CNT Sustainable Communities Attainable Results

Driving: A Hard Bargain

The Combined Cost of Housing & Transportation in the Chicago Metropolitan Region




Center for Neighborhood Technology
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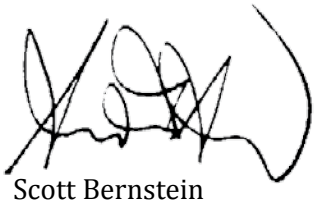
Driving: A Hard Bargain

Until recently, most discussion of housing affordability has focused exclusively on home prices, leaving out the second largest expense for most households: the cost of transportation. The resulting lack of clear information about the full costs associated with housing location has motivated inefficient development and spurred the "drive 'til you qualify" movement of households away from the city center in search of lower cost housing. In the last several years, the dramatic increase in foreclosure rates, often concentrated in remote exurbs, and the equally dramatic spike in gasoline prices around the country have revealed the vulnerability of households that choose locations based on an incomplete and often misleading understanding of the true costs.

For nearly ten years, the Center for Neighborhood Technology has worked to bring transparency to the cost of location through an Affordability Index that gives both housing and transportation costs at a neighborhood level. Thanks to support from the Searle Funds at The Chicago Community Trust, which provided lead financial support for *Driving: A Hard Bargain*, CNT is able to offer a model for how H+T analysis can inform and guide regional planning. In cooperation with the Chicago Metropolitan Agency for Planning (CMAP), the Chicago region's metropolitan planning organization, CNT has produced this customized analysis incorporating detailed, local datasets provided by CMAP and recommendations for sustainable growth targeted to municipal, regional and state entities.

CMAP's embrace of the H+T measure of affordability places it ahead of the curve nationally as the HUD-DOT-EPA Interagency Partnership for Sustainable Communities moves towards a comprehensive definition of housing affordability and hones its programs to yield more livable communities. CMAP's collaboration with CNT to include H+T costs in its planning processes also sets an important precedent for MPOs across the country interested in aligning their own policies with the livability principles set forth by the HUD-DOT-EPA Partnership.

CNT would like to thank Randy Blankenhorn, Executive Director, and Jill Leary, Deputy Director, CMAP, for their guidance and suggestions. *Driving: A Hard Bargain* also benefited from the expertise and assistance of Bob Dean, Lee Deuben and Kristin Heery, who coordinated the delivery of CMAP data.



Scott Bernstein
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Introduction

Discussion of housing affordability usually revolves around home prices alone, failing to account for the varying costs of transportation in different locations. Although frequently overlooked, research has shown that these costs typically represent a household's second largest expenditure, in some cases consuming as much as 30% of household income. The lack of clear information about the true costs and tradeoffs associated with housing location motivates inefficient development decisions and has helped spur the "drive 'til you qualify" phenomenon, which describes the movement of households away from the city center in search of lower cost housing. In the last several years, the dramatic increase in foreclosure rates, often concentrated in remote exurbs, and the equally dramatic spike in gasoline prices around the country have revealed the vulnerability of households that choose locations based on an incomplete and often misleading understanding of the true costs.

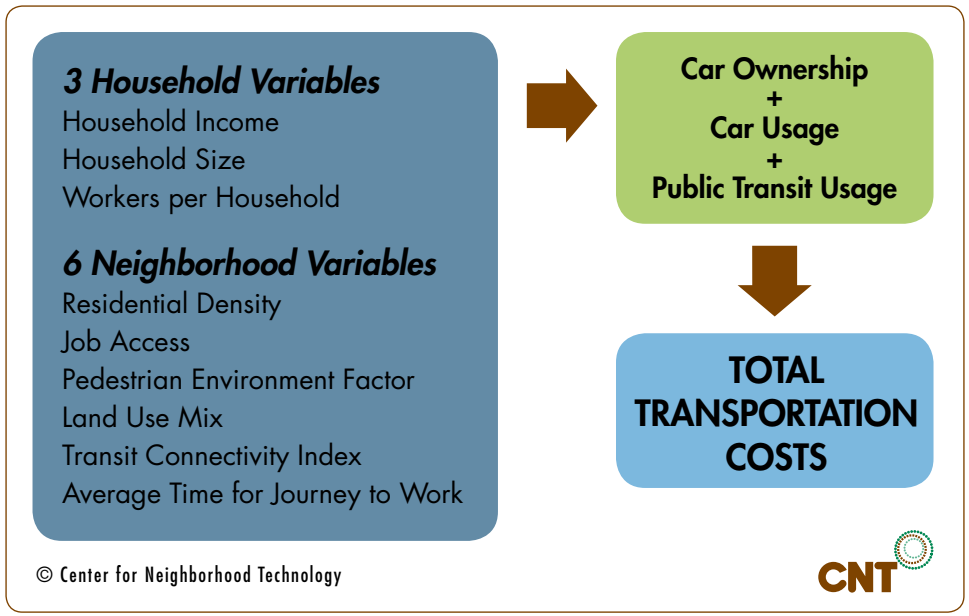
While the Chicago metropolitan area is known as a relatively affordable place to live, with a reasonably priced housing market and the second largest public transportation system in the U.S., the region has not been spared the recent turmoil in energy and real estate markets and has struggled to meet demand for affordable housing and transportation. Faced with rising gasoline prices, over 70,000 new foreclosures in 2009 and congestion costs estimated by the Metropolitan Planning Council of approximately $7.3 billion per year, Chicago must plan for a future in which needs for low- and moderate-income housing are met, and families have access both to varied transportation options and clear information about their costs. An expected 27% increase in the region's population, from 8.6 to 10.9 million residents between 2010 and 2040, and the considerable and increasingly well-recognized cost of carbon pollution mean that the decisions made today about housing location and transportation development are all the more important.

This analysis of Housing and Transportation (H+T) costs in the Chicago region represents a major step toward sustainable development by revealing the true costs of living in the region and providing a comprehensive tool for understanding how burdens placed on families, public agencies and the environment can be minimized. The analysis will directly impact Chicago's future development as a decision-making tool employed by the Chicago Metropolitan Agency for Planning (CMAP) for its *Go to 2040* plan and policies. The information presented in this report will also allow households to make more informed choices about where to locate and will enable communities to recognize development opportunities that provide truly affordable and sustainable housing and transportation options.

Behind the H+T Affordability Index

The innovative element of the H+T Index is CNT's Transportation Cost Model. The model describes the relationship between independent household and neighborhood variables and three dependent variables: auto ownership, auto use and transit use. From these variables, the model derives the total transportation costs for different types of households based on where they live. Housing Costs are derived from Census figures for Selected Monthly Owner Costs for homeowners with a mortgage and Gross Rent for renters paying cash.

This report features the results of a customized transportation cost model, designed specifically for the Chicago region with detailed, local datasets from the Chicago Metropolitan Agency for Planning (CMAP) and the 2000 Census. Although maps include Kendall County, findings cited as regional averages in this analysis do not include data for the county, which was not a part of the Northeastern Illinois Planning Commission (NIPC) in 2000 but came under CMAP jurisdiction in the summer of 2005 with the merger of NIPC and the Chicago Area Transportation Study (CATS). A detailed explanation of the model and customization is included in the appendix.



The H+T Index Uncovers the "Cost of Place"

Factoring Transportation into the Affordability Equation

Most people, from public officials and bankers to homeowners and renters, define affordability based only on housing costs. According to the traditional view of affordability, housing costs should consume no more than 30% of a family's budget. Today, the real estate market factors the value of land into the price of a home, based on the home's location and proximity to jobs and amenities. But there is less clarity about the accompanying transportation costs that also depend upon location. In many cases, the very same features that make land and homes more attractive and more expensive per square foot also make transportation costs in the area more affordable.

Although the cost of transportation varies considerably among different communities, it is nearly always the largest household expense after housing. But while people generally have a good idea of what they pay for housing, they are less likely to understand their transportation costs, a series of small and large payments dispersed over the course of a month or year. Transportation costs include automobile finance charges and depreciation, gas purchases, insurance and transit passes, which in the aggregate factor significantly into the housing affordability equation. The lack of transportation cost data led CNT to develop its H+T Affordability Index as a better way to describe the costs faced by households.

It is very difficult to determine the level at which transportation expenditure should be considered affordable, as it varies by household choices and characteristics, income, and available options in a given area. Nevertheless, after analyzing costs in 53 metro areas, ranging from large cities with extensive transit (such as the New York metro area) to small metros with extremely limited transit options (such as Fort Wayne, IN), CNT found that 18-21% of area median income is a typical level for household transportation expenditures but that 15% has been achieved by many communities in the country and should represent the goal toward which we strive. By combining this figure with the 30% standard for housing affordability, CNT has established an affordability goal of no more than 45% of household income spent on housing and transportation combined.

Location Efficiency Yields Lower H+T Costs

Location efficient neighborhoods are compact, mixed-use, transit-rich communities where homes are located near shopping, schools and work. Comprehensive analysis of H+T costs has revealed that location efficiency is sometimes even more significant than housing cost in determining overall affordability, making these neighborhoods not only more convenient than less efficient areas, but also more likely to meet the 45% goal for affordability.

While residents in location efficient neighborhoods typically pay more for housing, they also own fewer cars, pay less for transportation and dedicate less of their budget to overall H+T costs. In contrast, people living in less dense communities may pay less for housing but pay much more to get around because they lack easy access to employment centers, commercial areas, schools and public transportation. Households in these communities own more cars and drive them farther to meet daily needs, adding up to transportation costs that often exceed the savings derived from lower cost housing.

