IEc

Integrating Indicators of Smart Growth and Walkability into Real Estate Listings

February 4, 2011

Neal Etre
Senior Associate

2067 Massachusetts Ave
Cambridge, MA 02140
617.354.0074

netre@indecon.com

Background

- Wide range of indicators on healthy neighborhoods and smart growth exist. The most common types include:
  - Access and proximity to key community resources (i.e., retail and service locations, recreational spaces)
  - Street connectivity and walkability
  - Availability and quality of public transportation
  - Health and safety metrics are frequently employed as a complement to these measures
- Homebuyers often do not have ready access to key information on the smart growth characteristics of neighborhoods
  - Real estate listings and agents are a homebuyer's most important source of information
  - Most real estate listings provide little or no relevant information on neighborhood characteristics such as walkability and proximity to services and transit

EPA/CDC's project goals

- Identify potential indicators of smart growth and walkability that could be incorporated into multiple listing services (MLS) or other consumer-based real estate listings
- Conduct research on typical MLS operations to determine feasibility of incorporating indicators into real estate listings
- Develop implementation strategy to facilitate integration of indicators into real estate listings

Identification of potential indicators

INDICATORS FOR POTENTIAL INCLUSION INTO MLS AND OTHER REAL ESTATE LISTINGS
Property/neighborhood characteristics
Intersections per square mile
Façade distance from property line
% land zoned for commercial or residential uses
Residential density
Proximity to diverse uses
Proximity to civic or public use space
Public transportation
Commuter mode split
Proximity to transit
Transit trips
Street design
% on-street parking available
% sidewalks shaded by trees
Street design speed
Presence of sidewalks
Proportion of sidewalks in good repair
Proportion of street with adequate lighting
Vehicle-pedestrian injury collision rate

- IEc identified 35 distinct indicators
  - Property and neighborhood characteristics
  - Public transportation availability
  - Street design
- Evaluation criteria:
  - Utility to homebuyers and real estate agents
  - Relationship to activity and health
  - Scale (i.e., household, neighborhood, city)
  - Use in existing "meta-indicator"
  - Data availability
- Overall, we identified 16 potential indicators for further evaluation

