Interactive Intercity Transit Planning for Vermont, New Hampshire and Maine

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Outline

- General context for work – the New England Transportation Institute
- Building blocks
- Future directions - discussion

Context for Work

- New England Transportation Institute Issue Areas
  1) Rural transportation issues definition and refinement
  2) Rural transportation issues of safety and health
  3) Rural information technology
  4) Rural transportation investment and rural settlement patterns
- Partnering with University of Vermont Transportation Research Center on some tasks
- Focus on northern New England (Vermont, New Hampshire and Maine)

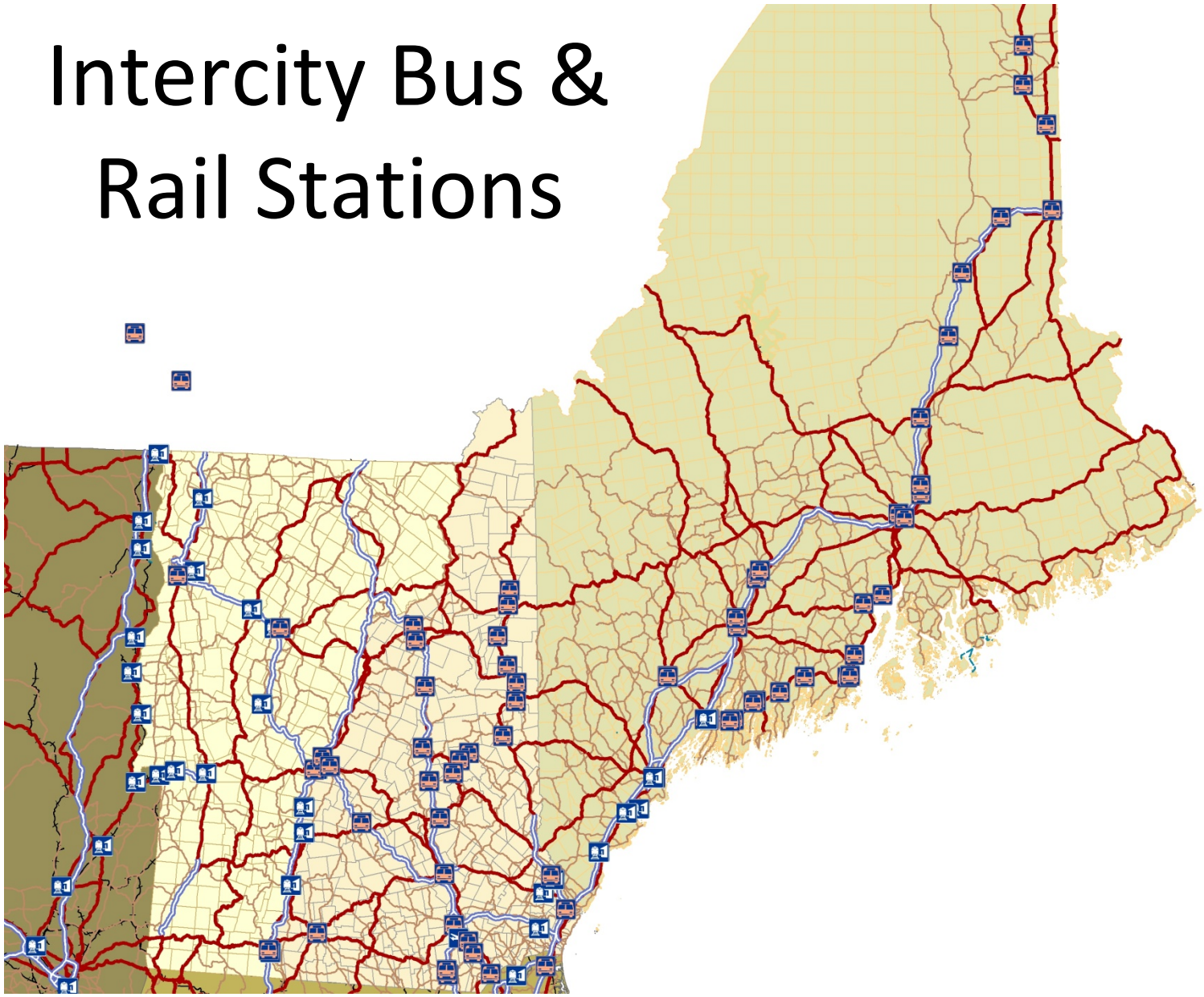
Interactive?

- New England Transportation Institute is also working towards interactive transit route planning tool using some of these same data
- Matt Coogan presented this work yesterday so I am focusing on planning applications today
- But I want this session to be interactive – please share your ideas