By easing reliance on automobiles, location efficiency lightens the burden not only on families, but also on the environment. New research performed by CNT has shown that households located in efficient neighborhoods contribute far less to transportation-based carbon emissions than do households in comparatively inefficient locations.

Lack of information on location efficiency leads to unexpected financial burdens and time constraints for everyone. When planners and home-seekers overlook the hidden costs associated with sprawl and ignore the benefits of transit, they tend to make inefficient location decisions and miss opportunities for smart growth. Failure to recognize the value of location efficiency in dollars, time and greenhouse gas emissions also leads to uninformed criticism of the costs involved in transit projects that serve in-town urban and inner-suburban locations. Consequently, many dense, convenient, but undervalued downtown areas suffer from disinvestment and fail to attract new development.

Transportation should consume no more than 15% of income.

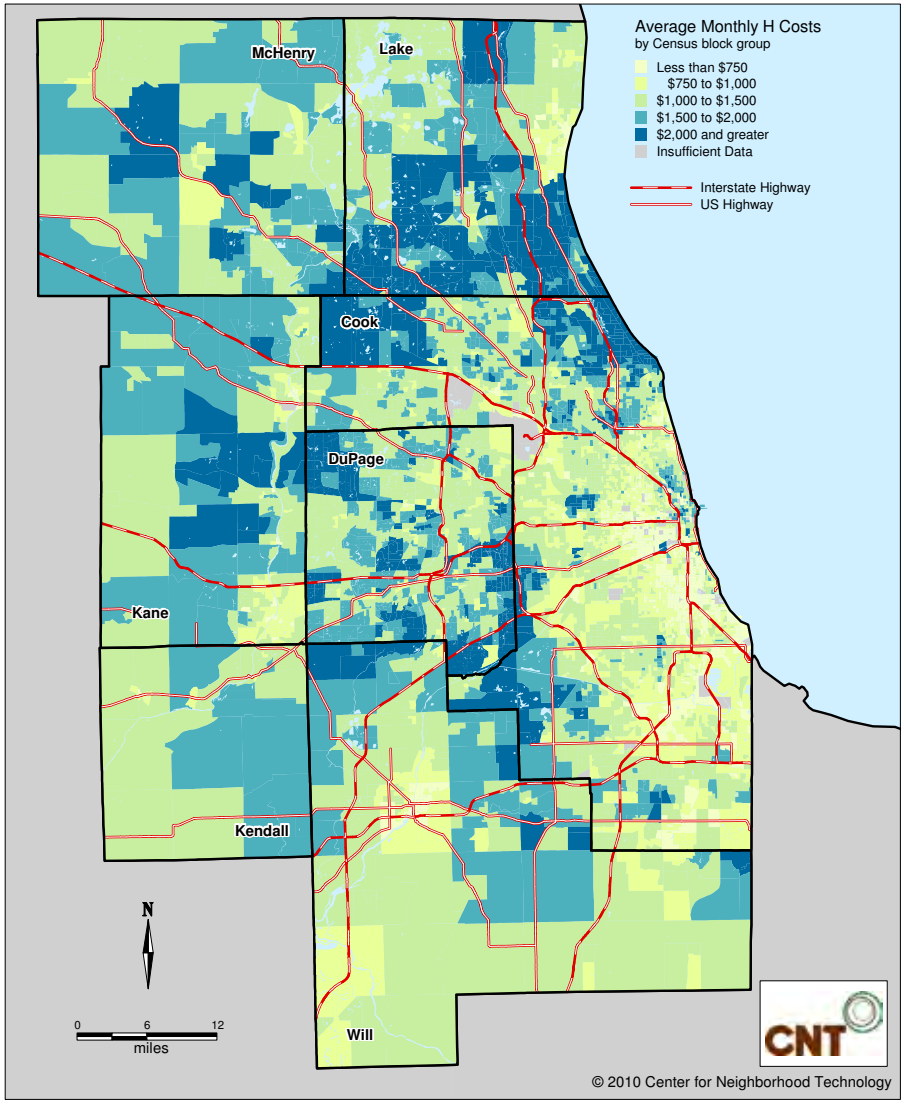
The Hidden Cost of Transportation

A map of average housing costs in the Chicago region reinforces the conventional picture of widespread affordability, with all seven counties containing an ample mix of communities covering the spectrum of housing costs. The only obvious pattern that emerges from this picture is the concentration of expensive housing in the north shore and northwestern suburbs of north Cook and south Lake counties.

Transportation costs, in contrast, vary predictably. More densely developed communities in Chicago and its inner ring suburbs that include a mix of housing types, stores and other amenities as well as easy access to public transportation exhibit average transportation costs that are below $700 per month for a typical regional household. These costs rise to over $900 per month in the next tier of suburbs and peak at more than $1,000 per month in the outer reaches of the collar counties.

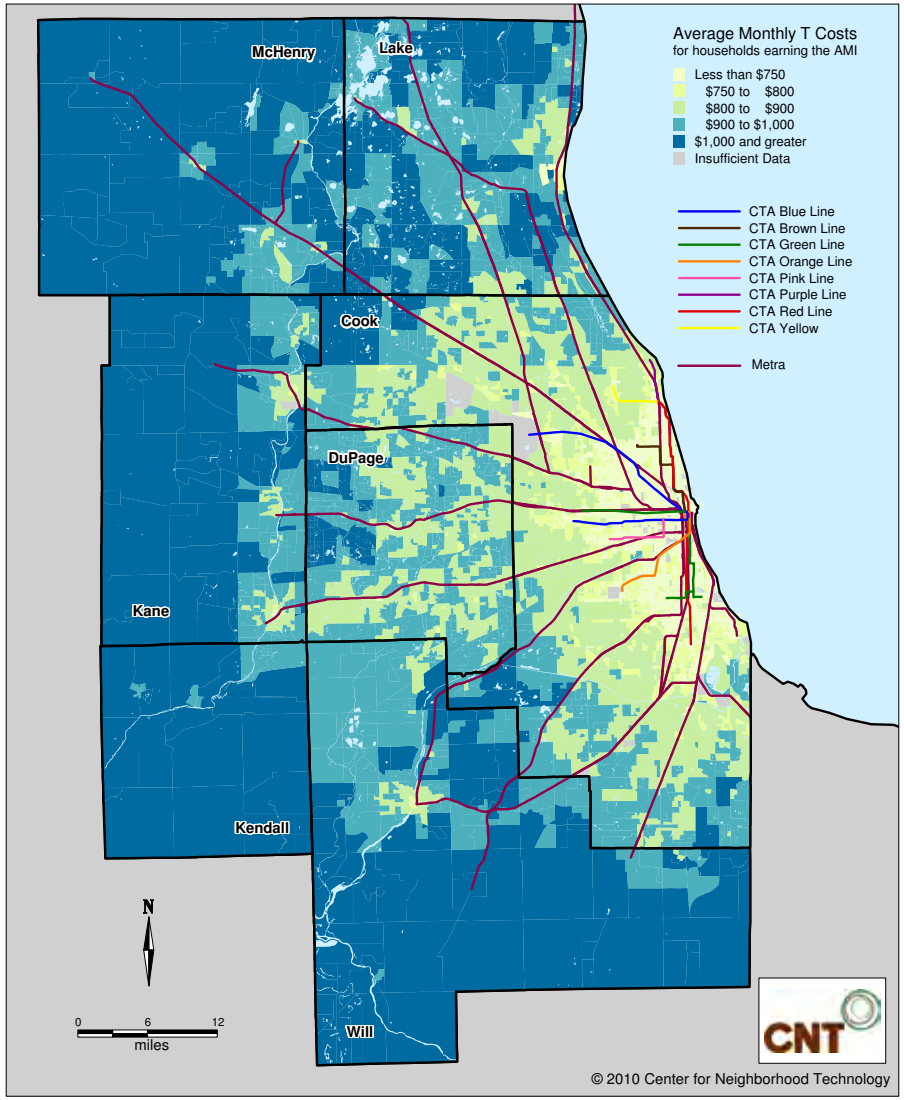
When transportation costs are combined with housing the higher cost associated with living in the less dense, collar county communities far removed from amenities, employment centers and public transportation becomes evident.

