

# SUBURBAN SPRAWL:

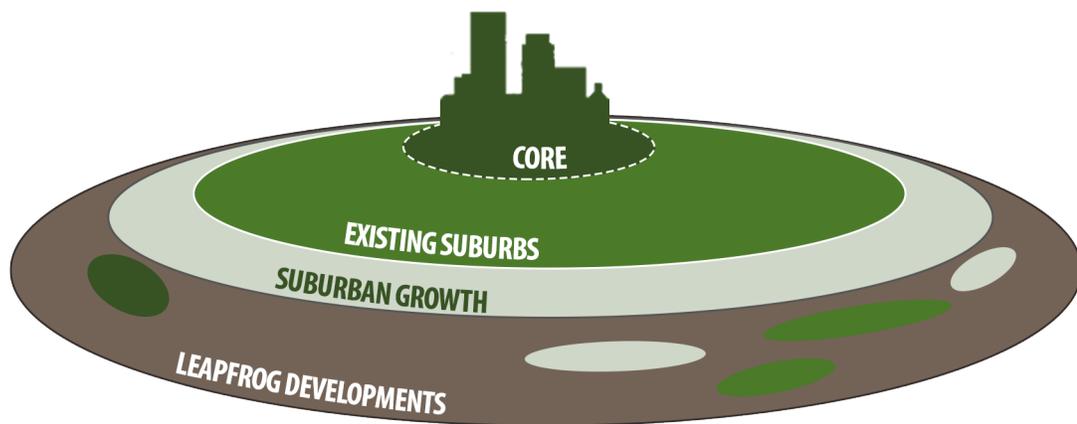
## EXPOSING HIDDEN COSTS, IDENTIFYING INNOVATIONS

### EXECUTIVE SUMMARY

For thousands of years, cities and towns were built at a human scale. Even large cities were walkable. Then, within the span of two lifetimes, cities and towns were completely transformed. Instead of being built for people, they were being built for automobiles. They sprawled.

Sprawl has a number of characteristics: low density of development per hectare; rigorously separated uses (e.g., long distances between housing and retail); “leapfrogging” past existing areas of build-up, leaving undeveloped gaps; and/or dependency on the automobile. Most of all, sprawl is characterized by development on previously agricultural or natural “greenfield” sites.

Sprawling, suburb-dominated municipalities are now common worldwide – and predominant in North America. While 81% of Canadians now live in urban areas, half of metropolitan residents are in the suburbs, and suburbs are growing 160% faster than city centres. Although sprawl is common, it is still in the experimental stage, and we don’t know how this experiment will work out. The signs suggest we will need to be more aware of the hidden costs and consider innovative ways to create denser urban form.



### CAUSES

Why have the suburbs grown so fast? Much of the literature places the blame on municipal plans and zoning rules. However, while such plans and rules allow for sprawl and even shape it, they don’t require it. There is however a *demand* for sprawl; people and firms have been choosing the suburbs without considering some of the other costs. Why is that?

A key factor is price: it’s cheaper to buy a house in the suburbs. In a 2012 survey, 79% of Toronto-area residents said prices influenced their choice of location; the survey concluded that housing affordability, not personal preference, may be driving homebuyers to the suburbs. Likewise, for firms that have a choice of location, the suburbs are generally cheaper.

Prices are lower in sprawling areas for a number of reasons. Distance from city amenities is one reason, but it is not the only one. Markets don’t exist in a vacuum; they exist in a framework of government policy and law, and are heavily influenced by it. For example, several decades of government spending on major free-to-use highway systems has enabled daily long-distance commuting. Furthermore, the ongoing policy failure to address the other costs of road use (such as illness, injuries and climate change) subsidizes and perpetuates automobile use and suppresses the price of transportation to and from suburban locations.

Most significantly, undercharging developers for necessary infrastructure and municipal costs created by new greenfield developments artificially distorts the market in favour of sprawling development, though some municipalities are starting to examine the underlying costs. Utility pricing that fails to reflect the higher costs of servicing sprawling areas is another hidden subsidy.