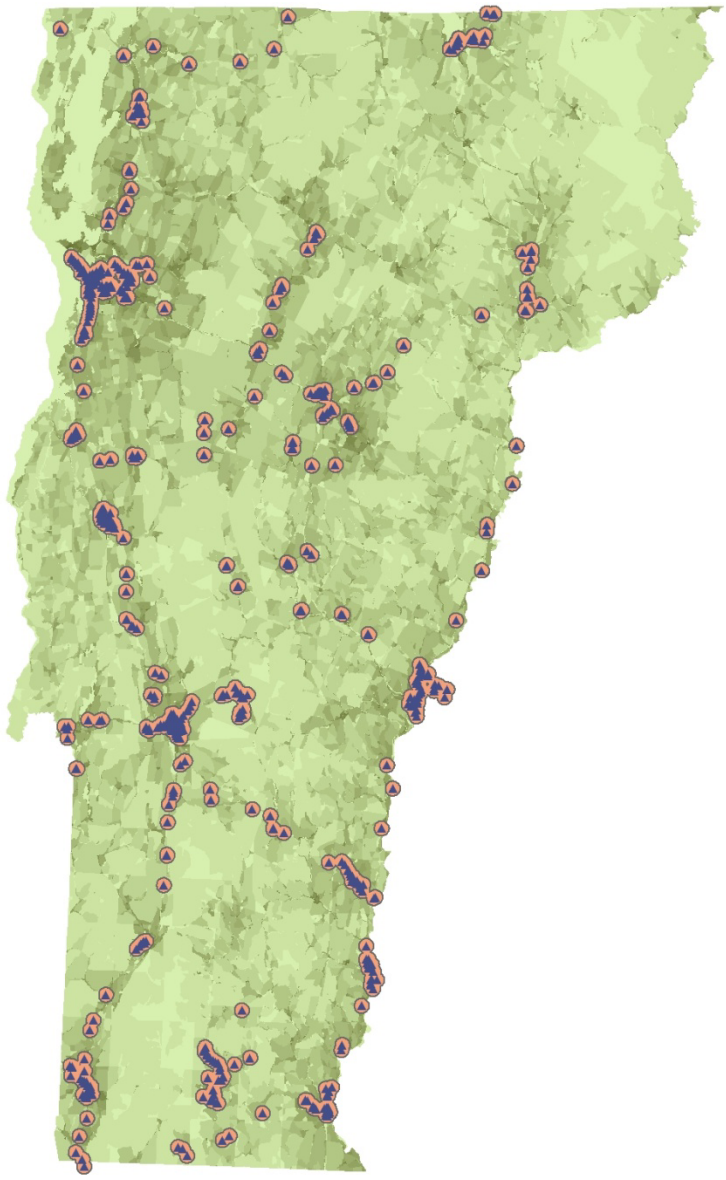
Building Blocks

- Current bus and rail routes and schedules
- Portrait of rural transportation patterns (New England Travel Survey)
- Data about the built environment
  - 3 Ds (density, diversity and design) which is a strong explanatory variable for walking
  - Employment data