Housing Costs in the Chicago Region



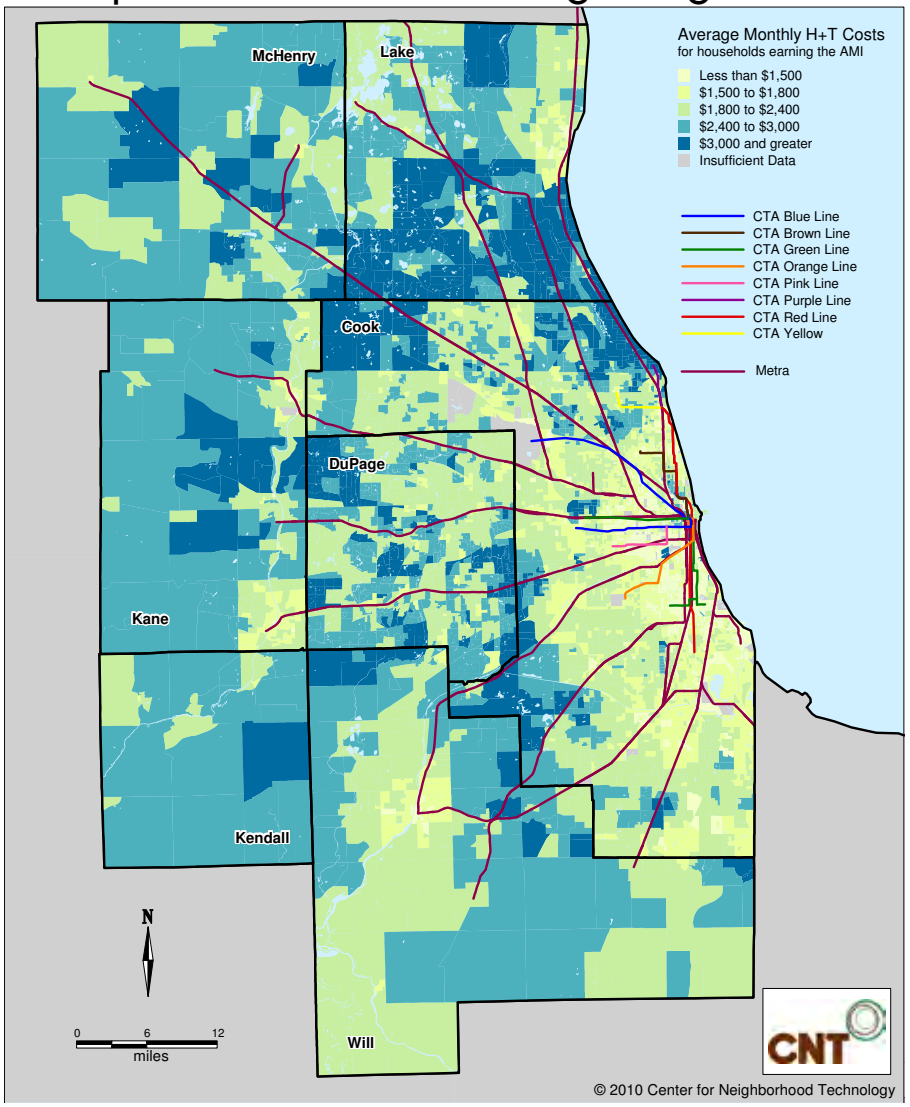
The most expensive areas are concentrated in near north side communities and the northern suburbs, where monthly housing costs average over $2,000. Homes located in Chicago and its inner-ring suburbs, as well as areas on the region's fringe, are more affordable, with housing costs below $1,500.

Transportation Costs in the Chicago Region



Transportation costs are lowest in the region's urban core, which features the highest densities, most extensive transit service and best access to a blend of amenities and employment centers. Residents of these communities benefit from reduced car-ownership and shorter driving distances.

The Combined Costs of Housing and Transportation in the Chicago Region



When total housing and transportation costs are considered together, areas that might have been avoided due to higher housing costs seem suddenly more affordable, and many areas with low housing costs have combined costs that fall at the high end of the spectrum.

The Region Looks Less Affordable Through an H+T Lens

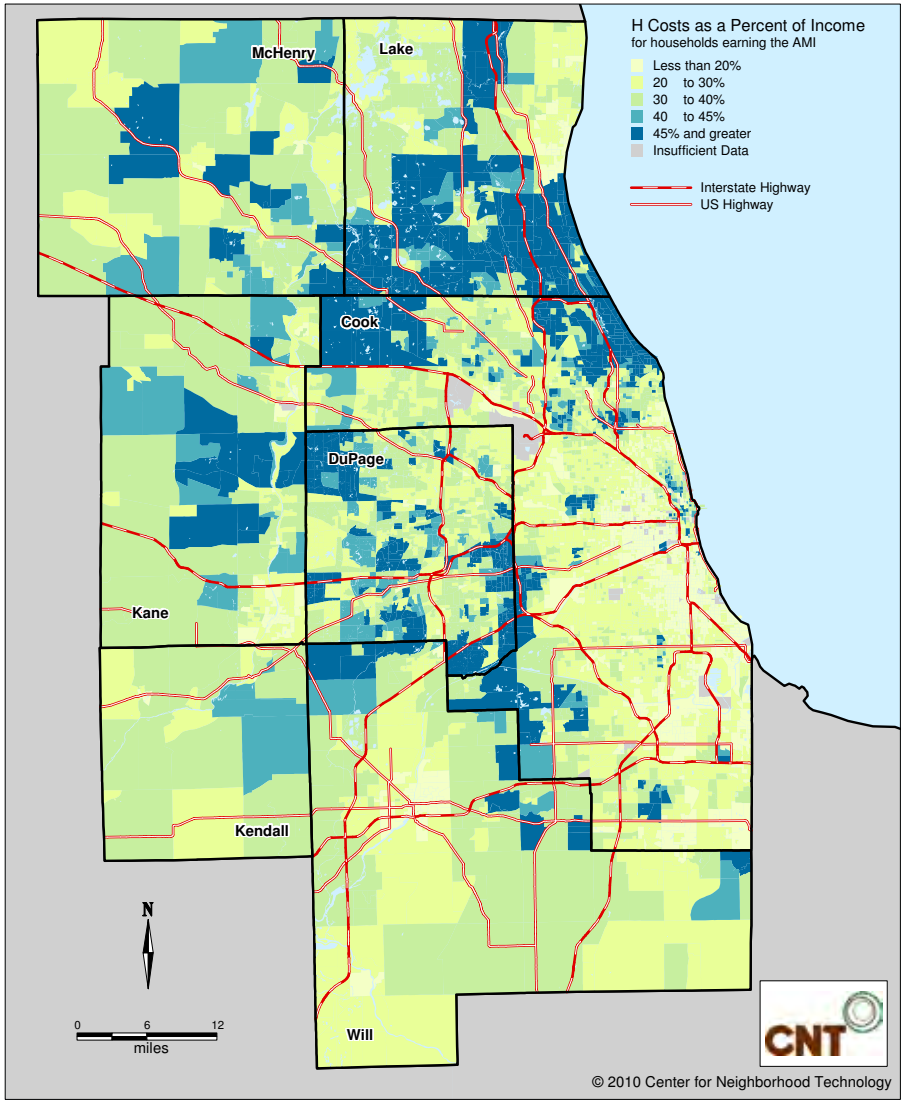
The Chicago region contains 3,900 neighborhoods with 1.87 million housing units where the average housing cost is under 30% of the regional median income of $51,680 per year. These communities are concentrated in Chicago, its inner-ring suburbs (with the North Shore being a notable exception) and also in the exurban areas farthest removed from the urban core.

When transportation costs are factored in, the picture of affordability changes considerably. Many communities that appear affordable under the 30% rule of thumb for housing affordability cease to be so when a 45% standard for combined housing and transportation burden is applied. In total, nearly 900 neighborhoods containing over 400,000 housing units become unaffordable at the H+T 45% level. Most of the communities that do remain affordable are more densely developed, clustered in Chicago and bordering suburbs, and are well served by transit.

Burden = Cost / Area Median Income

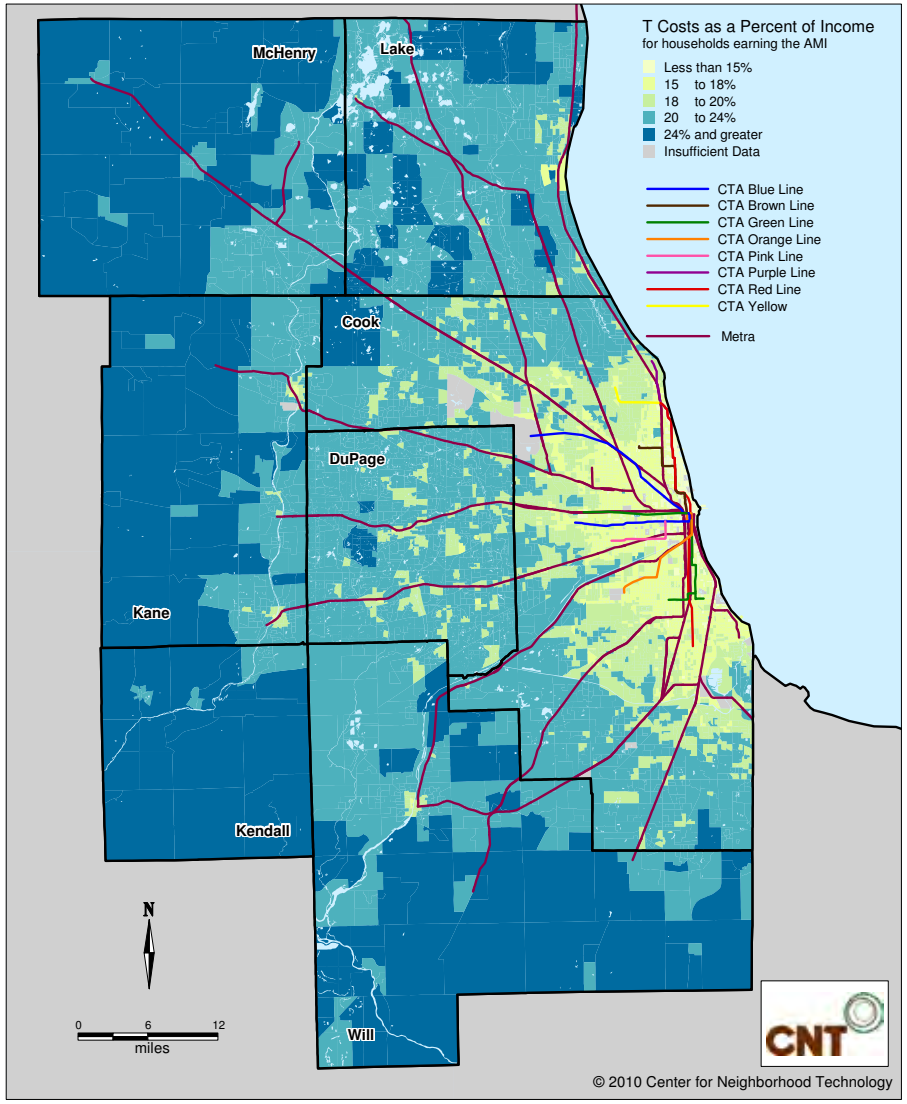
To be considered affordable, combined housing and transportation costs should consume no more than 45% of household median income.

