Development for the Next Century

Geoffrey Anderson
Hazard Busing

The bar chart illustrates the percentage of students given "Hazard Busing" in 1998, categorized by the decade when the school was built. The data shows a significant increase in the percentage of students bused from 1991 to the present compared to earlier decades.
Land Use and Transportation
What is smart growth?

Smart growth is development that revitalizes neighborhoods, protects farmland and open space, keeps housing affordable, and provides more transportation choices.

It is development that is good for the economy, community, and the environment.
Smart Growth Principles

- Mix land uses.
- Take advantage of compact building design.
- Create a range of housing opportunities and choices.
- Create walkable neighborhoods.
- Foster distinctive, attractive communities with a strong sense of place.
- Preserve open space, farmland, natural beauty, and critical environmental areas.
- Strengthen and direct development towards existing communities.

- Provide a variety of transportation choices.
- Make development decisions predictable, fair, and cost-effective.
- Encourage community and stakeholder collaboration in development decisions.
Arlington, VA-- Smart growth at the corridor level

Smart growth encourages development around transit stations
Land Use With Transportation Choice at the Neighborhood Level

Status Quo

Land Use With Trans Choice
Development Patterns Supporting Transportation Choice at the Street Level

- High Density Development
- Street Trees
- Below-ground utilities
- Mixed-Use (Residential and Commercial)
- Pedestrian-friendly area
- Bike Lanes
- Median for light rail
Existing Conditions

- Low Density Development
- Single use district
- Above ground utilities
- Auto-oriented development
- No parking in rear
- Narrow Sidewalks
- Wide Streets
Lower infrastructure costs

Growth scenarios in 14 regions found that more compact development almost universally resulted in infrastructure cost savings.

In some cases, these strategies would cut costs in half.
SMART GROWTH BENEFITS PUBLIC BUDGETS: LOWER COSTS

Lower infrastructure costs

Per acre infrastructure costs for single-family homes by location

Building infrastructure to serve new development on the fringe can cost the city up to three times more per acre than urban infill development.
Case study: Charlottesville, VA

Smart growth saves roadway improvement costs

<table>
<thead>
<tr>
<th>Roadway improvement needed</th>
<th>Dispersed development</th>
<th>Town center</th>
</tr>
</thead>
<tbody>
<tr>
<td>New freeway (miles)</td>
<td>12.1</td>
<td>0</td>
</tr>
<tr>
<td>New urban roads (miles)</td>
<td>29.7</td>
<td>56.8</td>
</tr>
<tr>
<td>Widened roads (miles)</td>
<td>176.1</td>
<td>67.4</td>
</tr>
<tr>
<td>Freeway cost (millions $)</td>
<td>$300</td>
<td>0$</td>
</tr>
<tr>
<td>New road cost (millions $)</td>
<td>$120</td>
<td>$230</td>
</tr>
<tr>
<td>Widened road cost (millions $)</td>
<td>$600</td>
<td>$240</td>
</tr>
<tr>
<td><strong>Total cost (millions $)</strong></td>
<td><strong>$1,020</strong></td>
<td><strong>$470</strong></td>
</tr>
</tbody>
</table>
Case study: Sacramento, CA

Analysis of multiple planning scenarios in Sacramento revealed that compact development would save the city $7.5 billion in infrastructure costs, 23% of what it currently spends.
Higher revenues per acre

Multifamily housing in near an area’s center can generate nine times more revenue per acre than traditional large-lot, single-family housing on the fringe.
Case study: Asheville, NC

Historic restoration increases tax base downtown

The Old Penny’s Building in downtown Asheville stood vacant for over 40 years. Its taxable value in 1991 was just over $300,000.

After renovations, the building is valued today at over $11,000,000, **an increase of over 3500%** in 15 years.

The building is on a lot less than 1/5 acre.
1. These are the kinds of places that have held their value.
LOCATION AND FORM MATTER: INTENSITY

Miami

Home values drop farther outside of the city center

Miama
10 miles: -12.5%
20 miles: -15.0%
30 miles: -19.9%
40 miles: -21.8%
50 miles: -20.3%
Boston

Cleveland: Same Population

<table>
<thead>
<tr>
<th>Source: TTI</th>
<th>1982</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>% peak VMT congested</td>
<td>10</td>
<td>28</td>
</tr>
<tr>
<td>% of land miles w/ congestion</td>
<td>10</td>
<td>23</td>
</tr>
<tr>
<td>Number of rush hours</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Freeway and arterial miles</td>
<td>2420</td>
<td>4490</td>
</tr>
</tbody>
</table>
Reducing transportation costs

35% fewer vehicle miles travelled (VMT) with compact development
Reducing transportation costs

“Compared to other large metropolitan areas in the U.S., Portland area residents travel about 20% fewer miles every day.”