Review of Existing Meta-indicators

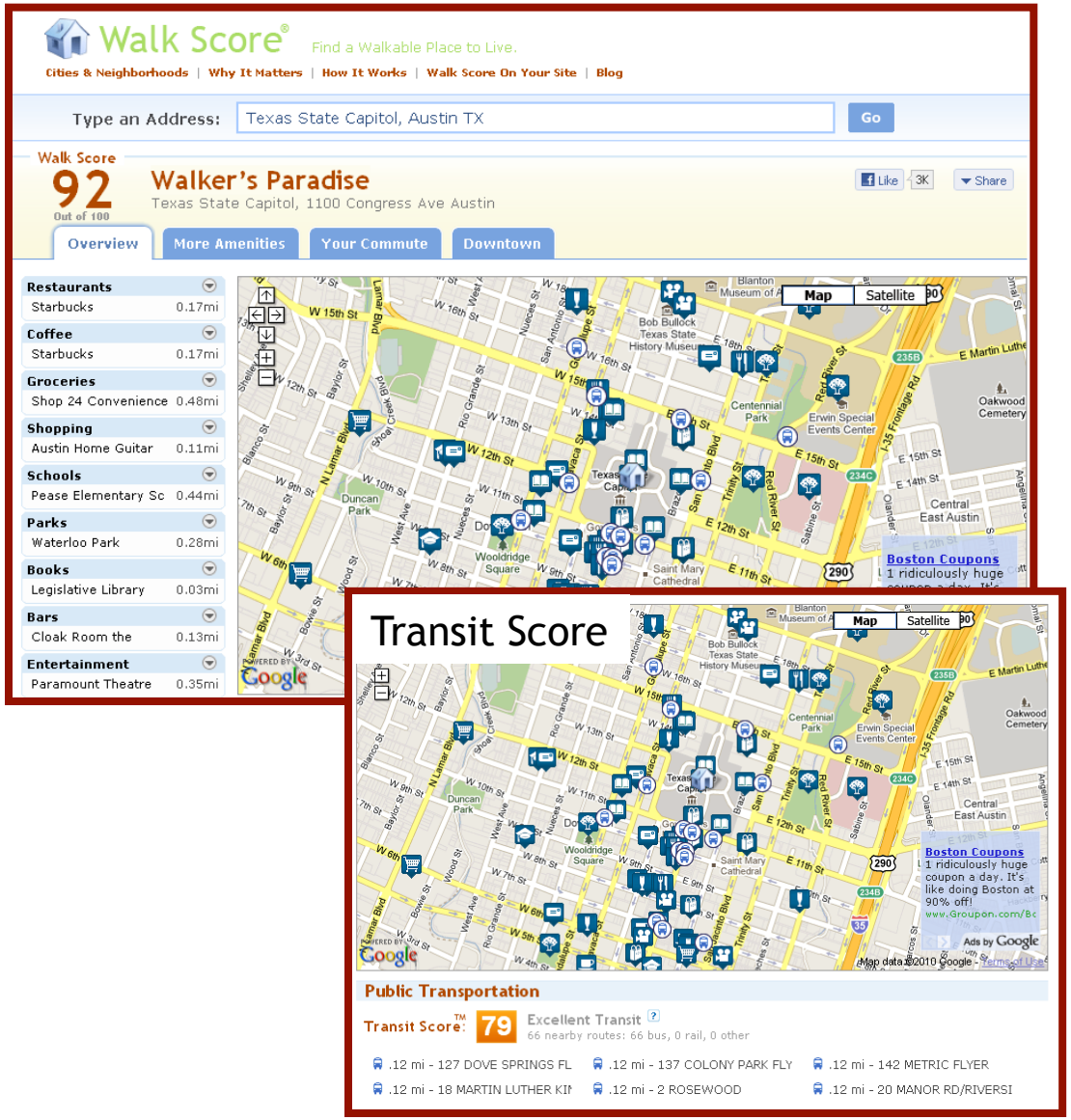
INDICATOR	WS/ TS	H+T	PEQI	WI	RDI
Property/neighborhood characteristics					
Intersections per square mile	★	✓	-	✓	-
Façade distance from property line	-	-	-	-	-
% land zoned for commercial or residential uses	-	-	-	-	-
Residential density	-	✓	-	✓	-
Proximity to diverse uses	✓	-	-	-	-
Proximity to civic or public use space	✓	-	-	-	-
Public transportation					
Commuter mode split	-	✓	-	-	-
Proximity to transit	✓	✓	-	-	-
Transit trips	✓	✓	-	-	-
Street design					
% on-street parking available	★	-	-	-	-
% sidewalks shaded by trees	-	-	✓	-	-
Street design speed	★	-	✓	-	-
Presence of sidewalks	★	-	✓	-	-
Proportion of sidewalks in good repair	★	-	✓	-	-
Proportion of street with adequate lighting	★	-	✓	-	-
Vehicle-pedestrian injury collision rate	★	-	✓	-	-

✓ = Indicator currently covered by tool
★= Indicator may be covered by tool in the future

- IEc also reviewed "meta-Indicators"
  - Walk Score™/ Transit Score™ (WS)
  - The CNT's Housing + Transportation Affordability Index (H+T)
  - San Francisco Department of Public Health's Pedestrian Environmental Quality Index (PEQI)
  - Urban Design 4 Health's Walkability Index (WI)
  - Transpo Group's Route Directness Index (RDI)
- Recommended moving forward with WS/TS and H+T Affordability Index
  - Relatively easy to understand
  - Demonstrated usability
  - National coverage
  - Note: neither provides information on street design