Housing Burden in the Chicago Region



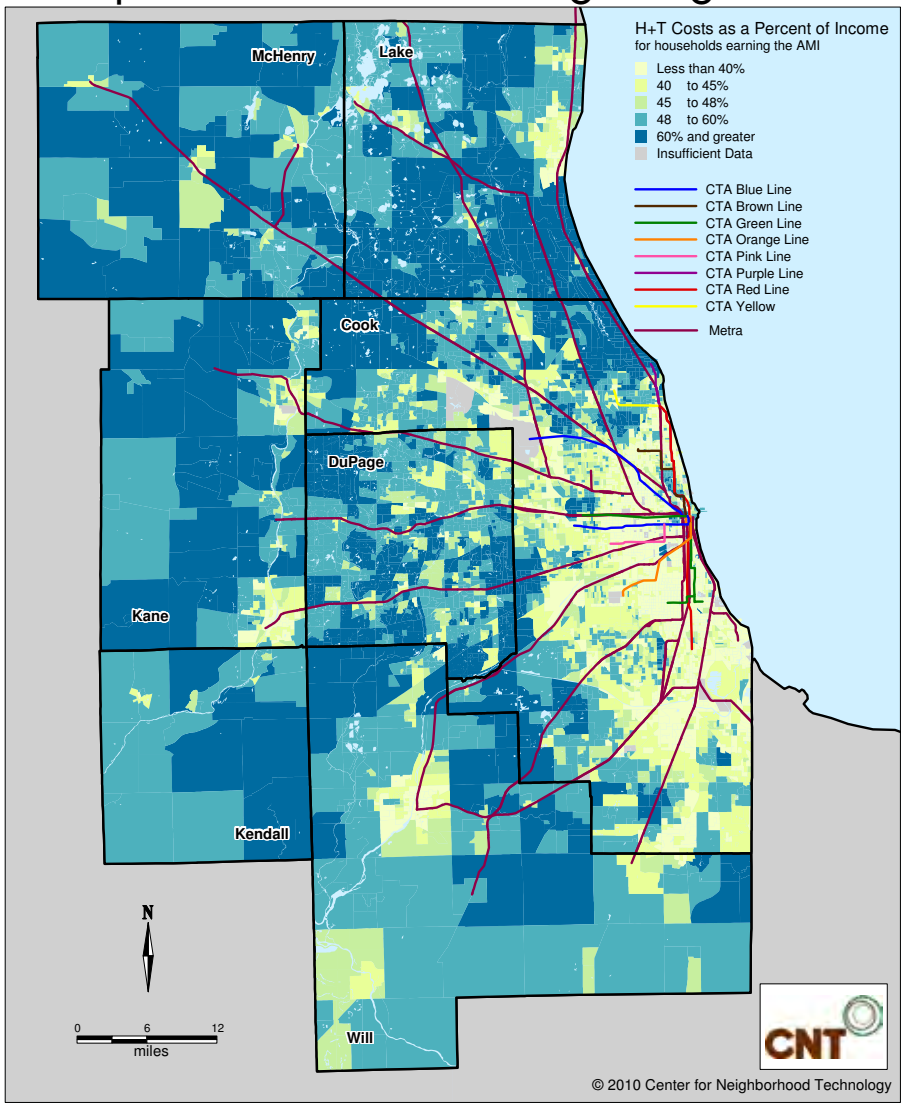
The region looks affordable under the conventional definition of housing affordability, with every county in the region including communities at different levels of affordability for the typical household earning the regional median income.

Transportation Burden in the Chicago Region



The H+T Index brings to light the hidden cost of transportation and demonstrates how transportation burden varies with location, density, mix of uses, and transit availability.

The Combined Burden of Housing and Transportation in the Chicago Region



The region looks significantly less affordable through an H+T lens, experiencing a net loss of nearly 900 affordable neighborhoods in the shift from housing costs at 30% of income to housing and transportation at 45% of income.

Thinking Outside the House

Areas with more compact construction and greater transit service enjoy lower average transportation costs because a higher percentage of workers travel by bus or train to their jobs. Households in these communities own fewer cars and drive significantly less than households in sprawling, exurban areas of the collar counties.

In the city of Chicago, for example, one quarter of workers travel by bus or train to their jobs and the average household spends under $600 per month on transportation, keeping costs low by driving less than 11,000 miles per year. Transportation costs are also lower along the rail lines that radiate from Chicago's center. These corridors feature higher Transit Connectivity (TCI) scores, indicating greater transit service, and also enjoy greater affordability. This is true not only for dense urban centers, but also for pockets of service around Metra stations in outlying areas of the region.

At the same time, the average household in less compact areas, like McHenry County, faces high costs, spending an average of over $1,000 per month on transportation. McHenry's low-density communities lack the concentration of people necessary to support transit and are removed from employment centers, leaving residents with few alternatives to the automobile. As a result, residents own more cars, use them more often and travel longer distances for errands and work. McHenry households own more than two cars on average and drive 24,000 miles per year, double Chicago's averages.

At an average annual cost of $5,000 per vehicle, car ownership constitutes the single biggest expense within most families' transportation budget, only covering ownership costs, not gas and repairs. Annual transit expenses at $1,300 for a long-distance rail commuter seem a bargain by comparison. The option to avoid or reduce automobile ownership provides a major economic benefit for households of all income levels, but particularly for low-income households.

Because of large discrepancies in household location and habits, especially differences in car ownership and usage, transportation costs in the Chicago region vary greatly. Costs can run as low as $500 per month in downtown Chicago and some communities along CTA lines (Gold Coast, Grand Boulevard). In contrast, the average cost of transportation rises to more than $700 per month in suburban Cook County and along the Metra corridors of DuPage county and satellite cities, and to more than $900 in the vast majority of Kane, Lake, McHenry and Will Counties. In some exurban communities, like Deer Park and North Barrington, average transportation costs rise to over $1,200 per month.

Transportation Characteristics of Chicago Counties

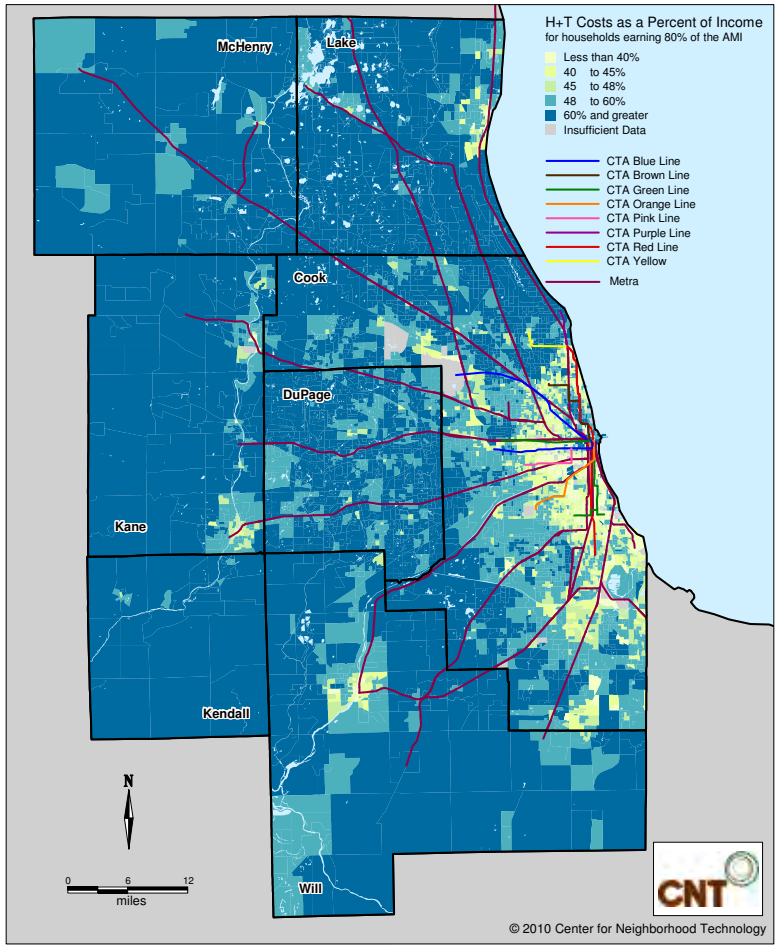
County	Average # of Autos per Household	Percent of Workers Using Transit	Transit Connectivity Index	Average Vehicle Miles Traveled per Household	Average Monthly Transportation Cost
Cook	1.35	19%	3.68	13,154	$705
DuPage	1.85	7%	1.70	18,717	$949
Kane	1.92	4%	0.38	21,198	$994
Lake	1.95	6%	0.63	21,313	$1,009
McHenry	2.06	3%	0.16	24,229	$1,076
Will	1.95	4%	0.22	22,338	$1,018
City of Chicago	1.10	25%	7.76	10,590	$587
Six County Region	1.54	14%	1.29	15,628	$798

Large discrepancies in car ownership, miles driven and transit usage by location lead to wide variation in transportation costs across the Chicago region.

