Goals for this Presentation

- Identify strategies for building wealth through greater value creation and capture in cities and regions
- Identify policy and market barriers
- Suggest appropriate roles for mayors in leading the transition
References

- Chapter 12 in The New Transit Town, Island Press 2004
- “Great Places and Great Nodes that Work for Everyone” by Scott Bernstein
- Travel Matters: Mitigating Climate Change with Sustainable Surface Transportation, TRB/TCRP Report 93, at www.travelmatters.org
Review of Desired Outcomes

- Today
  - Auto & transit-related development
  - Value-capture is rent seeking
  - Managed tightly by a single entity, eg, transit operator or developer

- Tomorrow
  - Transit & people-related development
  - Value-capture is multipurpose
  - Jointly managed with a broader community
Desired Outcomes-Continued

- Financing tied to physical design
- Seen as a subsidized liability
- Transportation benefits are defensive, e.g., for congestion management
- Financing tied to performance measures
- Formally credited as a local & regional asset
- Transportation benefits are affirmative, e.g., for household savings, local economy, healthy environment
Desired Outcomes—Continued

- Inter-city travel bypasses local economy
- Promoted primarily for certain upscale markets
- Led by clever exceptionalism (i.e., it really does look like rocket science)

- Inter-city travel supports local economy
- Promoted to achieve sustainable mixed-use, mixed-income communities
- A way of life
How To Get There
Five Key Aspects of TOD

- Location Efficiency
- Rich Mix of Choices
- Value Capture
- Place Making
- Resolve the Tension Between Node and Place
Location Efficiency and Value Capture
As the Curtain Rose on the 20th Century—
What’s Wrong with this Picture?

- Cars were dangerous
- New York City set and posted speed limits
- But there were no speedometers
There Was Competition for Public Space
Designers and Engineers Coped for a While

**INSTALL STOP AND GO SIGNALS**

*TO REGULATE AS WELL AS TO CONTROL TRAFFIC*

[Diagram of a city street with traffic signals and pedestrians]

**PEDESTAL SIGNALS**

*FOR TRAFFIC CONTROL*

*INSTALLTED ON END OF SAFETY ZONES*

Elizabeth, N.J.

**Figure 15**
But Market Forces Were Strong
Most Places Abandoned Their Transit Systems
America’s Inter-City System Was Largely Abandoned
And Public Policy Favored a Different Vision
High Performers Recognized the Need for Seamless Integration
While Others Thought We Could Have It All By Digging In
Not Since the 1920’s Have Planners Had Good Scorecards
So While We Get Examples of New Prototypes
These Are Not Often Replicated
The Opportunity: Tangible Assets of Places

- Urban Purchasing Power
- Concentrated Workforce
- Mass Transit Systems
- Accessibility
- Abandoned and Under-Used Land
Tangible Assets of Places, con’t

- Underutilized Infrastructure
- Already Assembled Rights of Way
- Aggregation of Efficient Resource Use
- Surprising Biodiversity
Sample Asset: Accessibility

- Density, Transit Access (Proximity, Frequency, Connectivity), and Amenities Determine Transportation Demand
- Statistics Used to Estimate Likely Travel Demand
Demand is Verified by Measuring Vehicle Ownership and Extent of Use

Demand is Then Valued in Dollars and Cents
Veh/Hh, VMT/Veh and VMT/Hh in metropolitan San Francisco

\[
\frac{\text{Veh}}{\text{Hh}} = 4.722 \left( 22.520 + \frac{H}{RA} \right)^{-0.3471} \left( 1 - e^{-\left( 0.000112 \frac{S}{P} \right)^{1.2386}} \right) \left( 1 + 1.0519 \frac{P}{H} \right) (Tr + 60.312)^{-0.2336}
\]

\[
\frac{\text{VMT}}{\text{Veh}} = 10386 \left( 0.5041 + \frac{H}{TA} \right)^{-0.0419} \left( 1 + 0.02759 \frac{P}{H} \right) \left( 1 - 0.0704 \sqrt{\text{Ped}} \right) - 0.01743 \left( \frac{\$}{P} - 22136 \right)
\]

\[
\frac{\text{VMT}}{\text{Hh}} = \frac{\text{Veh}}{\text{Hh}} \times \frac{\text{VMT}}{\text{Veh}}
\]

For the 3 metropolitan areas, the \( R^2 = 79 – 96\% \) for Veh/Hh and \( 80 – 94\% \) for VMT/Hh.

