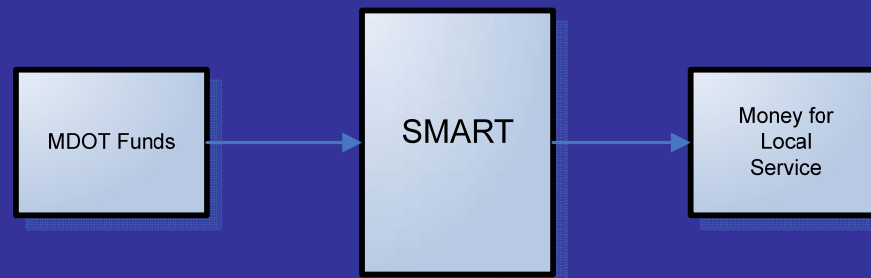
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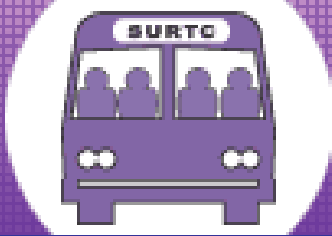
Financing & Organization: Municipal Credit Program

State reimbursement
program

Distributed by SMART as
a function of population
and availability of fixed-
route service

May be used for
operating costs only





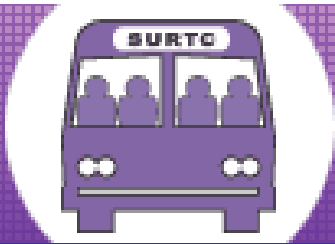
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SMART's Service Design

- ❖ Fixed-Route Service
- ❖ ADA Service
- ❖ Connector Service
 - ❖ Job Express
 - ❖ Flexible Route
 - ❖ Advanced Reservation
 - ❖ Dial-A-Ride

- ❖ Community Transit
 - ❖ Designed by each local community to meet their unique needs





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SMART & ITS: First Attempts

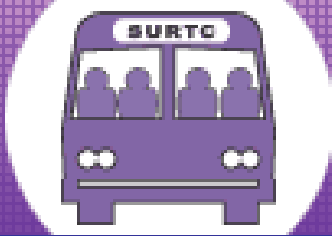
Mid-1990's

Tried to develop/implement

- ❖ mobile data terminal technology
- ❖ interactive voice recording system

At the cutting edge of technology, *if not ahead of it*





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SMART & ITS Today

Technology/Communications hub located at the Oakland Terminal

Clients utilizing the system at that site and two others (Troy and Livonia)

Other groups submit rides daily using excel spreadsheets

Can book trips on any vehicle in the fleet

- 109 Connector vehicles

- 137 Community based vehicles

However, that isn't the common practice

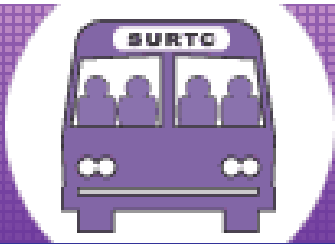


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Impacts

Organizational Structure: technology is integral to SMART's coordination efforts

Finance: TCRP Report 91 estimated the annual savings of coordination at \$2.7 (2002)

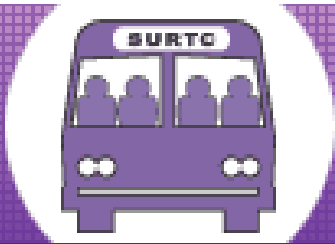


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Lessons Learned: Understanding the Community

- ❖ Understanding the community transportation system
- ❖ Identifying actual needs
- ❖ *Promoting adoption*
- ❖ Educating Employees and the Community



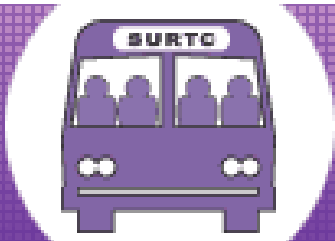


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Lessons Learned: Identifying, Tailoring, and Adopting the Proper Technology



- ❖ Importance of architecture and standards
- ❖ Stay focused on outcomes
- ❖ User friendliness
- ❖ *Centralization*
- ❖ *Scalability*
- ❖ *Redundancy & backup*

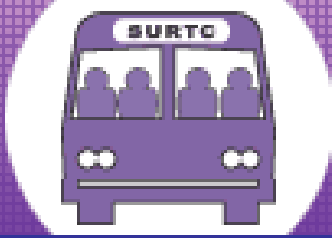


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Lessons Learned: Making the Most of Available Resources

- ❖ *The high cost of being the first mover*
- ❖ Attracting technologically adept managers
- ❖ Making use of consultants
- ❖ *Staying generic*
- ❖ Accounting for long-term viability
- ❖ Managing ITS independently





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A Quick Review

1. **Necessity is the mother of invention**
 - In this case SMART's relationship with its community partners
2. **Interdependence can foster strong relationships**
3. **Much can be learned from 'failure'**
4. **Even the 'best' product may not sell**



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