



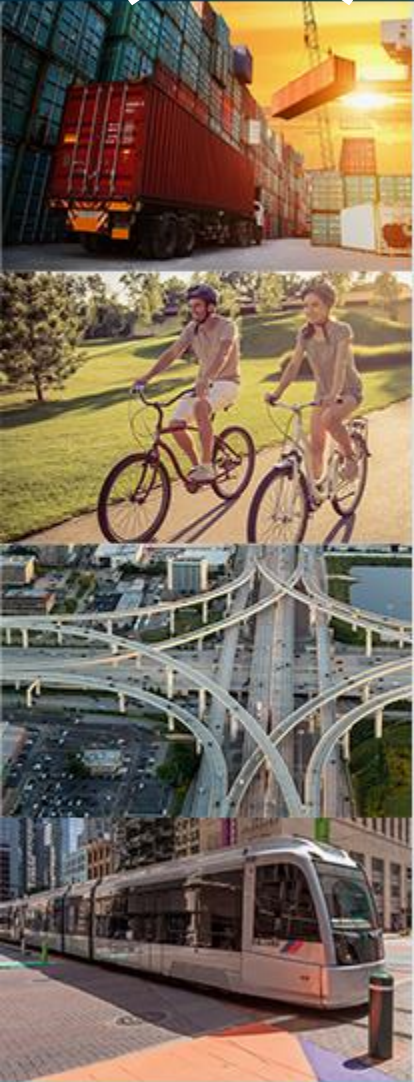
Using Transit Needs Indices to Address Service Gaps



**AMPO National Conference, San Antonio, TX
September 27, 2018**



What Is and Why use a Transit Needs Index (TNI)?



- Highlights key demographic indicators
- Use several needs factors and density
- Tool for urban, suburban and rural needs
- Fixed and flexible routes
- Can result in new transit service

Challenges in Addressing Transit Gaps and Needs



- Traditional challenges in urban areas
- Difficulties in small rural communities
- Growing needs in older suburbs
- Needs conflict with density and land use
- Adverse attitudes towards transit

Key TNI Demographics

- Household without a Automobile
- Percent Persons with disabilities 18-64
- Percent Persons over 65
- Median Income
- Population Density

Build a Simple TNI

- Determine the area baseline
- Assign the specific transit need indicators and their weights
- Use most recent census data (American Community Survey)
- Compile the scores and develop interpretations
- Example: Below

TNI Basic Example

- Middle, Outer and Inner Counties – Average Demographics Per 2016 Census (14 cities)
- All weights are 20%
- Household without Automobiles 5.0% (4.0%- 6.0%)
- Persons with Disabilities 10% (8.0% -12.0%)
- Median Income \$50,000 (\$40,000 - \$60,000) lower is higher score
- Density 2,500 per square mile (2,000 – 3,000) per square mile
- Population over 65 12.0% (9.6% -14.4%)
- () is the range of a two(2) score.

Boffo City in Middle County

- Population - 22,000; Square miles 14.4/1528 (1) low
- Household without automobiles – 2.5% (1)
- Persons with disabilities – 7.5% (1)
- Household median income - \$75,000 (1)
- Persons over 65 – 12.3% (2) average
- TNI overall score : (6) very low

Tuff City in Middle County

- Population: 32,000 ; Square miles 8.4/3,765 (3) high
- Households with automobiles 7.8% (3)
- Persons with disabilities 15.8% (3)
- Household median income - \$ 32,300 (3)
- Persons over 65– 11.6% (2)
- TNI overall score –(14) very high

Middle City in Middle County

- Population 47,000 - Square miles 21.3/2,207 (2) average
- Households without automobiles 4.7% (2)
- Persons with disabilities 11.7% (2)
- Household median income - \$49,500 (2)
- Senior population – 12.5% (2)
- TNI overall score – (10) average)