H/RA is Households/Residential Acres, H/TA is Households/Total Acre, $/P is Income/Capita, P/H is Persons/Hh, Tr is Zonal Transit Density and Ped is Ped/Bicycle Friendliness


Also reported at http://www.sierraclub.org/sprawl/transportation/holtzclaw-awma.pdf
Showing the Benefit Graphically

Driving vs Residential Density

- Annual VMT/Hh vs Households/Residential Acre
- Graph comparing SF, LA, and Chicago densities

Axes:
- Y-axis: Annual VMT/Hh
- X-axis: Households/Residential Acre

Legend:
- SF
- LA
- Chicago
Mapping the Asset Regionally
Transportation is the Highest HH Cost After Housing
Buy Cars or Build Wealth?

- **Monthly Car Sales**
- **Personal Savings Rate**

### Charts
- **Millions of Cars**
- **Percent of Disposable Income Saved**

### Data Points
- **1976.01**
- **1976.08**
- **1977.03**
- **1977.10**
- **1978.05**
- **1978.12**
- **1979.07**
- **1980.02**
- **1980.09**
- **1981.04**
- **1981.11**
- **1982.06**
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- **1997.01**
- **1997.08**
- **1998.03**
- **1998.10**
- **1999.05**
- **1999.12**
- **2000.07**
- **2001.02**
- **2001.09**

### Legend
- **Blue Line:** Monthly Car Sales
- **Green Line:** Personal Savings Rate
“Zero Percent Loans Drive Economy”:
Detroit Free Press, August 2002
‘We’ll be the first generation in the history of the planet that drove to the poorhouse in an automobile’

Will Rogers
Showing the Benefits of Capturing the Value

How much more of Cook County is Affordable for the Working Poor when we count Transportation Savings
How Much More of the Bay Area Is Affordable When Transportation Savings Are Counted

Where the Washingtons Can Afford the Average Home using a Conventional Mortgage

Where the Washingtons Can Afford the Average Home using a Location Efficient Mortgage

Source: 1999 HMDA Data

Source: 1999 HMDA Data and The Institute of Location Efficiency
Skip the car, buy a house

There's a lot of hand-wringing nowadays about suburban sprawl and the need for “smart growth.”

But like the weather, nobody's doing much about it. Much of the home-buying public still opts for wide-open spaces along the metropolitan fringe. And despite thoughtful warnings from civic and regional groups, political realities in Illinois militate against significant governmental action.

Now comes a modest but innovative pilot program that just might make a small difference. Maybe even a big difference—if it educates the public about the true cost of living “out there.”

It's called the Location Efficient Mortgage, or LEM, and it has been developed by environmental groups such as Chicago's Center for Neighborhood Technology along with Fannie Mae, the government-chartered, stockholder-owned repurchaser of home mortgages.

It works like this: Participating lenders, in evaluating applicants, take into consideration how close the dwelling is located to public transportation. If it's so close the applicant can live without a car, or a working couple can get by with just one, the estimate of disposable income is increased, and with it, the size of the mortgage for which they qualify.

A couple jointly earning $60,000 and buying into Chicago's transit-rich Edgewater neighborhood, for instance, would qualify for a home selling for $212,218. Out in the boonies, under traditional guidelines, the limit would be $158,364.

And there are sweeteners. LEMs are not subject to income limits and they offer more flexibility, including lower down payments, than conventional mortgages. The City of Chicago, moreover, is offering vouchers worth $900 toward the purchase of energy-efficient appliances to the first 100 LEM borrowers.

Downsides? There's mandatory counseling. And for now it's limited to Chicago and three West Coast cities.

The ultimate value of LEM, however, may be to show, in ways people readily understand, that sprawl does impose costs. Some of that cost is paid, knowingly and gladly, by those who choose to live “out there.” Much of it, however, is hidden, and paid indirectly by those who live “back here.”

For more information about LEMs call 1-800-732-6643.
Status of the Idea

LEM is sponsored by:

Center for Neighborhood Technology
The Center for Neighborhood Technology is the partner and LEM contact in the Chicago Area. CNT is a non-profit organization committed to helping the greater Chicago area protect the environment, save energy, save money, and build sustainable, efficient communities. For over 20 years the CNT has been inventing and implementing programs that achieve these goals. For more information on CNT visit www.cnt.org

Fannie Mae
Fannie Mae is the largest non-bank financial services company in the world. It operates pursuant to a federal charter and is the nation’s largest source of financing for home mortgages. Over the past 30 years, Fannie Mae has provided nearly $2.5 trillion of mortgage financing for over 30 million families. For more information call 1.800.7FANNIE (1.800.736.6643) or visit www.fanniemae.com

NOW IT’S EASIER TO OWN YOUR OWN HOME!

Introducing the LEM℠, the Convenient Community Mortgage.