Intercity Bus & Rail Stations

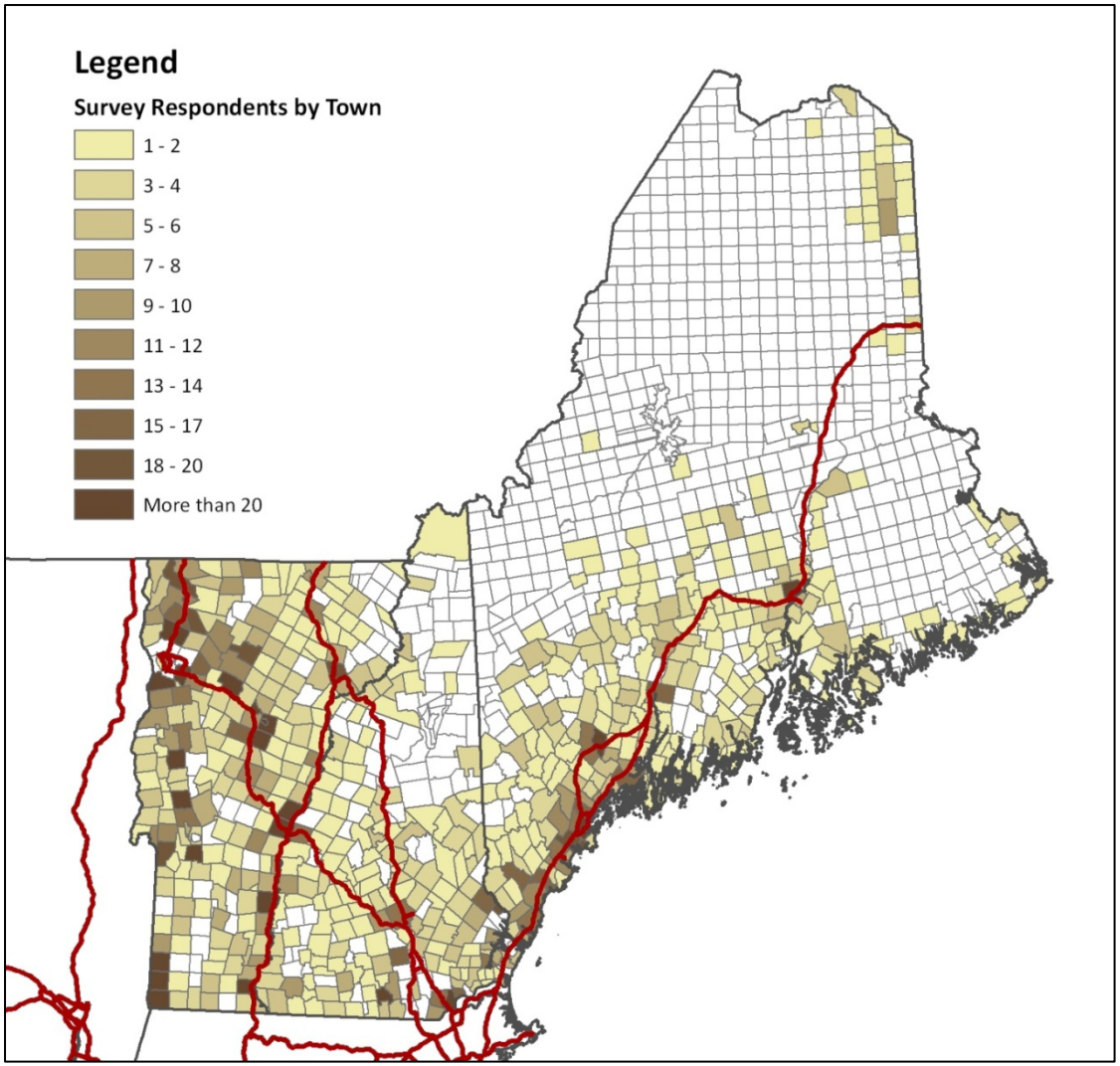


Local Bus Service Areas

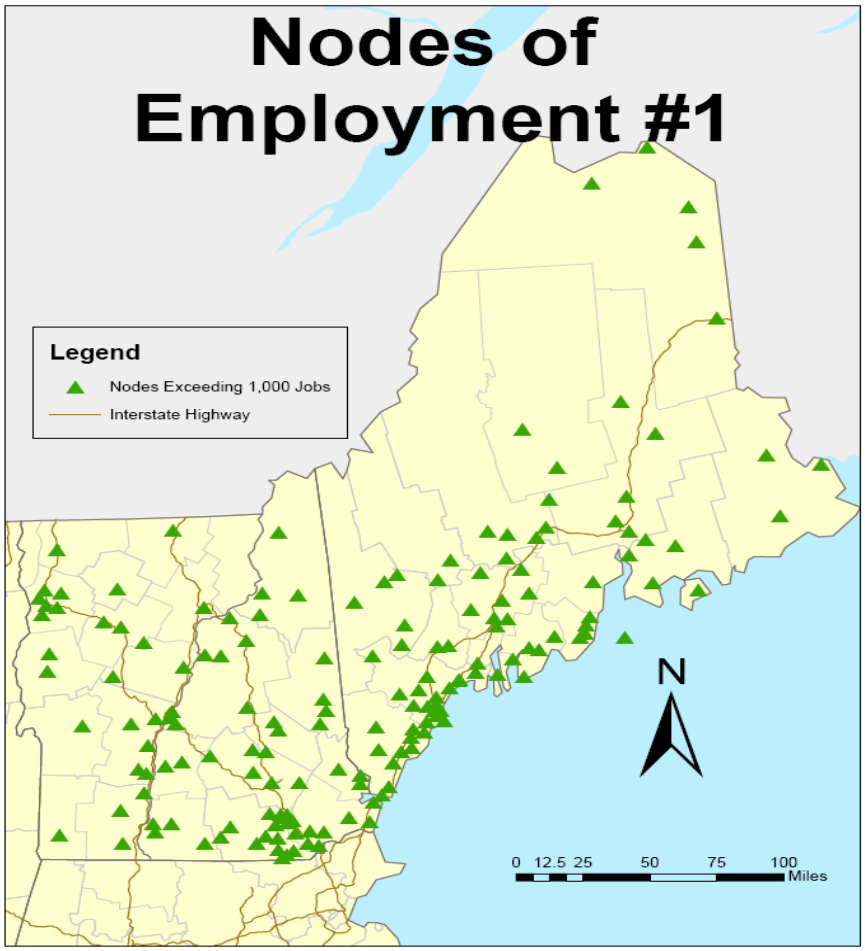


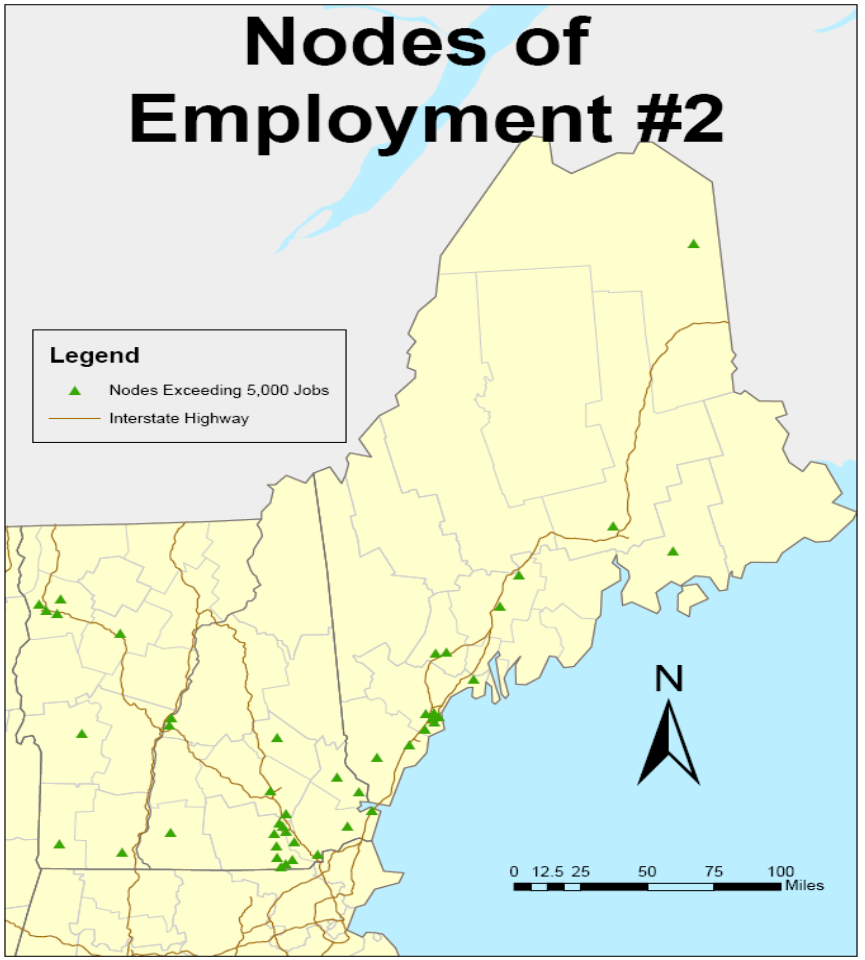
The New England Travel Survey

- Mail with internet option
- 3,767 responses

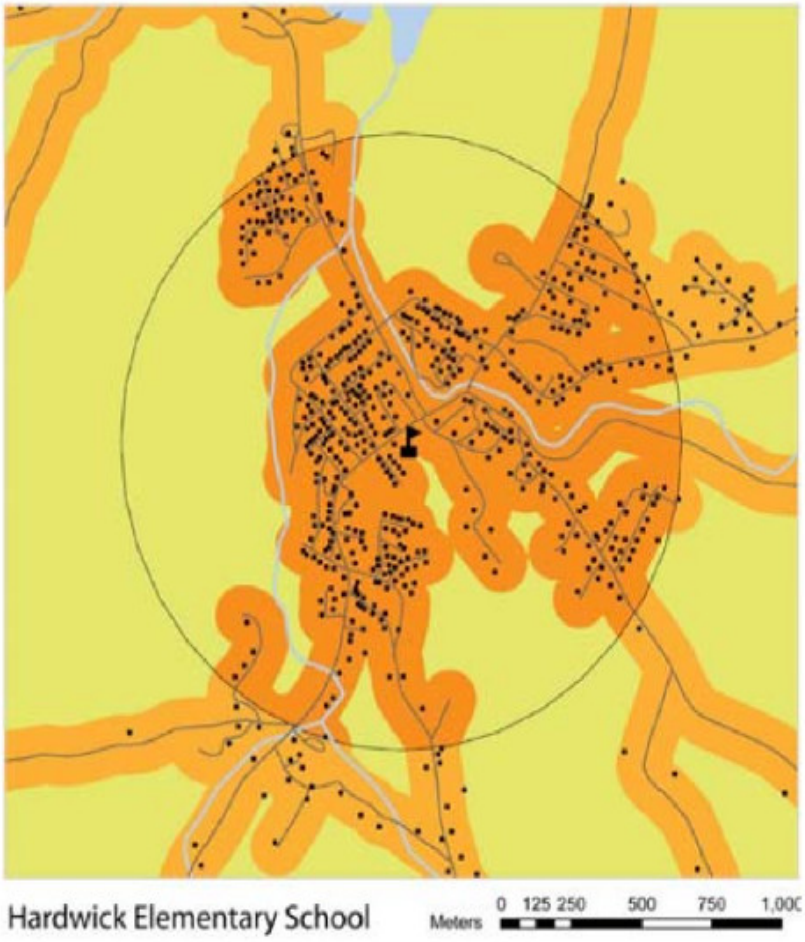


Geographic Distribution of Employment Nodes





3 Ds – Density, Diversity and Design