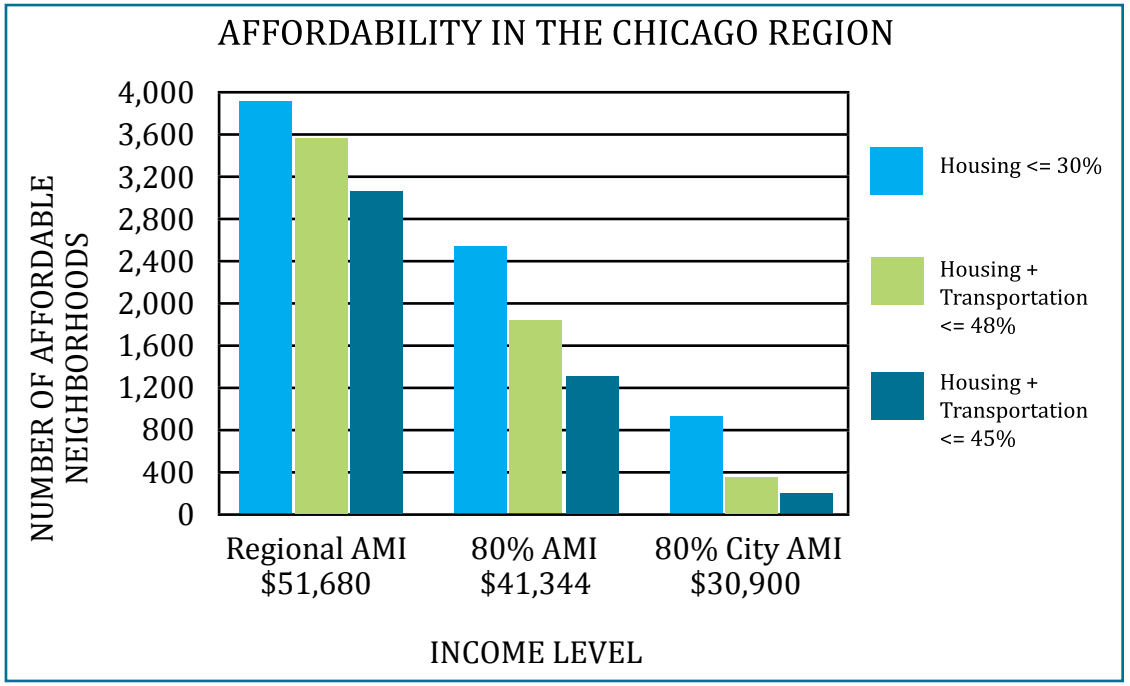
Households Earning Less than the Regional AMI Have Few Affordable H+T Options

The region offers very few affordable H+T alternatives for households earning $41,344, or 80% of the regional AMI. Within the urban core, these households are largely restricted to communities on Chicago's West, Southwest and South Sides. Moving beyond the city limits, a few south suburban communities and central sections of the satellite cities of Aurora, Elgin, Joliet and Waukegan are affordable at H+T costs below 45% of income. In total, 1,300 neighborhoods feature average H+T costs affordable to this income group.

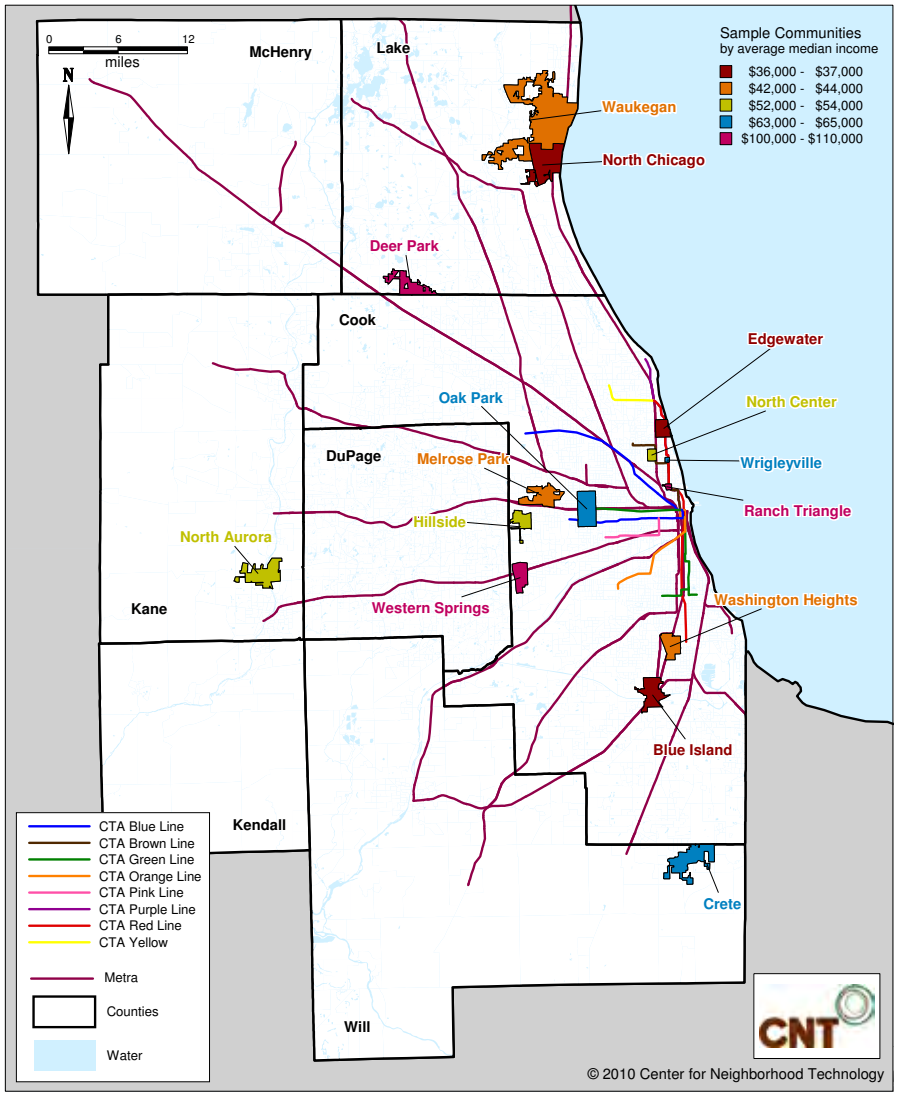
For low-income households earning $30,900, or 80% of the Chicago AMI, the picture is even bleaker. Just 206 neighborhoods in the region are affordable to these households.



The map to the left and chart below illustrate the narrow range of affordable housing options that are available to regional households who earn less than the AMI. Outside of a small band of communities with both affordable housing and transportation, there are simply very few places within reach.



A Tale of Three Types of Cities



To illustrate the fundamental correlation between location efficiency and transportation costs, CNT selected five sets of representative Chicago area neighborhoods at a range of income levels. In each income set, three locations were chosen that typify the different levels of density and kinds of development found in an urban neighborhood, an inner ring suburb and an exurb on the region's fringe. Comparing transportation costs in these communities demonstrates just how much costs are driven by development patterns, even when housing costs and income remain similar.

The H+T view of these fifteen communities also shows that a range of housing options of varying efficiency exists for almost every demographic group in the Chicago region. The importance of transportation costs for determining affordability is clear at every income level analyzed, but especially for lower-income households.

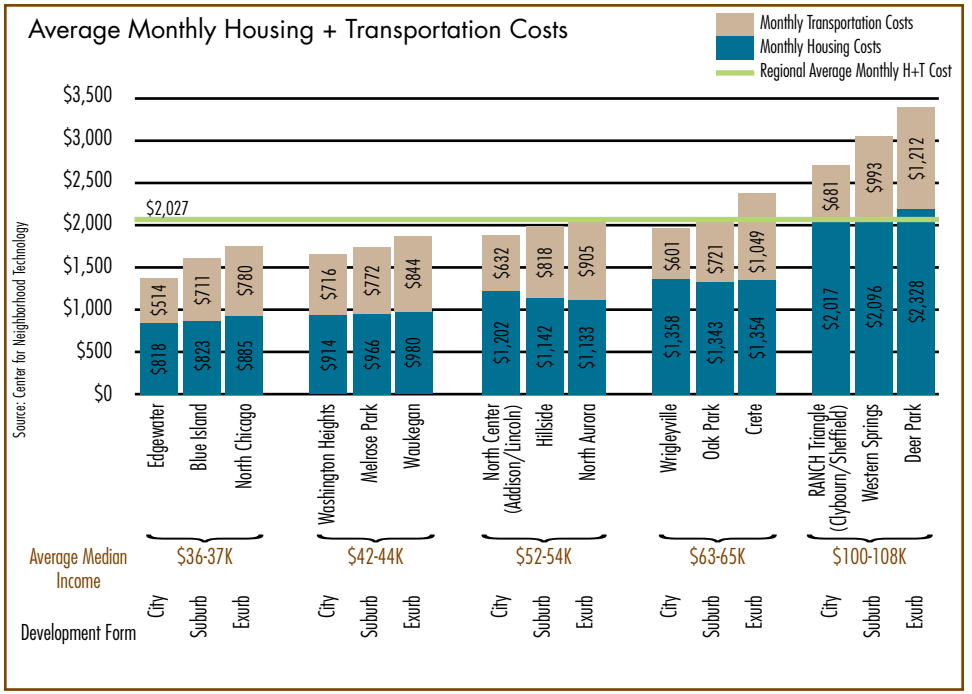
If people fully understood their range of options and the combined cost of housing and transportation associated with them, they might reconsider the attraction of lower cost exurban communities and instead choose to live in slightly more expensive urban and suburban housing, building equity in sustainable communities rather than idling it away on congested commutes.