To learn more about the LEM Convenient Community Mortgage or for a list of participating lenders, contact:
The Center for Neighborhood Technology
2125 W. North Avenue
Chicago, IL 60647
773.478.4800 x1123
www.locationefficiency.com

Location Efficient Mortgage℠ is a Service Mark of the Institute for Location Efficiency, a California nonprofit organization.
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The Joyce Foundation
John D. & Catherine T. MacArthur Foundation
The Simmons Foundation
And other private donors.
The Idea is Taking Hold

Location Efficient Mortgages® in Chicago, Bay Area, and Seattle
- Smart Commute Mortgages in Pittsburgh, Minneapolis, and 10 other regions
- Take the T Home in Boston
- Walk to Work Mortgages in Milwaukee
- Employer Assisted Housing in many places
Showing the Benefits: Two Views of Emissions

Traditional View: Cities produce large amounts of GHG.

Emerging View: City dwellers produce relatively low amounts of GHG.

Each color represents one fifth of the land area on each map.
Car Sharing:
Pay as You Go Driving
How it Works

- A kind of “riders club,” an “HMO for riders,” or “premium last mile” transit service
- Organization buys cars, members use them
- Typical bill is $125/month
- Savings of $200-$400 per month for users
- Each car supports 20-40 households
- Each car removes 10 from the road
- 58 percent sell or delay purchase
Fixing It First

- Total increase in housing 1970-1999 was 2.4% per year
- Total increase in commercial space was 2.4% per year
- Population increased by 1.1% per year
- Households increased by 1.5% per year
- Roads increased by 2.7% per year
- Jobs increased by 2% per year
Fixing It First

- 80% of all housing that will exist in 2020 exists today
- Similar portions for infrastructure and non-residential stocks
- Depreciation of existing stocks equals or exceeds growth
- Life extension is worth more than production
Infrastructure Accounting

- Maintaining what we have, I. E., Fixing It First
- Using marginal costs to achieve least cost strategies
- Identifying underutilized assets
- Extending the life of existing assets
Infrastructure Accounting

- Building requires water, sewer, gas, electric, telephone, bandwidth, roads, transit and municipal services
- Marginal costs in older areas are $0-10,000
- Marginal costs in newer areas are $55-60,000
- In Chicago, S. Florida, 770,000 new HH by 2020
- Net difference is in the range of $42 Billion
Sample Benefits: Infrastructure and Rights of Way
Different Ways to Distribute the Same Population

ILLUSTRATIVE DISTRIBUTIONS OF A POPULATION OF 1.5 MILLION OVER 121 SQUARE MILES OF LAND.

Population distribution governed by two rapid transit lines, with all other movement on foot.

Half the population distribution governed by two transit lines, the other half by automobile access.

Population distribution governed by automobile access alone.
Thermal Efficiency Increases with Density and Geometry

- With row housing, each addition unit pairing savings at least two heat loss surfaces compared to single family
- Potential savings of 32-43 percent over component efficiency alone
Green Infrastructure
Equity Express℠: Individual and Community Equity Savings Accounts

- Place based efficiencies produce big revenues.
- Value can be captured.
- Captured value is applied to wealth creation.
- Wealth creation becomes the key performance measure for regional equity achievement.
What This Means for One Family

- CNT studied 4 relatively mixed income communities in Chicago.

- Used a set of incentives and programs to achieve resource efficiencies (car sharing, location efficient mortgages, home energy efficiency, real time electricity pricing).

- Assumed availability of an IDA with a 2:1 match.
Two Savings Paths to Homeownership
(Avg. HH Expenditures for $35,536 Annual Income)

Save $31/month from reduction in Other expenditures
Time to home with 2:1 match = 11 yrs

Save $212/month from reduced HH expenditures
Time to home with 2:1 match & 20% to Community = 2 yrs

The Community benefits by increased local ownership, a cleaner environment, and additional capital.
Example: How This Works for Maria

- Single parent.
  - $30,000 annual income, lives by O’Hare.
  - Starts an Equity Express Savings Account.
  - Sells car and joins car sharing program.
  - With $ from car sale, joins co-op.
  - Buys A/C with money from car sale and gets free light bulbs.
  - Saves $192-202/month; $2304-$2404/year.
  - Buys a house in 9 months with 2:1 match.
How We Estimated Community Benefits

- Each new homeowner contributes 20 percent of their savings to a community benefits fund.
- Each community sets a goal to increase homeownership by 10 percent or by 1,000 households.
- Each household makes a down payment of $5,000.
- Each first time homebuyer therefore contributes $1,000 to the community benefits fund.
How We Estimated Regional Benefits

- Each community contributes $1,000,000 to capitalize a local fund and sets goals to get these funds matched.

- Each fund joins a cooperative that pools its purchasing, leveraging & borrowing power.