Respondents by self reported category

Type of area	Count	Average BG HH Density (hh/sqmi)	Average Neighbor-hood Density (hh/sqmi)
Big city	66	2,547	2,574
Small city	501	6,492	1,691
Suburban	322	2,640	750
Rural town or village	1,288	330	455
Rural, outside of a town or village	1,311	132	128

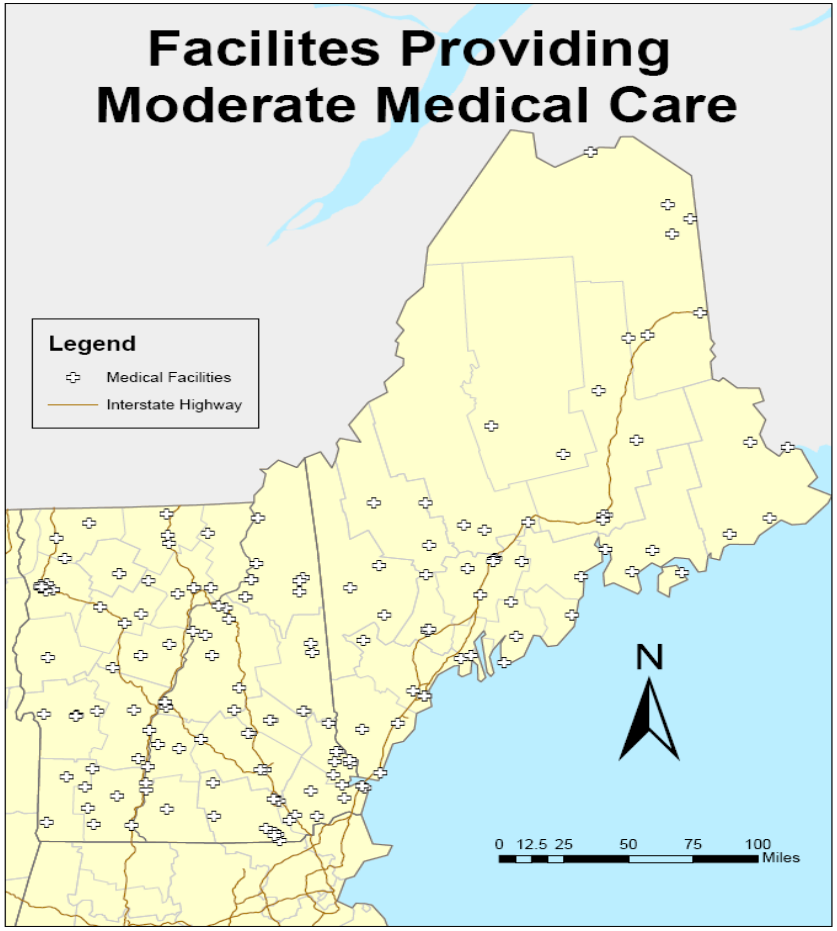
Survey: “I would like to live closer to my work or school”