The H+T Affordability Index prices the tradeoff between housing and transportation costs that owners and renters make when deciding where to live. People who choose to live in exurban communities often pay more in increased transportation costs than they save on housing, a fact they learn only after signing because transportation cost data has not been available. At every income level in this example, the city household spends considerably less per year on the combined cost of housing and transportation than its exurban counterpart.

An H+T Comparison of 15 Chicagoland Communities

The H+T cost chart for these fifteen communities illustrates that transportation cost is driven by location, not demographics. While costs do rise with income, at every income level, sprawling development patterns lead to higher transportation costs, even when housing costs and local incomes are held constant.

Living in North Chicago instead of Edgewater, for example, may offer a family more house for almost the same cost – seemingly a good deal until $266 of extra transportation spending is added. In lower income communities like these, lowering overall H+T expenses can have a significant impact. The $200-$300 that Edgewater residents save on transportation when compared to their counterparts in Blue Island and North Chicago translates to thousands of dollars in additional disposable income each year. While the strains on lower-income households in these communities are more acute, wealthier households also stand to save significantly by locating in more efficient, transit-rich areas. Locating in North Aurora instead of North Center, for example, saves a family nearly $100 per month in housing costs on average, but the savings are more than erased when nearly $300 of extra transportation expenses are added.



Diverse transportation costs are the result of varying development patterns and the availability of amenities and travel options within walking distance. At every income level, households living in less dense exurban communities bear higher H+T costs than those living in compact, location-efficient communities.

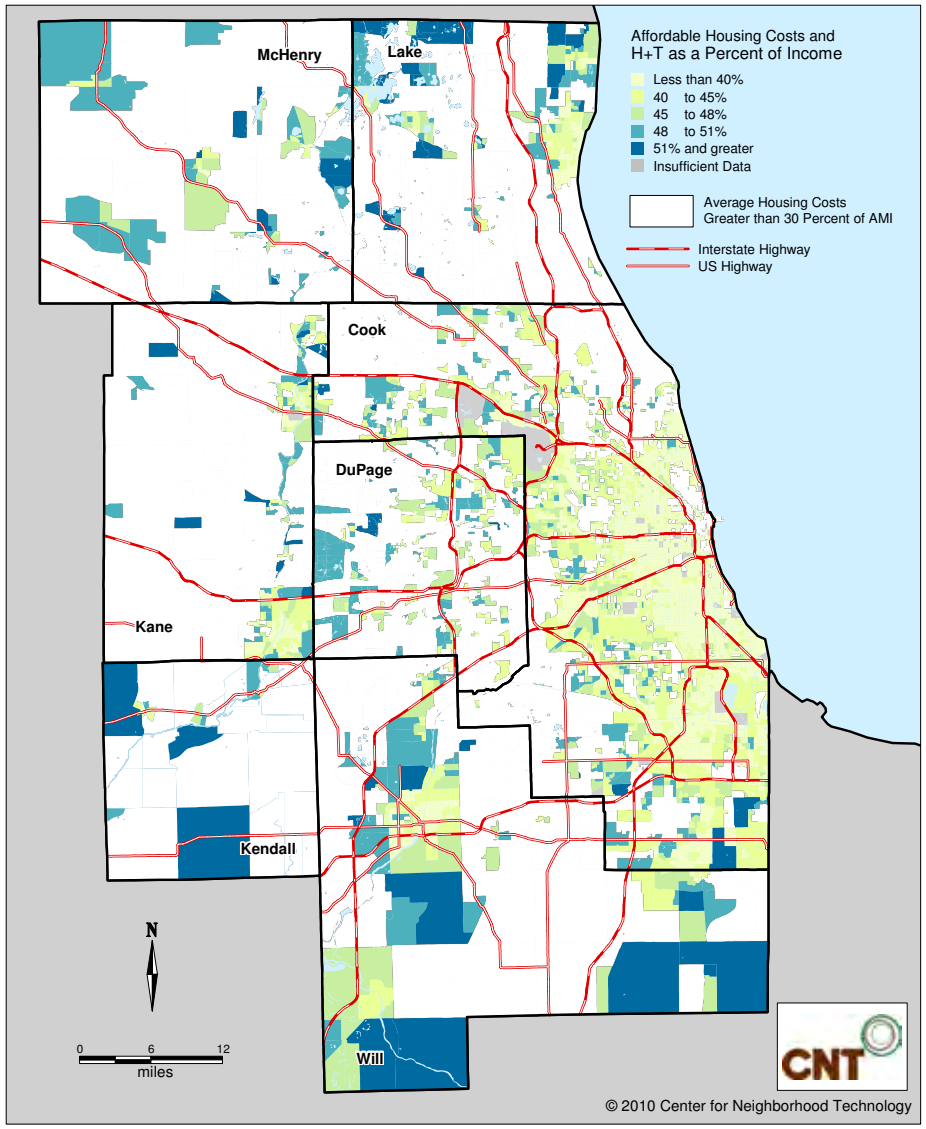
A Closer Look

The factors that contribute to these dramatically different transportation cost outcomes are clearly outlined by three indicators of location efficiency: auto ownership, miles driven and transit usage. While North Center residents own an average of 1.2 cars per household, Hillside and North Aurora families own 1.6 and 1.8 autos, respectively. The amount that households drive also increases as they move to less dense communities. While North Center residents drive an average of 10,708 miles per year, Hillside residents drive 14,979 miles, or 40% more and North Aurora residents drive 18,863 miles, or 76% more. North Center residents drive less, not just because they live closer to work, amenities and entertainment, but because they have the option to take transit. One quarter (24.9%) of North Center residents take transit to work, but only 2.4% of North Aurora workers find it convenient enough to do so.

Although all three communities have very similar incomes, the city residents of North Center spend only 42.6% of their total income on housing and transportation as a result of fewer cars, lower mileage and greater use of public transit. Hillside and North Aurora residents, in contrast, spend 45.8% and 47.9% of their household income, respectively.

	North Center, Chicago, IL (Addison and Lincoln Avenues)	Hillside, IL	North Aurora, IL
Community Type	City	Inner Ring Suburb	Exurb
Average Median Income	$53,264	$52,006	$53,537
Average Autos per Household	1.2	1.6	1.8
% of Workers Taking Transit to Work	24.9%	9.5%	2.4%
Average Vehicle Miles Traveled per Household	10,708	14,979	18,863
Average Monthly Transportation Costs	$632	$818	$905
Average Monthly Housing Costs	$1,202	$1,142	$1,133
Average Transportation Cost Burden	14.7%	19.1%	21.3%
Average Housing Cost Burden	27.9%	26.7%	26.5%
Average Combined H+T Burden	42.6%	45.8%	47.9%

Driven to Spend



Outlying communities with affordable housing are much less likely to look affordable once transportation costs are considered than urban and inner suburban communities with similar housing costs but much lower transportation costs..

As homeownership rapidly expanded over the last 15 years, many residents using the conventional definition of affordability sought inexpensive housing on the fringes of the metro region. Due to the inefficiencies inherent to these communities, however, many households now face transportation costs that offset any reduction in housing expenses related to location. The map to the left features block groups where average housing costs fall under 30% of the region's AMI and reveals how those communities fare from an H+T perspective. Areas shaded in green and blue are communities where housing is affordable under the traditional definition, but where combined H+T exceed 45% of AMI.

Areas in white are communities where housing costs alone exceed the 30% benchmark.