- Example: In 10 years, with a 1:1 match, 50 communities capitalize a $1 billion equity fund.
National and Local Researchers Measured the Dimensions of the Challenge

- Metro Atlanta grew 600,000 acres or 930 square miles, an increase of 81 percent over previous 701,000 acres.
- Population grew from 2.2 to 3.6 Million or 62 percent.
- Daily VMT increased about 1 percent for each 1 percent increase in land use.
There Needs to be Better Alignment Between Plans and Development
Regional Housing Need

- 24.4 percent of owner-occupied HH pay over 30 percent of HH income for housing
- 36.9 percent of renter HH pay over 30 percent of HH income for housing
- Majority of all HH earning less than $35,000 pay more than 30% of household income for housing
- The gap for these households: the 10 county region lacks at least 185,000 affordable units
Real Cost of Housing Includes Transportation Cost, Increases Gap

Atlanta Housing Affordability When Auto Costs are Considered

Source: Map is based on owner occupied housing median value & estimated monthly loan payment assuming 30 year loan at 7% interest rate. 50% area median income is $41,657, affordability is based on HUD 30% of income standard. Auto costs based on 2000 VMT Data at a County Level & Average vehicles/FH at a census tract level (2000 data). Assumes 51.7 cents/mile (Your Driving Costs - AAA 2003)

Prepared by: The Center for Neighborhood Technology
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<th>What We Do/How To Pay</th>
<th>Regulation/Affirmation</th>
<th>Inclusion through Opportunity</th>
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<td>- Score LIHTC by location efficiency</td>
<td>- Housing Trust Fund</td>
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<td>- Inclusionary zoning</td>
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<td>- Tax incentives for smart growth</td>
<td>- Location-efficient incentives (LEM, Smart Commute, etc.)</td>
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<td>- Regional Fair Share Housing</td>
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<td>- Screening transportation investments for impact on affordability to households and communities</td>
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<td>- Regional joint housing and transportation planning</td>
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<td>- Enforce housing goals in 1989 Statewide Planning Act</td>
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<td>- Transferable Development Rights</td>
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<td>- Promoting broader housing product range</td>
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<td>- Car sharing</td>
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Effective Systems and What to Build
A Clear Choice

- Business as usual, leads to continued sprawl, lack of affordable housing
- Build out commuter network, but don’t change land use, probably continues to feed sprawl and high costs
- Build out transit-oriented, mixed used, mixed income network, tie to land use at 7 HH/acre or greater
- Accommodate all growth and achieve inclusive affordability
Freiburg Germany—Modest Density + Good Coverage + Ease of Use = Low Car Use + Affordability
"The Streetcar is the Apostle of Democracy"

William Jennings Bryan addresses crowd from street car at corner of Coral Way (Miracle Mile) and Ponce de Leon Boulevard on April 29, 1925.
Big Systems and Small Places

- Startup streetcar systems in Portland, Seattle, etc.
- Explicit public-private partnerships
- TIF-like financing mechanisms used to prospectively capture value
- Streets become multi-purpose utilities
- Proposed small-starts funding in TEA3
Capital as if Airports Matter

- Top 21 AIP’s currently proposed at $90 B
- All 527 airports with scheduled service over 20 years $300-$500 Billion plus landside access
- Possible new deal—flex local airport dollars, build regional banks
What Cities Can Do Now on Inter-City Travel

- Remove curbside bus prohibitions
- Build air-rail-bus links into AIP’s and regional surface plans too
- Join peak schedule shifting to reduce congestion both in the air and on the ground
- Treat airports as second downtown and zone for land uses
- Build regional coalitions around this—include multi-city market sharing (e.g., Milwaukee and Providence share market with O’Hare and Logan)
Smoothing these schedules out reduces peak by up to 13% & reduces capital demand by 1/3.
What Needs to be Done

- Additional planning and development
- Web enabled assistance on financial literacy
- Demonstration program funding
- Policy support
Possible Projects

- Web-based cost calculators
- Parallel housing affordability index that includes energy and transportation costs
- Work with NAR to get these costs disclosed on www.realtor.com
- Help develop performance standards for transit-oriented development
Our Basic Message

- Good community design and amenities pay
- Bad design and lack of amenities constrains wealth
- This is a must-have performance measure for planned development
- Don’t let the American Dream stop the American Dream
Learning to Do It Together

- A learning network of knowledge creating experiences
- Truly joint development
- Marriage of good design with excellent performance
- New kinds of public-private-community partnerships
- Creating the kind of value that can be profitably shared
Recommendations

- Use location efficiency and CTOD market research to create performance based brand equity
- Boost support for rapid and sustained learning
- Use what we already know—e.g., build scorekeeping for location efficiency and energy efficiency into plan review and codes
- Sharpen the barriers analysis to include infrastructure and pricing
- Use new accounting standards awareness to leverage opportunities (GASB34 & bond rating)
- Work with private sector to standardize product definitions and boost capital access
- Experiment with new risk sharing tools
- Tie this all to wealth creation and community performance
For More Information:

- scott@cnt.org
- www.cnt.org
- www.locationefficiency.com
- www.travelmatters.org
- www.reconnectingamerica.org
- www.transact.org