

ACHIEVING LIVABLE CITIES

Today, municipal leaders face the challenge of planning and delivering livable cities with shrinking financial resources. The past half century of unrestrained urban sprawl and auto dependency has led to a host of social, economic and environmental problems in Canadian urban areas. New official planning documents in the 1990s recognize these problems and establish goals to deal with them. The next step is to translate those long term goals into practical, daily decisions and actions.

This briefing suggests a way to do that. It proposes a new urban development model, based on eight guiding principles and a process of change. Transportation is a critical element in this new model. Therefore, the briefing also reviews **A New Vision for Urban Transportation**, first presented by TAC's Urban Transportation Council in 1993 and widely endorsed since then.

Applying the new model to achieve more livable and sustainable cities will not be easy. But the social, economic and environmental benefits to all urban Canadians will be substantial.

MUNICIPAL LEADERS FACE A MAJOR CHALLENGE...

Livable Cities with Shrinking Resources

Across Canada today, municipal leaders face the challenge of planning and delivering livable cities with shrinking financial resources.

Livable cities:

- enable a high quality of urban life.
- are clean and healthy places.
- provide a high degree of personal safety and security.
- offer a wide choice of housing and sustainable travel options.
- operate efficiently and deliver municipal services at fair and reasonable prices.
- conserve key strategic resources of land, air, water, energy and financial capital.
- are environmentally, socially and economically sustainable in the long run.

Shrinking financial resources are a result of:

- growing, changing and aging populations exerting increased pressures for a variety of government services.
- decreased transfer payments to local governments, declining tax bases in some areas, and citizen and business resistance to property tax increases.
- increased municipal responsibilities in some places, resulting from provincial downloading of social and transportation services - sometimes without access to additional funds.

The Past Trend

The pattern of urban development since World War II has been moving away from the direction of livable cities. That pattern, dominated by urban sprawl, saw the rise of suburban communities surrounding older, more compact, central areas. The trend was spurred on by a shift of population from rural to urban areas, a booming economy with healthy tax bases, affordable housing and automobiles, inexpensive gasoline, and plentiful road space provided from the public purse. Such development, which continues today, is characterized by segregated land use, low densities, widely dispersed residential / commercial / employment activities, longer travel distances, less opportunity for effective public transit, and private automobile dependence.

Many results of this trend have been negative:

- Low density developments result in inefficient use of municipal infrastructure and services, and proper maintenance and operation cannot always be afforded in today's municipal budgets.
- Urban designs that serve vehicles before people lack pedestrian friendly streetscapes, result in communities with no "sense of place", reduce personal safety, damage older neighborhoods, waste valuable land, add noise, and increase auto dependence.
- Traffic congestion and lengthy commutes waste fossil fuels and other non-renewable resources, increase the cost of goods, add stress to individuals and families, and degrade the quality of urban life.

- Concentrations of ground level ozone and suspended particulate matter in urban areas continue to rise. Medical research links these transportation derived air pollutants to increased respiratory illness and mortality.
- Emissions of greenhouse gases (notably carbon dioxide) leading to climate change continue to rise in spite of Canada's past international commitments. Over one quarter of Canada's greenhouse gas emissions come

from the transportation sector, and approximately one half of that originates in urban areas.

The goal now is to reverse the past trend and make future cities more livable, and to do so in ways that are fair, efficient and affordable for all. ***Since transportation pervades every aspect of modern urban life, it is part of the problem and must be part of the solution.***

A NEW VISION FOR URBAN TRANSPORTATION IS PART OF THE ANSWER...

Meeting the challenge of planning and delivering livable cities in the face of shrinking financial resources involves three major steps.

An Urban Area Vision

The first step is to create a common vision for the future of the city, region, urban community or regional district, based on public consultation and having public support. It should describe the goals and objectives for a livable community, as seen by local leaders and citizens, and its principles should be embedded in the official plan.

Throughout the 1990s, this step was completed in many places. Examples can be found in Greater Vancouver's *Livable Region Strategic Plan*, Hamilton-Wentworth's *Vision 2020*, (former) Metro Toronto's *Livable Metropolis*, Ottawa-Carleton's *Community Vision*, Montreal's *City Plan*, and others.