Walk Score / Transit Score

- Advantages
  - Easy to understand: WS measures walkability of an address (0 – 100) based on proximity to nearby amenities
  - Based on Google local database (automatically updates)
  - Application programming interface (API) for integration into other web-based applications
  - TS considers proximity to and quality of nearby transit
- Challenges
  - Costs
  - Currently measures straight-line distance (soon to be improved)
  - Only rates distance to nearest amenity in each category—e.g., does not account for concentration of amenities (soon to be improved)
  - Does not account for pedestrian friendly street design

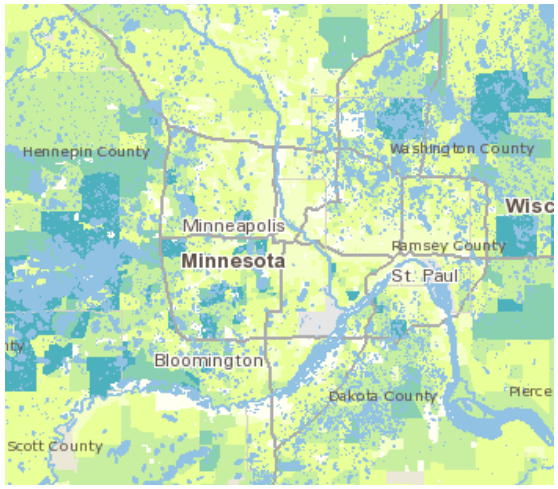


H+T Affordability Index

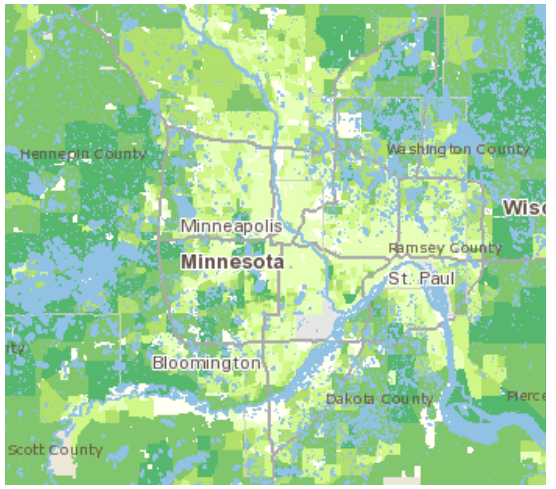
- Advantages
  - Highlights financial advantages of walkable neighborhoods
  - Assesses the combined cost of housing and transportation
  - Application programming interface (API) for integration into other web-based applications

- Challenges
  - Methods are not easily explained to homebuyers (i.e., it uses regression)
  - Not address specific ~ relies on averages across census block group
  - Does not account for user-specific commuting/travel patterns
  - Does not account for pedestrian friendly street design