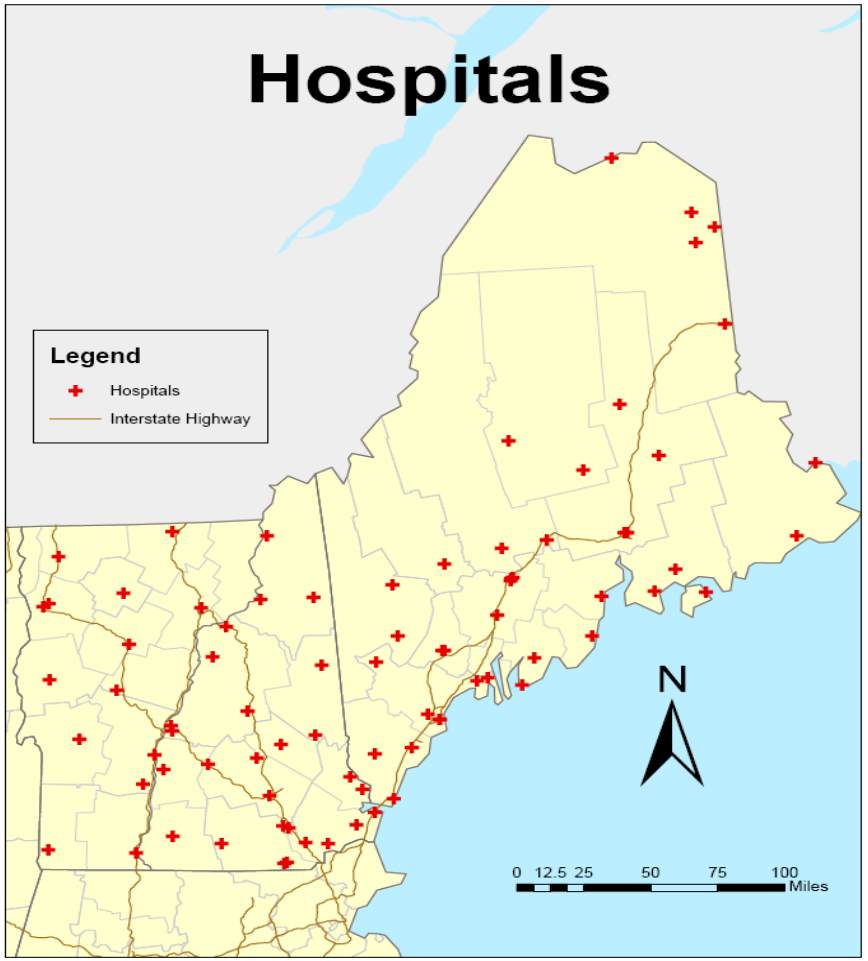
- As expected, very high correlation with self-report commute distance
  - “Definitely false” – average commute of 5.6 miles
  - “Definitely true” – average commute of 21.7 miles
- However, inverse correlation with distance to employment nodes
  - “Definitely false” – averages of 7.9 & 18.3 miles
  - “Definitely true” – averages of 6.8 & 15.2 miles