## **COSTS OF SPRAWL**

The costs of sprawl are many and diverse. Some of these costs are counted, meaning they show up on financial statements. Other costs are hidden – they don't show up on financial statements, but they are real and substantial. Different stakeholders pay for sprawl in different ways, either directly or indirectly. However, it is important to realize that we all—businesses, governments, and homeowners-- bear the costs in the end.

Governments and their taxpayers absorb many of the costs of development directly and in future infrastructure liabilities. Municipalities can pay a significant financial cost for sprawling development. Sprawling suburban development requires new infrastructure and thus new capital spending. When a new development is approved on the fringes, municipalities get additional property tax revenues, but they also pick up new costs, including liability for future infrastructure maintenance and replacement costs that continue indefinitely, and rise over time. In the initial wave of sprawl, these costs were not understood.

Development charges help municipalities recover some of these costs from developers but not all of them. Municipalities are beginning to understand the burden these costs place on their communities. In Edmonton, for instance, the City picks up all the capital costs of fire and police stations, and portions of some roads and recreation facilities. It also covers all the costs of maintenance, repair and renewal of the infrastructure, including pipes and roads. The costs to Edmonton of new suburban developments will exceed revenues – by a very large margin. Across just 17 of more than 40 new planned developments, costs to the City are expected to exceed revenues by nearly \$4 billion over the next 60 years.

Edmonton is not alone. Peel Region recently determined that new development was not paying for itself. Calgary Mayor Naheed Nenshi has started calling these hidden costs the "sprawl subsidy."

Some municipalities are starting to ask questions and find savings. In established areas, much or all of the required infrastructure already exists, and so redevelopment and infill development typically entail significantly lower municipal capital spending. Halifax Regional Municipality (HRM) recently found that it could save hundreds of millions of dollars by reducing the expansion of low-density sprawling development and opting for more dense urban development. Calgary found that by adopting a denser growth pattern that used 25% less land, it could save \$11 billion in capital costs alone.

Today's transportation systems further mask the costs of sprawl. The vast majority of roads in Canada are free to use, but they aren't cheap to build or maintain. Governments in Canada spend almost \$29 billion on roads every year – far more than they spend on transit, rail, air, marine and all other transportation modes combined. Fuel taxes, licence fees and all other motor vehicle payments cover only a little over half of that cost; \$13 billion is subsidized by other sources.

This large subsidy to road use is overshadowed by other costs that don't appear on financial statements: air pollution, climate change emissions, noise, delay from traffic congestion, and losses and injury from collisions. Estimates of these costs range upwards of \$27 billion per year. Parking is also often "free" or heavily subsidized. Based on US estimates, the cost in Canada is in the tens of billions of dollars per year.

Suburban households can end up driving about three times more than households close to the city centre, with consequent costs to household budgets and to the economy. Higher transportation costs for extra car ownership and fuel cancel out some of the household budget savings from lower home prices. By thinking about the long-term costs differently, consumers could reconsider the perceived benefits of sprawl. For instance, eliminating one car from a Calgary household's bills—an average savings of about \$10,000 per year--would put up to 18 times as many homes within financial reach (depending on income level). Clearly, the real cost of a suburban house to individuals and families is much higher than its sticker price. To address this in the future, home buyers may start considering the costs of more than just the property at the time of purchase.

On the social side, the unquestioning expansion of sprawl obscures statistics on more motor vehicle collisions, higher

climate change and smog emissions, and higher levels of obesity, diabetes, and other chronic illnesses that also impose significant costs on the economy. For example, in Toronto smog emissions from automobiles cost the economy \$2.2 billion per year and kill an estimated 440 people per year.

From yet another angle, businesses pay the costs of sprawl every business day. Roads congested by commuter traffic delay freight and raise delivery costs. Long-distance commuting, as well as the mental and physical health problems associated with sprawl, raise employee absenteeism while reducing productivity.

Finally, sprawl encroaches on natural areas surrounding municipalities, stressing and even eliminating key ecosystem services, such as water filtration, storage and runoff control, fresh air, erosion control, pollination, recreation and aesthetic enjoyment. The total value of such services provided by the Toronto greenbelt has been estimated at \$2.6 billion per year.

