TELUS for Transit

Pre-Screening of Transit Investments in the Metropolitan Planning Process

Jerry Lutin
New Jersey Institute of Technology

Association of Metropolitan Planning Officials
Annual Conference
October 31, 2008 Seattle, Washington

FTA

NJIT New Jersey's Science & Technology University

CAMBRIDGE SYSTEMATICS

RSG INC. TRANSPORTATION

TELUS for Transit

TRANSPORTATION ECONOMIC AND LAND USE SYSTEM (TELUS) FOR TRANSIT

Aid in pre-screening projects prior to New Starts

"Good planning makes for good projects"

Federal Transit Administration Contacts

Mr. Charles R. Goodman, Director, Systems Planning,
charles.goodman@dot.gov

Ms. Effie S. Stallsmith, Community Planner,
effie.stallsmith@dot.gov

FTA

NJIT New Jersey's Science & Technology University

CAMBRIDGE SYSTEMATICS

RSG INC. TRANSPORTATION

TELUS for Transit

Introduction

- preceded by Transportation Economic and Land Use System (TELUS) – TIP management system funded by FHWA

- funding authorized and appropriated to the Federal Transit Administration (FTA) by Congress in SAFETEA-LU

- transit planning differs from highway planning – different processes and scales of analysis – approach differs from FHWA- funded TELUS

- a new product - applied research project being carried out by a new team at New Jersey Institute of Technology

- Cambridge Systematics Inc. and Resource Systems Group, Inc. - members of the research team.

FTA

NJIT New Jersey's Science & Technology University

CAMBRIDGE SYSTEMATICS

RSG INC. TRANSPORTATION

Basic Premises Underlying TELUS for Transit

- The nation is being challenged to maintain mobility in the face of rising costs and uncertainty about the future supply of energy.
- Public transit can play a significant role in creation of a sustainable transportation system, but only if transit investments are supported by compatible land use policies and integrated with other economic development tools.
- Planning decision making for transit investments and land development patterns occur at different scales and jurisdictional levels – better communication is needed to bridge the gap.

TELUS for Transit

TELUS for Transit is intended to help answer the following questions:

- **If transit investments are being proposed for a region or community, what land use policies will be needed to optimize the effectiveness of those investments?**
- **If specific changes in land use policy are being considered for a region or community, what types of transit investment will be most cost-effective for each land use policy scenario?**

FTA NJIT New Jersey's Science & Technology University CAMBRIDGE SYSTEMATICS RSG INC. TRANSPORTATION

Federal Transit Administration Planning and Project Development Process – 3 Phases

- Systems Planning (Metropolitan Planning)
- Project Planning (New Starts)
- Environmental Planning and Review

TELUS for Transit Targets Systems Planning

- Studies conducted mainly at MPO level
- Multimodal region, corridor and sub-area studies
- Studies conducted in advance of New Starts
- Help lay groundwork for successful transit investments

TELUS for Transit

Involvement in Decision Making for Transit Investments and Land Use Planning		
	Transit Investments	Land Development
Federal Transit Administration*	Heavy	None
State Government	Some	Some
Metropolitan Planning Organizations	Heavy	Little/None
Transit Authorities	Heavy	Little/None
Counties & Sub-Regions	Some	Some
Municipal Governments	Some	Heavy
Private Sector Developers	Little/None	Heavy

FTA

NJIT New Jersey's Science & Technology University

CAMBRIDGE SYSTEMATICS

RSG INC. TRANSPORTATION

TELUS for Transit Addresses Planning at 3 Scales

- Region/corridor
- Municipal master plan/zoning
- Site plan

Dealing with Land Use and Development Planning at the MPO and Transit Agency Level

- Work to bridge the gaps in planning
- Need care not to overstep jurisdictional authority
- Respect local jurisdictional concerns and knowledge of conditions
- Provide insight and information
- Bring local stakeholders to the table – especially local planning and zoning officials and developers

TELUS for Transit - Project Phases

Mobilization

- Outreach
- Solicit User Group participants
- Define issues
- Convene expert panel

TELUS for Transit - Project Phases

Outreach – Opportunities

- APTA - Subcommittee on Land Use & Economic Development
- APTA – Policy and Planning Committee
- AMPO – Transit Session
- TRB –
- APA –
- NARC?
- Developers?
- Economic Development organizations?
- Municipal Officials?
- Other opportunities?

TELUS for Transit Project Phases

Retrospective Case Studies

- Find good examples of transit investment/land development patterns
- Define candidate performance measures
- Test measures through modeling
- Quantify performance
- Account for external factors

TELUS for Transit Project Phases

Develop Analytic Tools

- **Scoring tools**
- **Visualization techniques**

TELUS for Transit Project Phases

Prospective Case Studies

- Work with selected MPO's and transit agencies
- Conduct pilot corridor studies
- Document results
- Promote deployment of tools

TELUS for Transit – Analytic Tools

- Focus on simple, transparent measures
- Develop new ways to visualize the results
- How to apply
  - Scenario analysis
  - Comparison with known thresholds
  - Sensitivity testing

TELUS for Transit – Analytic Tools

- Need to be sensitive to transit network parameters
  - Coverage
  - Network/route alignment
  - Speed
  - Frequency of service