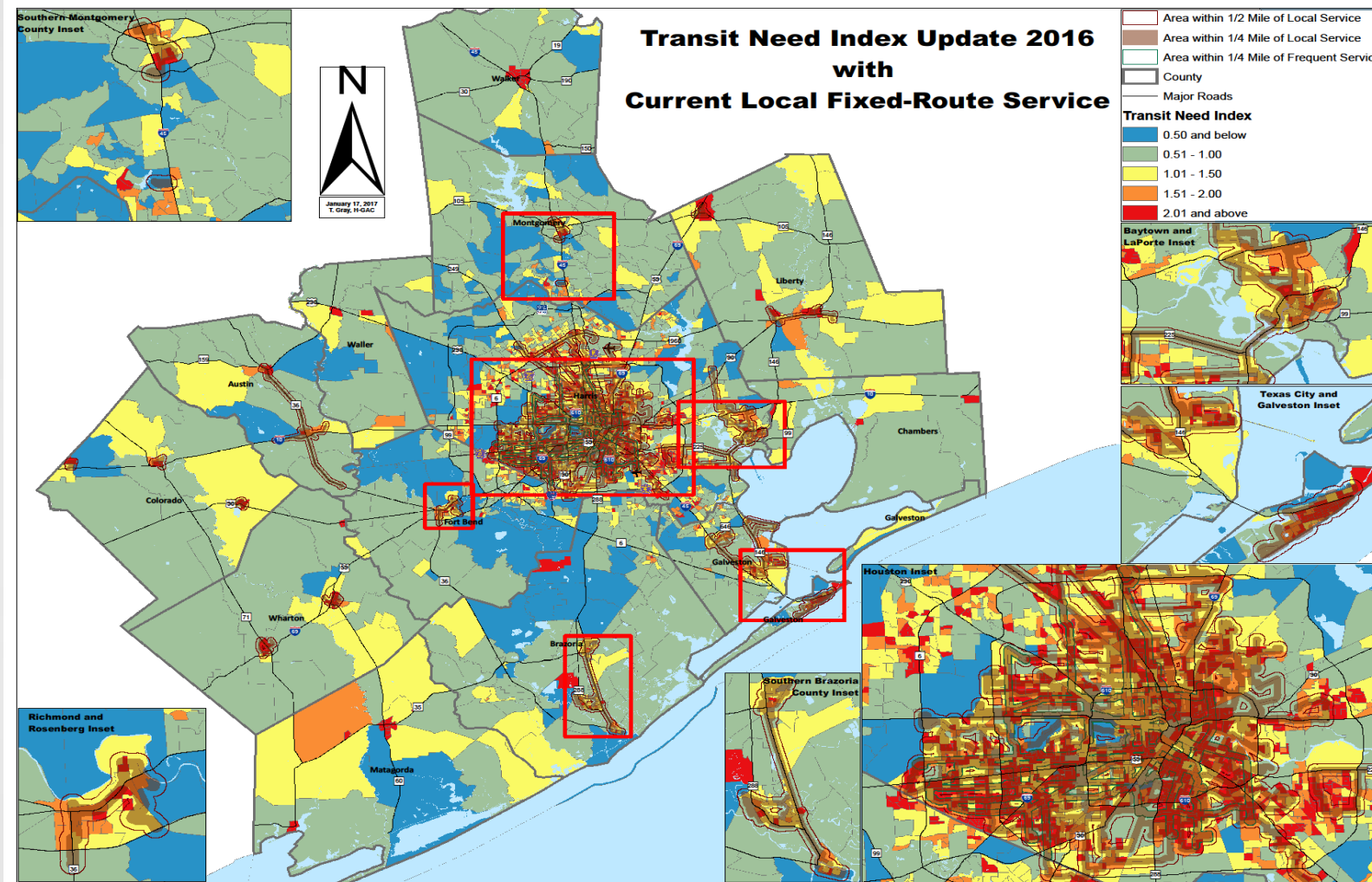
Interpreting The Basic TNI

Scoring Range	Need Level	Interpretation
5.0 – 7.9	Moderate Transit Needs	Some demand response service may be needed.
8.0 – 9.9	Significant Transit Needs	While lower than average, certain significant demographic needs are present.
10 – 11.9	Substantial Transit Needs	Transit needs are at or higher than the designated average. There is a substantial portion of the population needing transit service..
12 – 13.9	Major Transit Needs	Transit needs are high in many but not all demographic indicators. Often community resources may be limited for the high transit need.
14.0 – 15.0	Acute Transit Needs	Universally high transit needs. Resource limitations are often the primary challenge.to initiating service.

The Complex TNI

- Houston-Galveston Planning Region massive and diverse
- Large unincorporated areas analyzed
- All TNI factors coalesce to single average
- Means to grasp whole regional needs
- Color coding a map by transit need
- Variations within cities emerge

Houston – Galveston Regional TNI (Complex)



Using The TNI

- Transit feasibility studies for fixed route or flexible route service
- Title VI analysis
- General transit planning
- Transit needs indicators can be flexible

Questions?