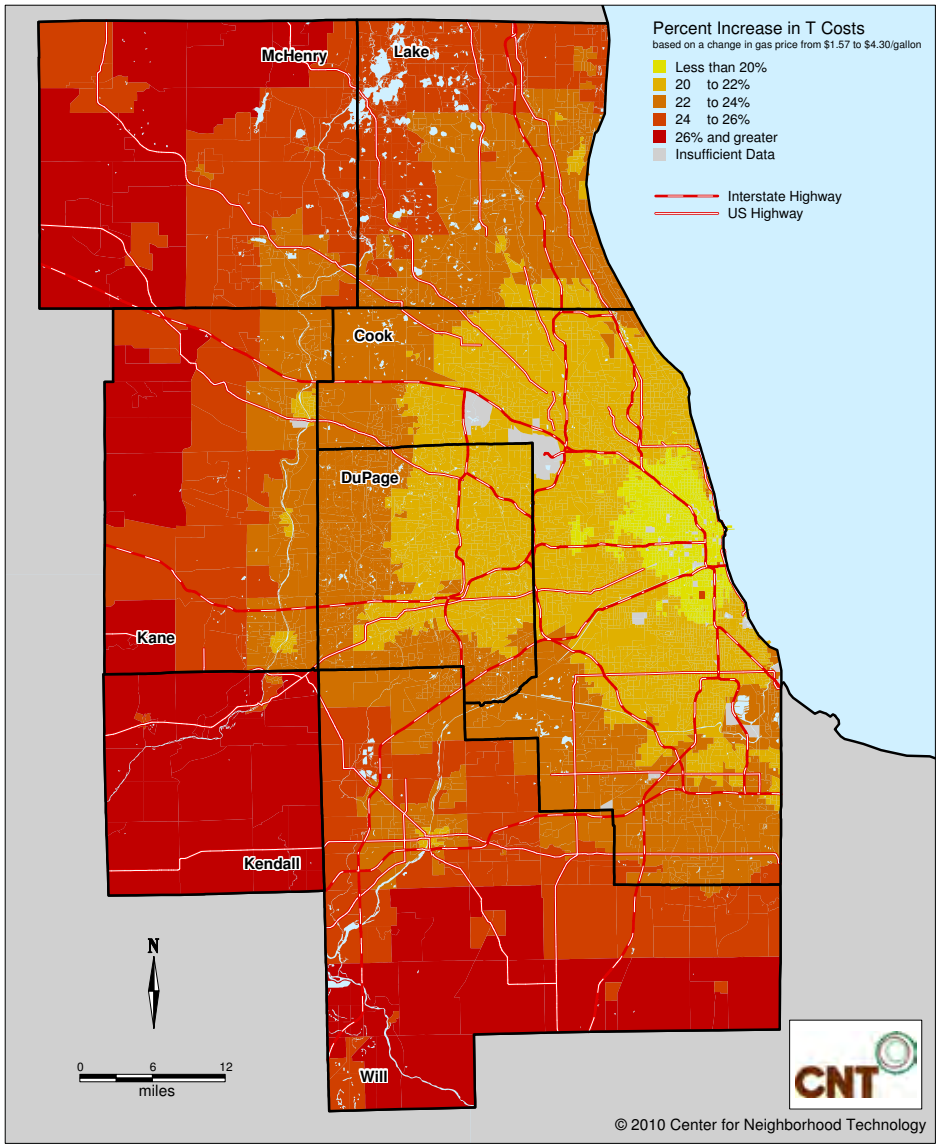
By definition, the most financially vulnerable population includes those households that are looking for a bargain. Low-income households seeking lower priced housing often make decisions without adequate information about true costs, locking themselves into homes that are not truly affordable and putting themselves at considerable financial risk.

Transit and alternative transportation serve as an important social safety net for these families, allowing them to reduce their exposure to auto costs and improve their financial stability. From federal policy to the financial advice that individual Americans receive, a complete view of affordability must consider the cost of transportation as well as housing to give people an opportunity to make more informed decisions about where to live.

Car Dependency = Vulnerability to Volatile Gas Prices

In addition to the burdens imposed by the costs of car ownership, households that rely heavily on automobiles are vulnerable to changing market conditions, especially increases in gas prices. The map to the right shows the impact on houshold transportation costs when gas prices rise from $1.57 to $4.30 per gallon, as they did between 2000 and 2008. While households in the city saw an overall increase in transportation costs of less than 18% (light yellow), residents of the further suburbs and exurbs faced an increase of more than 22% (orange-red), and in some cases of more than 24% (red).

People who depend on automobiles as their only means of transportation feel the greatest financial strain when gas prices rise. From 2005-2007 changing market conditions led to a dramatic shift in the transportation choices of commuters as the percentage of workers riding transit increased from 10.2% to 13.2%. But residents of areas without access to transit were left with no choice but to drive – and spend.

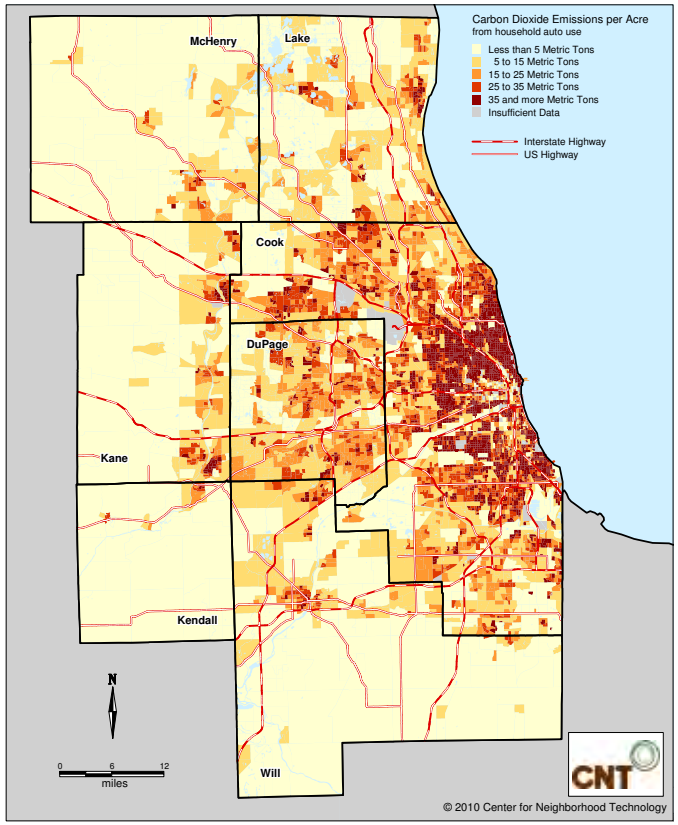


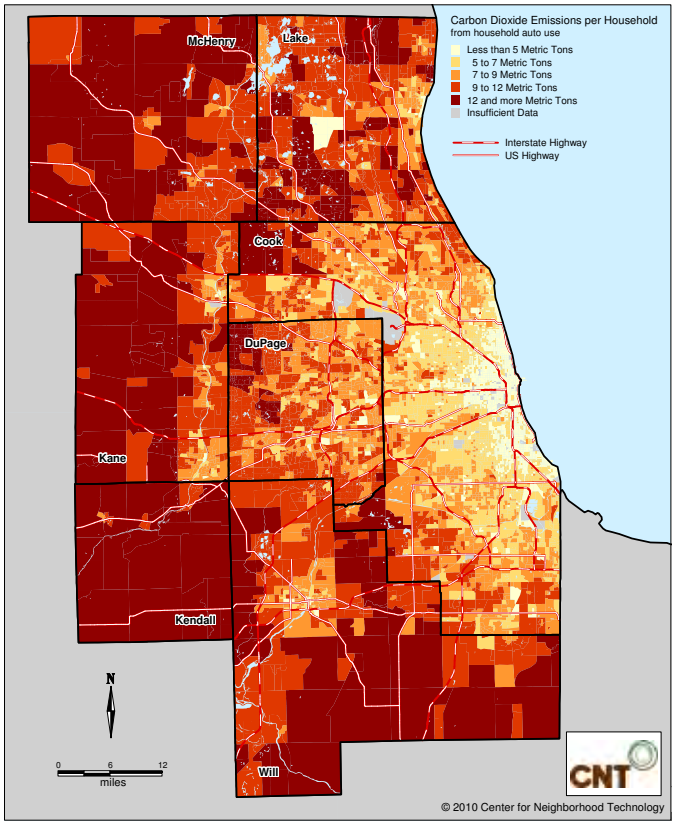
Households in communities that rely most on cars are the most vulnerable to gas price spikes.

Affordability and Sustainability Go Hand in Hand: A View of the Chicago Region's Greenhouse Gas Emissions

The hidden cost of transportation is not the only cost that is often overlooked when households choose where to move and decisions are made about where to locate housing development. Those who live in inefficient communities waste not only their own time and money, but also contribute disproportionately to carbon pollution, imposing a burden on our environment as well as themselves. As knowledge about climate change grows and programs to capture the carbon externality through taxes and market mechanisms expand, it has become increasingly important to consider the environmental costs associated with inefficient development and housing location.

Performing an analysis based on the H+T model for household transportation costs, CNT looked at emissions of carbon dioxide, a key greenhouse gas, stemming from household vehicle travel in over 330 metropolitan areas across the U.S. Although carbon emissions per acre are higher in more densely developed areas, when measured on a per household basis, the personal vehicle-related emissions of people living in cities and compact neighborhoods can be nearly 70% less than those living in suburbs.





Households living in transit-rich areas, where transportation costs are most affordable, are also likely to have lower auto-travel related carbon footprints than those in more auto-dependent suburban or exurban communities.

Driving Down the Cost of Living

CNT's H+T research demonstrates some of the major advantages of location efficient communities as compared to those which lack convenient access to transit, amenities and employment. Location efficiency translates not only to more convenience and lower costs, but also to reduced congestion and a healthier environment.

Because infrastructure, once built, has a long life cycle, development decisions stay with us for decades. Therefore, the Chicago region should take advantage of the current economic downturn to change how we grow.