## INNOVATIONS

Municipalities from St. John's to Vancouver have identified goals for the reduction of future sprawl and the creation of more liveable communities. However, little progress has yet been made, and the majority of population growth still occurs in the suburbs. Fortunately, there are communities examining the costs and finding innovative options. There is a growing body of experience that shows that public policy can shift price signals and transform markets to reshape municipal sprawl and create more liveable communities. They can also help to boost the economy and, by addressing hidden costs directly, balance municipal government finances.

Canada has an enormous stock of existing suburbs, a rising population and a growing interest in reducing the extent of future greenfield sprawl. These forces have sparked an interest in redeveloping existing suburbs, or "retrofitting suburbia" – the redevelopment of vacant lots, abandoned malls and big-box stores, inner city surface-parking lots, abandoned industrial (brownfield) sites, decaying older suburbs, as examples. What's needed is to use policy instruments to correct the price relationships currently encouraging sprawl while at the same time revitalizing urban cores and existing suburbs. These changes will raise property values for existing owners and help to achieve the urban form goals now being adopted by municipalities.

While prices have the advantage of allowing for "choice," it is important to bear in mind that choice isn't everything: equity, economic mobility and social stability are important, and spending choices are more restricted for those with lower incomes. There is a need to ensure fairness – to consider equity, economic mobility and social stability when designing pricing policies.

Below are examples of policy tools and innovative communities across the country that have begun to address the hidden costs of sprawl and design alternative approaches.

### DEVELOPMENT CHARGES

Development charges, which help defray municipal costs associated with new development, can be adjusted to reflect the higher costs imposed on municipalities by sprawling development. Development charges can be calculated based on the location in which the development occurs. For example, the City of Kitchener's suburban residential development charges are 74% higher than those for central neighbourhoods. For non-residential buildings, suburban charges are 157% higher. Similarly, Ottawa has higher charges for development outside of its greenbelt. Hamilton provides a 90% exemption from development charges in the downtown area. Calgary recently doubled its development charges on new suburbs. Peel Region also doubled its charges.

### UTILITY CHARGES

Providing services to sprawling areas tends to be more expensive. For example, a study of municipal wastewater systems in the Great Lakes area found that operation and maintenance costs can be twice as high in low-density areas. Municipalities can charge for utilities based on costs related to frontage (property width), and many do so. The City of Terrace charges \$.65/foot for water main while Winnipeg charges \$.95/foot for water main and \$2.95/foot for sewer main. Such charges help create a financial incentive for denser development.

## PROPERTY TAXES

Several options exist to use the tax system to address sprawl.

Property taxes are calculated by multiplying the assessed property value by the tax rate. The tax rate can be varied by property class. Some Montreal boroughs have lower rates for multi-unit buildings, thus encouraging denser development. Adjusting tax rates by location could also help reduce sprawl, if rates were to be reduced in central areas and raised in outlying areas. Provincial legislation determines the tax rates available; Ontario's Municipal Act, for instance, would require amendment to make such a change.

Another option is to levy higher taxes on the land's value and lower (or no) taxes on the buildings on the land. This "land value taxation" would encourage redevelopment of parking lots and underutilized land in city centres – thus taking some of the demand away from sprawl. Several cities in Pennsylvania have adopted land value taxation.

Finally, municipalities can offer special reductions. For instance, Windsor has a property tax assistance program for redevelopment of "brownfield" (abandoned industrial) properties, which encourages development in established areas. Ontario has reduced tax rates for farms, which encourages farmers to continue farming instead of selling their land to developers.

## TRANSPORTATION PRICING REFORM

Providing and boosting subsidies to transit, car-sharing and active transportation can level the playing field with motor vehicle subsidies. Such changes would encourage more density and less sprawl and municipalities continue to call for more investment in transit.

Fuel taxes can be adjusted to cover the costs of roads. Canada's are among the lowest fuel taxes in the developed world. Higher fuel prices can reduce the advance of sprawl and low density housing, while boosting inner city growth. Provincial governments can share the higher revenues with municipalities, or provide municipalities the power to levy such taxes (as Metro Vancouver has).