Survey: Satisfaction with the potential for economic advancement

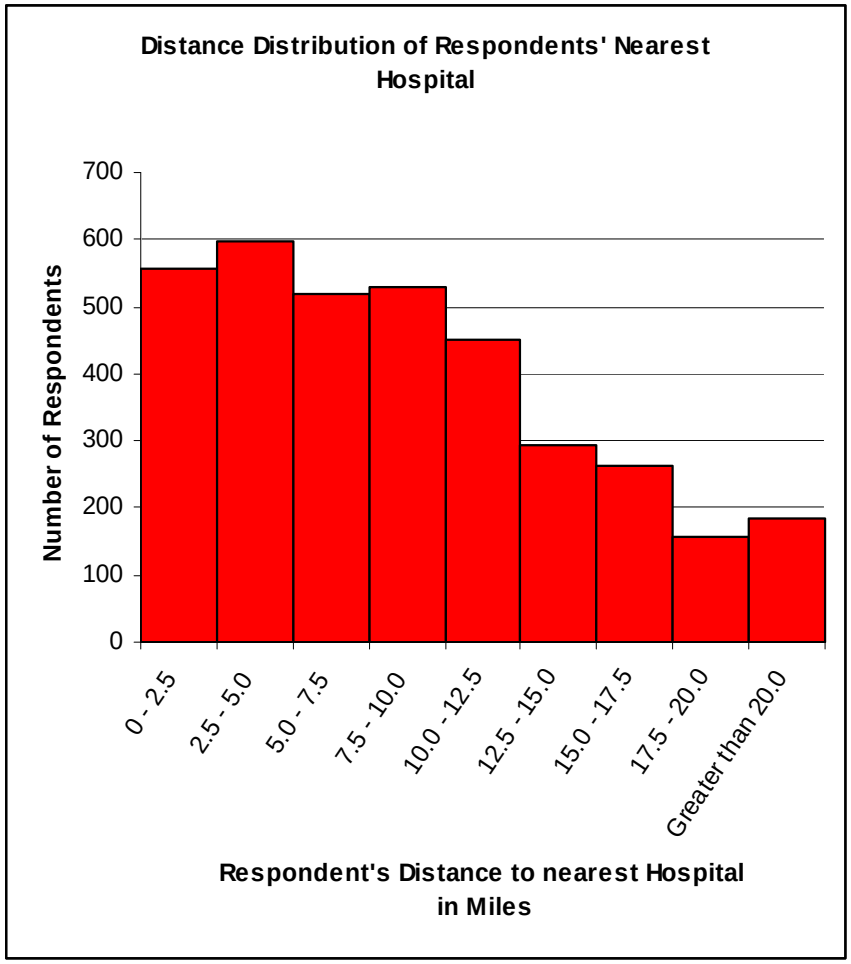
- Correlation with distance from employment nodes
  - "Completely unsatisfied" – averages of 9.2 & 21.2 miles
  - "Completely satisfied" – averages of 7.0 and 14.4 miles

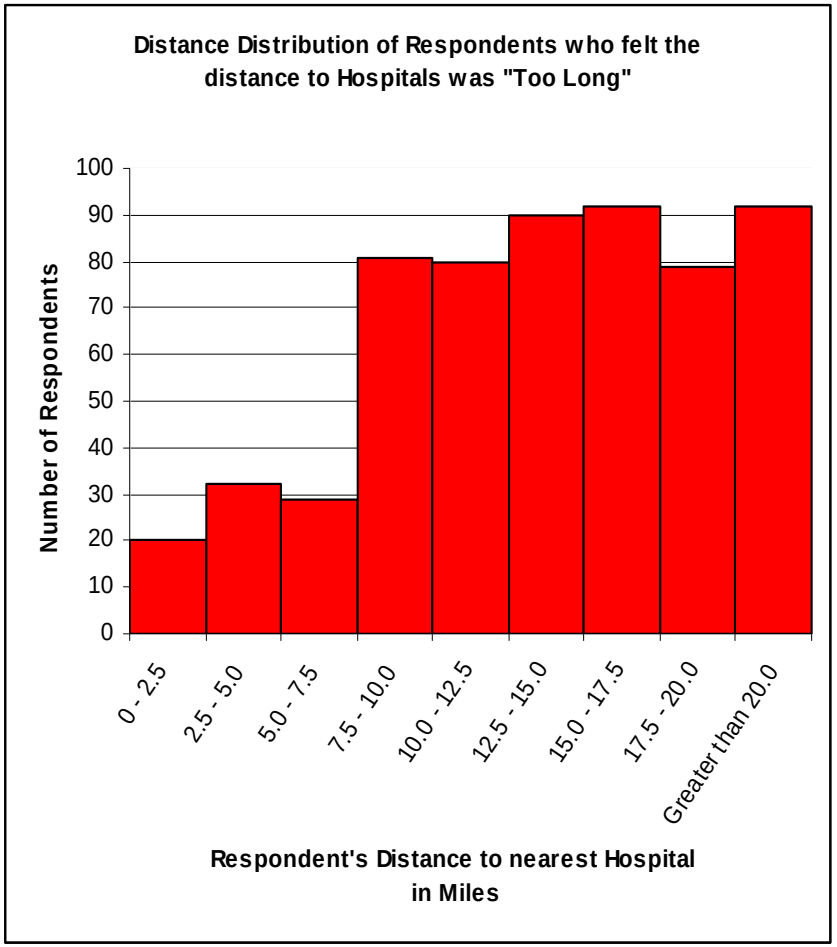
Geographic Distribution of Medical Facilities