Municipal Policy Recommendations

Adopt the H+T affordability benchmark.
Municipalities should adopt the H+T affordability benchmark as a standard against which developments within their communities will be judged, prioritizing improvements that yield greater affordability for current and future residents.

Enact zoning overlay districts that make Transit Oriented Development (TOD) an entitlement within ½ mile of stations.
Communities with rail service should make it a priority to publicly debate the nature of development that will occur within walking distance of the station and enact zoning districts designed to produce a district that matches their vision while also contributing to sustainable growth. Towns like Palatine and Arlington Heights have created new vitality around their stations and have taken control of their development by making their expectations known up front. Such planning goes a long way toward ensuring that communities get what they want out of a developer and lowers the risk for the developer by establishing parameters acceptable to the community.

Finally, communities need to do more to ensure a mix of incomes as part of the development that occurs around train stations.
Communities can accomplish this by enacting inclusionary zoning requirements for all new housing developments, especially those located near transit, and by establishing land acquisition and housing trust funds. Such measures ensure the development of vital communities that include housing affordable to working families of varying income levels.

Evanston is an example of a "transit-oriented development" that has revitalized its downtown but missed a golden opportunity to build in affordability. Communities like Highland Park, on the other hand, have successfully adopted inclusionary zoning codes, securing affordable housing for working families and single mothers that are indistinguishable from market rate homes.

Regional Policy Recommendations

As part of CMAP's *Go to 2040* planning process, and as the Regional Transportation Authority (RTA), updates its *Moving Beyond Congestion* plan, these regional bodies should:

Adopt the H+T affordability benchmark.
Regional bodies should adopt the H+T affordability benchmark as a standard against which investments will be measured, prioritizing improvements that yield more sustainable patterns of development with a better balance of homes, jobs, and transportation choices.

Identify priority development areas to capture regional growth and focus development around affordable TODs.
Future growth should be directed toward identified "priority development areas" (PDAs) along transit corridors. Both CMAP and the RTA, in collaboration with communities interested in hosting this growth, should direct future residential and commercial development to these PDAs to ensure a more affordable future.

Establish a Livable Communities Fund to foster planning and development around transit.
CMAP should institute a Livable Communities Fund that can cover planning grants and infrastructure improvements in support of such planning and

development. Atlanta and the Bay Area are examples of other regions that have established funds encouraging communities to plan and zone for the densities and mix of uses around transit corridors that lead to greater affordability and location efficiency.

Establish corridor-level thresholds for transit expansion projects (New Starts).

The use of New Starts funding for transit expansion should be contingent upon proposals meeting corridor-level thresholds requiring certain densities in development areas and provisions to include affordable housing. Such conditions will help the region capitalize on our public investments; density thresholds can ensure that dollars are spent in a strategic manner that captures the value of our improvements, and affordable housing requirements can promote projects that distribute benefits equitably.

Establish a regional land acquisition and predevelopment activities fund for TOD.

Land acquisition at targeted sites can help deliver the full economic and community benefits offered by public transportation, including equitable and affordable housing options and job growth, and can catalyze further development activity by expanding local markets and providing built examples of successful TOD. Regions and states across the country have experimented with funding for infill and TOD projects, with MPOs in several regions taking the lead, including Metro in Portland, the Metropolitan Council in the Twin Cities of Minnesota, North Central Texas Council of Governments (NCTCOG) in Dallas-Fort Worth, the Metropolitan Transportation Commission in the Bay Area and the State of California.

State Policy Recommendations

Implement the H+T Affordability Index Act.

States like California, Oregon, and Washington have strong state planning statutes that direct the states and urban regions to plan for improved environmental, land conservation and cost of living outcomes. Illinois has followed suit by passing SB 374, the H+T Affordability Index Act, under which the Capital Development Board, the Department of Commerce and Economic Opportunity, Illinois Finance Authoriy, Illinois Housing Development Authority and Illinois Department of Transportation must consider both housing and transportation costs when evaluating competing projects in urbanized areas. In order for this important legislation to be effective, the affected state agencies must make H+T affordability a serious goal in their planning and investment decisions.

Fund the Local Planning Technical Assistance Act.

Illinois should fund the Local Planning Technical Assistance Act that was passed in 2002. This act was designed to provide local governments with financial and technical assistance to update or complete comprehensive plans for their communities. Yet it remains an unfunded mandate eight years after passage. Many communities collaborate with developers to annex and develop land without taking into account the real costs of these developments to the community or future households. Funding this act would equip communities to update their plans and direct growth in sustainable ways.

Develop new resources for transit improvements and operations.

A comprehensive and connected mass transportation system brings significant economic value to a region. Other regions in the US recognize this and have passed referenda to raise funds, aspiring to create public transit systems like those in Chicago, New York and Boston. Illinois and the Chicago region must collaborate to identify new resources for transit, using both the flexibility built into the Federal surface transportation program and new funding mechanisms.

Institute a more robust economic development program to attract jobs to transit-served locations.

The goal of developing more housing in close proximity to transit has received a great deal of attention in recent years. Far fewer resources have been dedicated to do the same with jobs. Illinois' Business Location Efficiency Act was a nominal start when passed in 2005, but little has been done to implement it. The state should institute a more robust program to attract jobs to areas with transit. New Jersey's Urban Transit Hub Tax Credit program serves as a model on this front.

Summary

Households located in the Chicago region face H+T burdens that are in line with the average for cities with similar populations, adding up to about a little over 47% of AMI. This figure places the H+T burden faced by the typical Chicago household above the 45% H+T affordability goal. But while the region as a whole fails to meet this benchmark, the structure and extent of household expenses vary significantly by location. Denser, location-efficient neighborhoods face lower total H+T costs, benefiting from convenient access to jobs, schools, amenities and an extensive transit system. On the other hand, expanding homeownership and an incomplete understanding of affordability have fueled development patterns that increase regional sprawl and the burdens placed on family budgets and the environment by reliance on automobiles.

The path to a more equitable and sustainable future for the Chicago region lies in recognizing and capturing the value of underappreciated assets, like transit and location efficiency, through a comprehensive understanding of how different development and investment strategies impact H+T affordability. Only with such an understanding can we meet growing needs for low- and moderate-income housing, offer affordable options to households at every income level and craft a responsible approach to climate change.

The Chicago Metropolitan Agency for Planning has taken an important step towards achieving these goals by including the H+T Affordability Index as a measure in its *Go To 2040* regional planning process. Using CNT's analysis, CMAP has been able to compare how alternative development scenarios would affect future H+T affordability in the entire seven-county region, with detail down to the census block group level. This information has contributed to CMAP's selection of a preferred scenario and will inform agency policies to strategically direct growth and maximize affordability.

Appendix

H+T Model and Customization

For this analysis, CNT modified its H+T model by using local databases specific to Chicago to produce a custom analysis. Working in collaboration with the Chicago Metropolitan Agency for Planning, CNT used CMAP's 2001 land use files to calculate residential density and CMAP's Pedestrian Environment Factor (PEF) as a proxy for walkability. CNT also used its Transit Connectivity Index (TCI) which includes bus and train service data for CTA, Metra and Pace to measure transit connectivity. Because 2001 land use data was not available for Kendall County, the County is not included in regional averages.

Transportation costs are calculated using nine variables: six neighborhood characteristics (residential density, job access, PEF, land use mix, TCI, and average time for journey to work) and three household characteristics (household income, household size, & workers per household). These variables are used to predict, at a census block group level, three dependent variables – auto ownership, auto use, and public transit usage – from which transportation costs are derived.

Transportation costs are then added to housing costs and divided by household income to provide a more comprehensive picture of the affordability of a region's housing market.

Residential density describes the number of households per residential acre as defined by CMAP's land use file. Residential acres include urban mixed use. Utilizing this land use file to calculate a more accurate measure of residential acres was one of the key improvements made to the model for this report.

Job access measures the quantity of and proximity to regional jobs.

The Pedestrian Environment Factor is a CMAP metric used in the model as a proxy for walkability. In this version of the model, this metric replaced block size.

Entropy / Land use mix makes use of the CMAP land use file to calculate a measure of how mixed a block group is in terms of different land use classifications. Including local land use data represents another customization of the model for this analysis.

The special model developed for this analysis excluded Kendall County, for which 2000 land use data was not available. The county was included in maps using data from the standard H+T model; however, this data was not used to calculate regional averages, and results for Kendall County are not directly comparable to results for the rest of the region.

About the Center for Neighborhood Technology

The Center for Neighborhood Technology (CNT) is an award-winning innovations laboratory for urban sustainability. Since 1978, CNT has been working to show urban communities in Chicago and across the country how to develop more sustainably. CNT promotes the better and more efficient use of the undervalued resources and inherent advantages of the built and natural systems that comprise the urban environment.

As a creative think-and-do tank, we research, promote, and implement innovative solutions to improve the economy and the environment; make good use of existing resources and community assets; restore the health of natural systems and increase the wealth and well-being of people—now and in the future. CNT's unique approach combines cutting edge research and analysis, public policy advocacy, the creation of web-based information tools for transparency and accountability, and the advancement of economic development social ventures to address those problems in innovative ways.

CNT works in four areas: transportation and community development, natural resources, energy and climate. CNT's two affiliates, I-GO™ Car Sharing and CNT Energy, enable individuals and building owners to reduce their expenses in transportation and energy.

CNT is a recipient of the 2009 MacArthur Award for Creative and Effective Institutions.

More information about CNT is available at
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