Measuring Performance

Land Use

- Municipal land use plan and zoning ordinance support
  - Corridor and station site preservation
  - Pedestrian circulation
- Transit oriented development policy support
  - Growth concentration
  - Mix of uses
  - Land conservation

TELUS for Transit

Measuring Performance

Transportation

- **Transit supportive**

  Travel redistribution
  Transit ridership/mode split

- **Environmentally supportive**

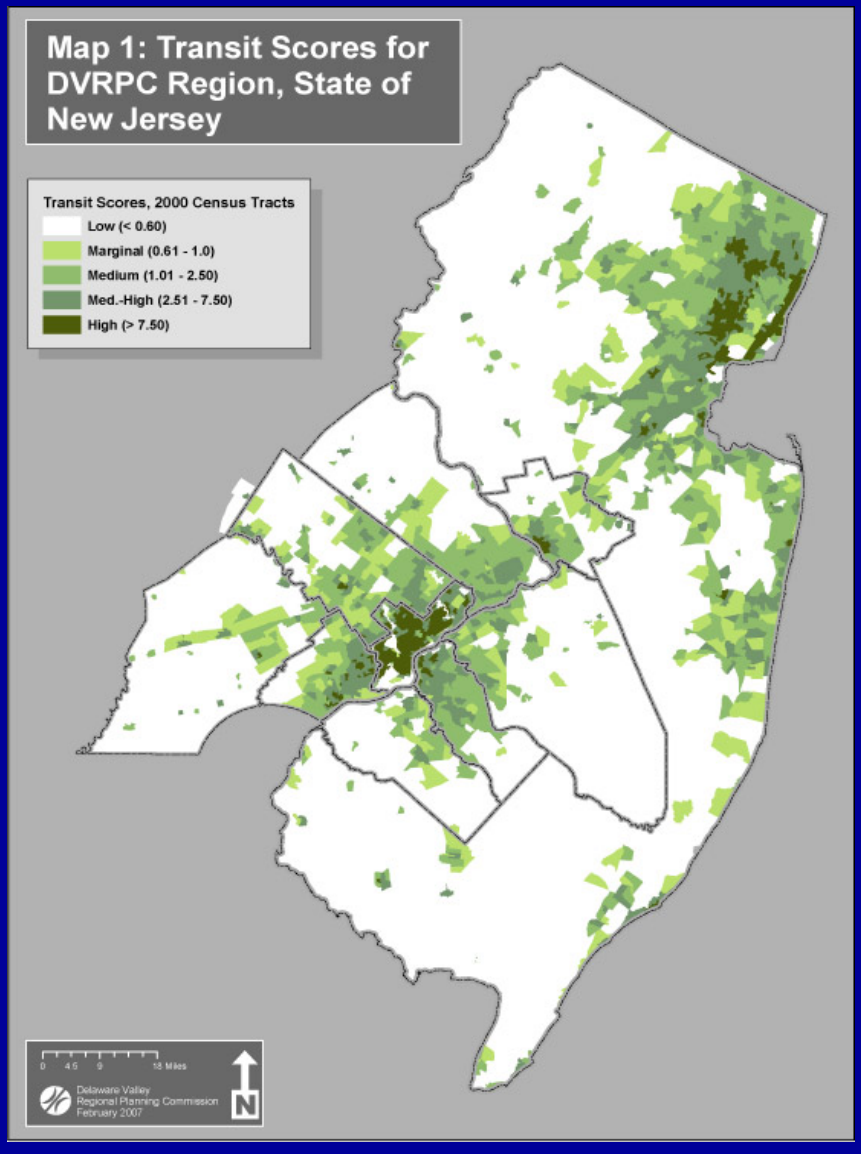
  Trip length reduction
  Congestion reduction
  Vehicle Miles of Travel (VMT) reduction

FTA NJIT New Jersey's Science & Technology University CAMBRIDGE SYSTEMATICS RSG INC. TRANSPORTATION

Sample Performance Measure - Transit Score Model

- **TRANSIT SCORE** =
  - 0.41*(Population per land acre) +
  - 0.09*(Jobs per land acre) +
  - 0.74*(Zero car households per land acre)

TELUS for Transit



FTA

NJIT New Jersey's Science & Technology University

CAMBRIDGE SYSTEMATICS

RSG INC. TRANSPORTATION

How can this project help you?

How can you help us?

- "TELUS" what you need
- Spread the word
- Participate in user group
- Participate in case studies

Contacts

Dr. Sunil Saigal, Principal Investigator, NJIT
sunil.saigal@njit.edu 973-596-6506

Dr. Jerome M. Lutin, Co-Principal Investigator, NJIT
jlutin@njit.edu 973-596-5506

Mr. Charles R. Goodman, FTA
charles.goodman@dot.gov 202-366-1944

Ms. Effie S. Stallsmith, FTA
effie.stallsmith@dot.gov 202-366-5653

FTA

NJIT New Jersey's Science & Technology University

CAMBRIDGE SYSTEMATICS

RSG INC. TRANSPORTATION

THANK YOU

QUESTIONS?