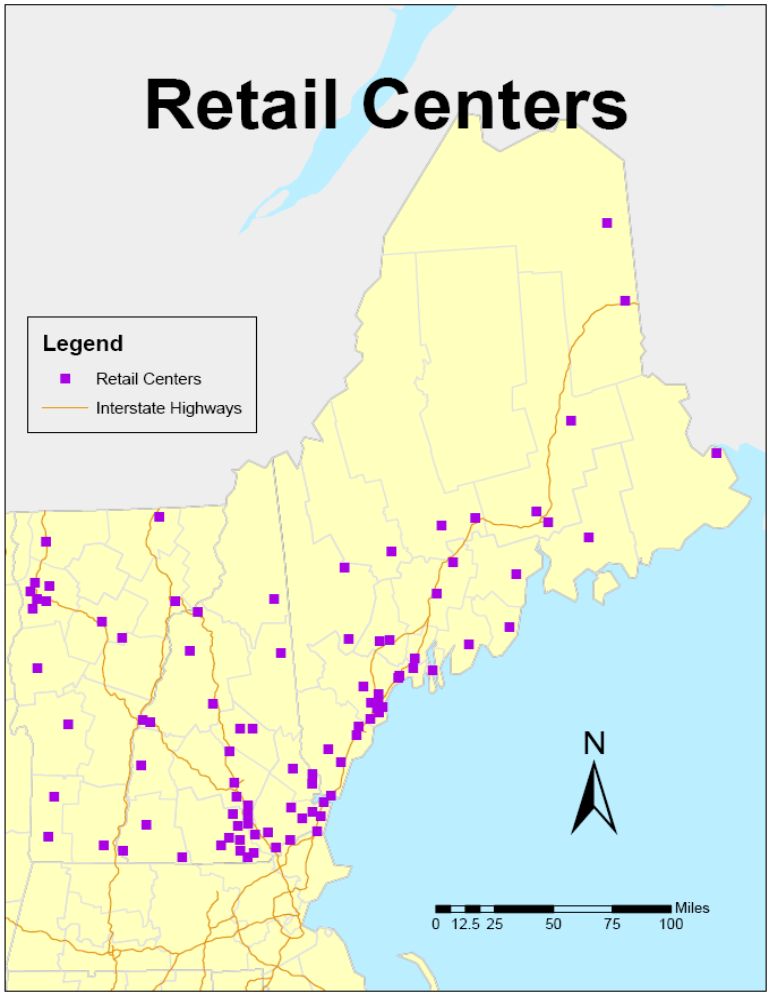
Distance to Hospital



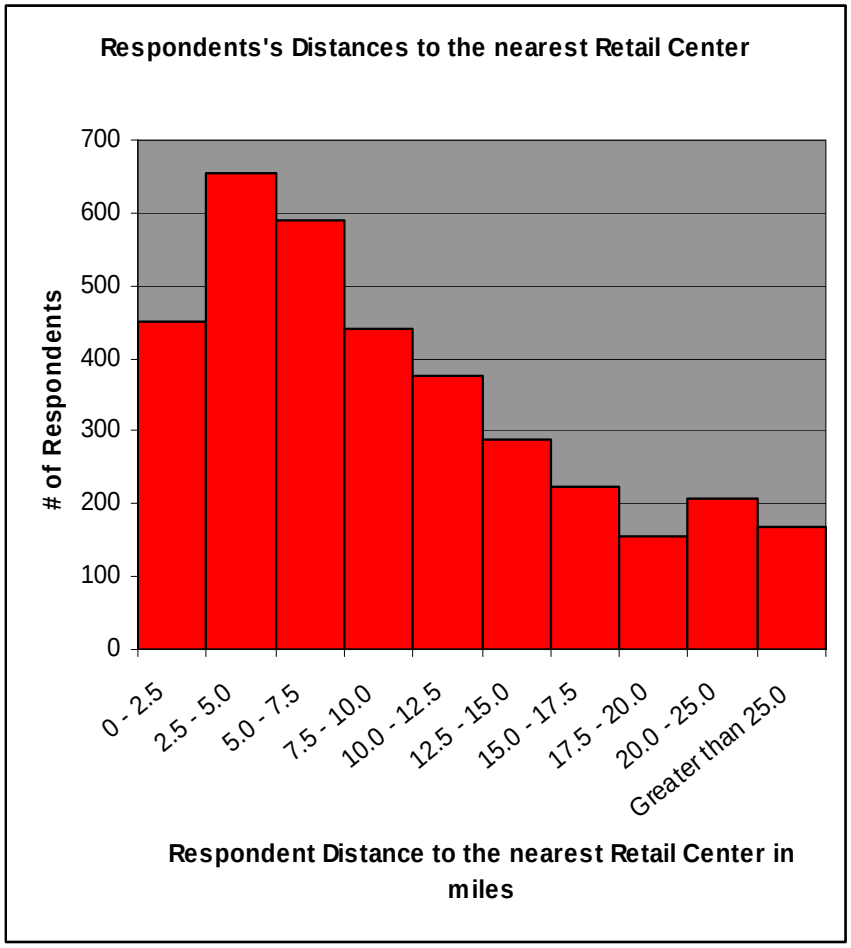


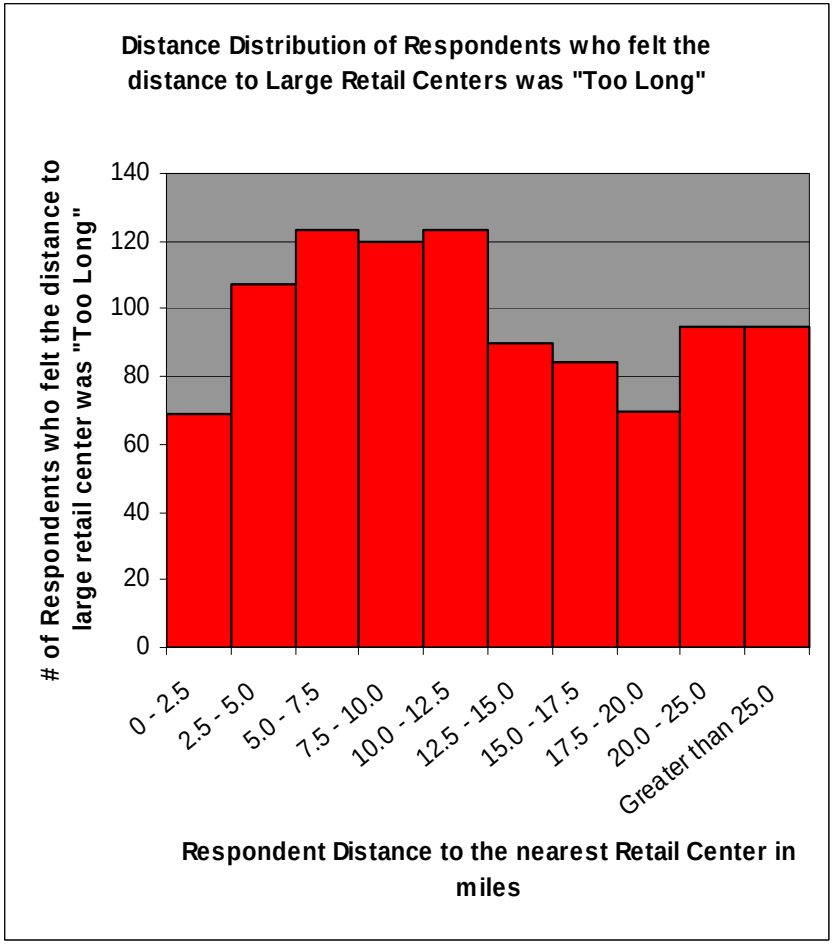
Geographic Distribution of Retail Centers

- Zip code with 375 or more retail employees and/or
- Major national discount store

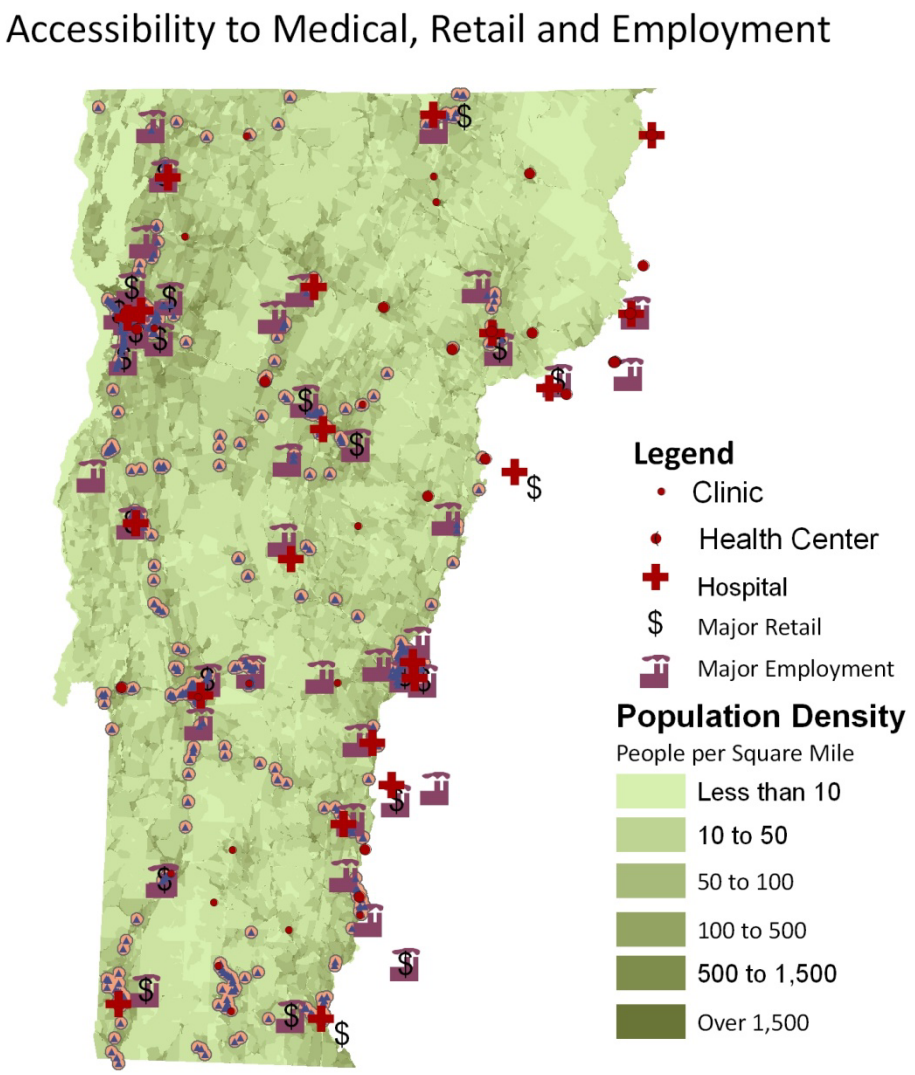


Distance to Retail Center





Data Integration



Possible Planning Applications

- Mapping different areas with different transit level of service goals
- Evaluating transit levels of service relative to goals
- Developing and evaluating transit alternatives
- Coordinating other planning with transit planning, e.g. in siting key activity centers
- Other?