- Portlanders save $1.1 billion in direct transportation costs each year.

- The economic value of the time saved by traveling less is estimated at $1.5 billion per year.
## Building Long-Term Economic Stability

### Declining returns on new capacity

Annual rate of return, by investment

<table>
<thead>
<tr>
<th></th>
<th>1950s</th>
<th>1960s</th>
<th>1970s</th>
<th>1980s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total highway capital</td>
<td>35%</td>
<td>35%</td>
<td>16%</td>
<td>10%</td>
</tr>
<tr>
<td>Non-local highway capital</td>
<td>48%</td>
<td>47%</td>
<td>24%</td>
<td>16%</td>
</tr>
</tbody>
</table>
### Better understanding transportation investment

**Annual rate of return, by investment: Cincinnati, OH**

<table>
<thead>
<tr>
<th>Investment</th>
<th>Total cost</th>
<th>Total benefits</th>
<th>Net benefits</th>
<th>Internal rate of return</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus improvement, region-wide</td>
<td>$522</td>
<td>$1,141</td>
<td>$619</td>
<td>27.1%</td>
</tr>
<tr>
<td>Light rail, region-wide</td>
<td>$6,218</td>
<td>$10,784</td>
<td>$4,566</td>
<td>8.7%</td>
</tr>
<tr>
<td>New highway capacity</td>
<td>$1,209.1</td>
<td>$1,365.2</td>
<td>$156.1</td>
<td>4.9%</td>
</tr>
</tbody>
</table>

*Dollar figures in millions.*
Better understanding transportation investment

Annual rate of return, by investment: Atlanta, GA

<table>
<thead>
<tr>
<th></th>
<th>Incremental investment</th>
<th>Cumulative investment</th>
<th>Incremental returns</th>
<th>Cumulative returns</th>
<th>Cumulative ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation demand management</td>
<td>$0.22 B</td>
<td>-</td>
<td>$40 B</td>
<td>-</td>
<td>182.0:1</td>
</tr>
<tr>
<td>Connecting infrastructure</td>
<td>$26.00 B</td>
<td>$26.22 B</td>
<td>$40 B</td>
<td>$80 B</td>
<td>3.1:1</td>
</tr>
<tr>
<td>Doubling down on congestion</td>
<td>$17.20 B</td>
<td>$43.42 B</td>
<td>$10 B</td>
<td>$90 B</td>
<td>2.1:1</td>
</tr>
<tr>
<td>Better coordination with</td>
<td>$0</td>
<td>-</td>
<td>-</td>
<td>$39 B</td>
<td></td>
</tr>
<tr>
<td>development patterns</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total direct return (all</td>
<td>-</td>
<td>$43.20 B</td>
<td>-</td>
<td>$129 B</td>
<td>3.0:1</td>
</tr>
<tr>
<td>investments)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Transportation Choice Wins at the Ballot Box

- Almost a 70% approval rate for transportation measures (twice the rate of all ballot measures)
- Success across region, population, party affiliation
- But it takes a sustained and dogged public education effort to get to yes
Proximity improves innovation and performance

• Increases access to labor
• Concentrates customers
• Produces economies of scale
• Produces ideas and innovation
Over 150 biotech firms have located near Boston’s Kendall Square, home to MIT. These companies gain access to a pool of talented labor, connections to research institutions, specialized services to biotech firms, and easy information transfer.
LOCATION AND FORM MATTER: PROXIMITY

Clustering: Carpets in Dalton, GA
RTP North Carolina

• As business and economic conditions have evolved, so has the need to advance RTP land use and infrastructure to support and attract research and other opportunities with the unique park environments that foster greater interactions and sociability.

– Research Triangle Foundation
Smart Growth America is the only national organization dedicated to researching, advocating for and leading coalitions to bring smart growth practices to more communities nationwide.

www.smartgrowthamerica.org

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