Parking pricing can be reformed to charge users the costs of "free" parking across municipalities – including in suburban shopping malls. Road use can be charged for directly. Highway 407 in Southern Ontario has a fully automated toll system. Vehicle registration and licencing fees can also be set on a distance-travelled basis to reward less driving and encourage denser development.

## ECONOMIC BENEFITS OF DENSITY

Filling in the spatial gaps in cities and increasing urban density can bring about what economists term "economies of agglomeration": spreading the fixed costs of infrastructure over more businesses and households, reducing costs on a per-unit basis. This also gives firms more potential workers to choose from, resulting in better employment fit and higher labour productivity. Job seekers also have more employers to choose from, reducing unemployment. The greater density of firms and employees results in knowledge spillovers, within sectors and between sectors. Urban density also improves the access of firms to suppliers and markets. And proximity of firms in related or complementary industries allows for productivity gains through specialization and outsourcing.

Such economies of agglomeration boost economic growth, and it appears that, as the economy tends toward being information-based, that association will grow stronger. In the Greater Toronto Area, for instance, population growth has accelerated downtown, in 2006–2011 exceeding growth in the surrounding regions of Peel, York-Durham and Halton for the first time. The downtown population is both younger and better educated, and they report that being close to work and public transit are their top two reasons for living downtown. Employers are moving downtown to attract this workforce and access the market.

## EQUITY AND FAIRNESS

Pricing reforms should be carefully designed to address unfair impacts on lower-income Canadians. Some reforms can be beneficial. For instance, raising property tax rates on single-family dwellings while reducing rates on multifamily rental dwellings (as some Montreal boroughs have done) will tend to be more progressive than flat rates across the board, or rates that are higher on multifamily dwellings.

However, sometimes a particular revenue-raising instrument can have a regressive consequence. Focusing on the combined costs that determine housing affordability--housing plus transportation--can compensate. The revenues can be used to support transit, build truly affordable (well-located) housing, or support social services. What matters is not whether an individual element of a policy package is regressive, but whether the package overall is more regressive than the alternative.

Finally, the overall distributional impacts of sprawl pricing reforms should be borne in mind. Reducing further sprawl reduces vehicle use and the smog emissions that disproportionately harm lower-income people. Making housing in central areas with good transit less expensive provides living arrangements that are truly more affordable (rather than distant houses with low sticker prices and expensive automobile dependence).

## FEDERAL AND PROVINCIAL ROLES

Other levels of government can support municipal innovation, recognizing their influence on what municipal governments can achieve in restraining future sprawl. Provincial legislation provides and shapes the municipal capacity to employ pricing policy instruments (property taxation, charges, fees and levies, and other matters). For example, provincial governments restrict the authority to collect development charges.

Under existing legislation, some reforms that municipalities could take to change the prices and create incentives for denser development are impossible. Yet, some larger cities have been given expanded powers under charters. This model could be rolled out to other larger cities, and general municipal legislation could be revised to expand powers of all municipalities to address sprawl.

In addition, provincial and federal governments could revise their own policies in order to support municipalities that are addressing sprawl. Transit investments, carbon pricing, highway tolls and higher fuel taxes, and improved regional governance arrangements can make it easier for municipalities to manage sprawl.

## CONCLUSION

The main driver of sprawl is prices. Prices have a profound impact on the decisions of firms and individuals, including decisions about where to build new developments, and where to buy houses and site businesses. Currently, price structures encourage sprawl while obscuring significant costs, creating a series of 'suburban myths.' By more closely examining both costs and alternatives, we can turn prices around and make them reward infill development, brownfield development and suburban retrofitting. When we do so, we will reap significant economic, environmental and municipal budget benefits.

The time is right to recognize a shift in attitude and growing body of innovative practice across the country. Municipal governments are studying the financial costs of sprawling development and the long-term liabilities it imposes. Major cities are exploring revenue-raising mechanisms to finance much-needed transit improvements, while citizens are open to the idea of taxes and user fees to support municipal services. With a better understanding of the costs and opportunities, perhaps we can better challenge our historic assumptions and adopt policies that will create towns and cities that work better for individuals, businesses and governments.