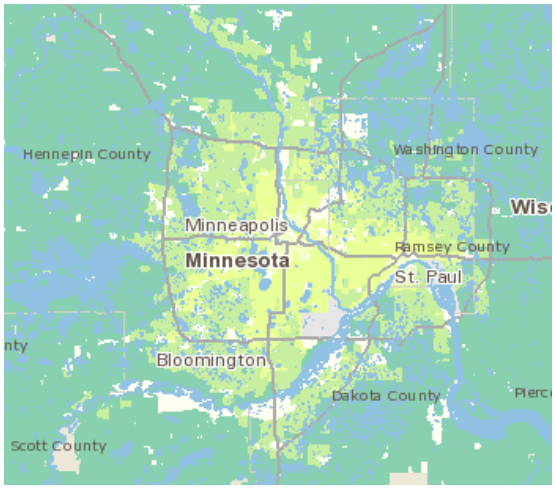
Housing Costs, % of Income



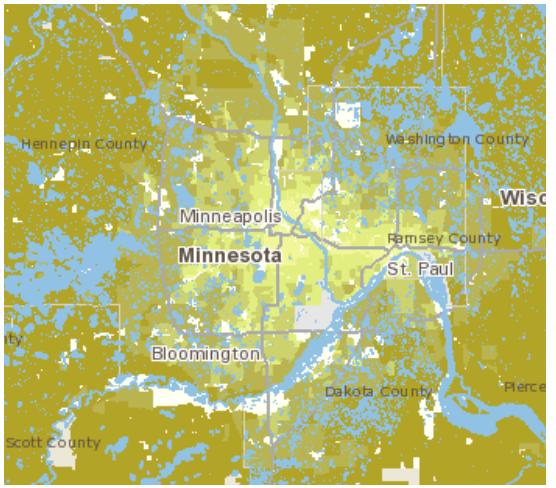
Housing + Transportation, % of Income



Transportation Costs, % of Income



Transportation Costs, $ per Month



Source: Center for Neighborhood Technology Housing + Transportation Affordability Index, http://htaindex.cnt.org/.

Feasibility research

- IEc conducted interviews with 20 real estate professionals
  - Investigated market structure and internal dynamics of MLS systems and other online real estate listings
  - Collected lessons learned from prior attempts incorporate green building information into real estate listings
  - Solicited industry opinion on how EPA can best play a role in using real estate listings to communicate walkability to homebuyers
  - Gathered feedback on the feasibility of incorporating the previously identified indicators and meta-indicators

Feasibility research findings

- Market structure and internal dynamics
  - Over 900 MLS operating in the U.S.
  - Serve as a data repository
  - Assist selling agents and brokers in marketing their portfolio of properties
  - Differ widely in the structure and capabilities of their technological systems
  - Updating fields is relatively routine – many use third-party vendors
  - Realtors typically responsible for updating listings and can be liable for accuracy
  - MLS systems face increasing competition from consumer-facing websites

- Lessons from green buildings
  - Technical issues to adding fields are relatively minimal for most MLSs
  - Persuading realtors of the value on new information is important
  - Education for realtors is critical
  - Liability concerns loom large

- EPA's potential role
  - Reduce financial hurdles associated with implementation of meta-indicators
  - Target educational campaign at real estates agents
  - Launch educational campaign at consumers to help increase awareness

Feedback on suitability of indicators for real estate listing integration

- 16 stand-alone indicators
  - Generally did not make a strong impression on the interviewees
  - Respondents felt that most indicators would not play well to the real estate agent or homebuyer
  - Proximity to transit and transit trips (i.e., frequency) received positive responses
  - Interviewees also viewed the presence of sidewalks indicator favorably

- Meta-indicators
  - Walk Score and Transit Score received favorable support
    - Ease of use/understanding by agents and consumers
    - No work/liability on the part of agents
    - Address specific results important to buyers
    - API facilitates technical implementation
  - H+T Affordability Index received some support
    - Concept was well-received, but concerns about ease of use/understanding
    - Average monthly transportation costs may be the best indicator to focus on
    - Reliance on averages (not buyer-specific data) may reduce utility in this context

Recommendations for implementation

- Establish pilot-tests
  - Identify willing MLS and consumer-facing websites
  - Suggested indicators for pilot projects
    - Walk Score and Transit Score
    - H+T ~ focus on transportation costs
    - Presence of sidewalks (if data are available)
  - Develop pilot projects
    - Coordination and planning ~ find pilot, establish guidelines and timing
    - Finalize indicators
    - If necessary, provide assistance with data assemblage
    - Provide outreach materials to realtors
    - Provide homebuyer education materials
    - Develop performance measurement plan
- Potential barriers
  - Costs to piloting organizations ~ time and money
  - Skepticism from the real estate community

Next Steps…

- Set up pilot project(s) with an MLS and potentially a consumer-facing website
- Develop targeted realtor and homebuyer outreach materials
  - Use literature on property value retention of walkable neighborhoods as a selling point to homebuyers
- Establish pilot performance measurement plans to investigate effect of new information on sales patterns
- Demonstrate potential benefits to realtors
  - Provide better information and services to homebuyers and sellers
  - Lead to sales of higher-priced properties?
  - Lead to shorter time on market for walkable homes?
- Scale up pilot program to additional MLSs and consumer-facing websites


IEc
INDUSTRIAL ECONOMICS, INCORPORATED
617.354.0074