An Urban Transportation Vision

The second step is to create a local transportation vision which is compatible with, and supports, the larger urban area vision.

In 1993, TAC's Urban Transportation Council produced a 30 year generic model for doing this. The Council's ***New Vision for Urban Transportation*** calls for:

- more compact, mixed use urban form to reduce the need for travel and enhance travel options.
- less dependence on single occupant autos through more choice and opportunity for walking, cycling, transit and high occupant autos.

- new financing methods, based on the user pay principle, with revenues dedicated to transport system improvements.

TAC's urban transportation vision is supported by 13 decision making principles and can be tailored to local conditions.

Over the past five years this vision has been widely accepted and its principles appear in many of the newest transportation plans. It has been formally endorsed by local governments, by provincial organizations, and by the Federation of Canadian Municipalities, the Canadian Institute of Planners, the Canadian Institute of Transportation Engineers and the Canadian Urban Transit Association. The National Round Table on the Environment and the Economy called it "*perhaps the most influential (sustainable transportation) vision statement currently in Canada*", and the Organization for Economic Cooperation and Development cited it as an example of "*best thinking on environmentally sustainable transportation in Canada*".

This step is therefore largely underway.

Visions into Reality

The third and most difficult step is to turn visions (as expressed in official plans and transportation plans) into practical reality through daily decision making.

This step is still in its infancy, and there are several **barriers** to its achievement:

Lack of Integration. There are still cases where daily decisions by different departments and agencies within a municipality work at cross purposes with less than optimum results.

A GENERIC VISION FOR URBAN TRANSPORTATION IN 2023

- A long term urban development plan has been approved. It emphasizes multi use town centres and high density, mixed use along connecting corridors. Transit has funding and operating priority in those corridors.
- Short-medium term community / neighborhood plans have been approved. They emphasize compact, mixed use communities based on pedestrian, cycling and transit friendly design.
- Transit, highways, arterials, parking and truck routes are planned and coordinated across the urban area.
- The percentages of trips made by walking, cycling, transit and high occupancy automobiles are all increasing; the percentage of trips made by single occupant automobiles is decreasing.
- The average distance and time for peak hour commuter travel is decreasing.
- An area wide parking strategy is in place and enforced.
- There are very few places which still require on-street goods transfer.
- The physically challenged enjoy universal access to public transport facilities and services.
- Roads and bridges are in a good state of repair.
- Air pollution from motor vehicle sources is declining.
- Urban transportation infrastructure and services are adequately funded from stable and sustainable revenues.
- Political leaders have the support of a well informed public when making decisions on urban development and transportation systems to serve the area.

Competition Between Municipalities. In large urban areas, especially those experiencing strong growth, there is often intense competition between municipalities to attract jobs and new tax bases. This lack of coordination weakens political will to achieve new visions.

The Existing Built Area. In all Canadian cities there are large existing built areas designed to the post war, auto dependent model. These massive capital investments will not be fully depreciated for decades. Changes will therefore be incremental.

Social Forces. Fundamental lifestyle changes will be required in order to encourage compact, mixed use developments and reverse current trends which favour urban sprawl and auto dependence. The well established NIMBY (“not in my back yard”) syndrome can force elected officials to deviate from progressive planning policies.

Market Forces. Developers respond to perceived market forces and hesitate to commit capital to innovative designs which may not attract buyers. Lacking choice, buyers cannot respond to new designs. These factors work to maintain the status quo.

But there are also growing ***opportunities for change:***

Understanding. There is growing awareness, especially in larger centres, that the urban development and transportation patterns of the past half century are no longer environmentally, socially or economically sustainable, and are contributing to a variety of problems.

Municipal Finances. Pressures on public budgets are stimulating the search for more efficient and effective ways to provide urban infrastructure and services without raising property taxes. More compact forms of development are a means to achieve this.

Smog. Urban air quality is becoming a public health issue. People are increasingly concerned about the health impacts of smog on themselves and their children. The effects of transportation on urban air quality are becoming well documented.

Climate Change. There is growing awareness of the long term threat of climate change caused by greenhouse gas emissions from human activities. More compact development, with less need for motorized transport, can both improve air quality and reduce greenhouse gas emissions. (*For more information on this subject, see A Primer on Urban Transportation and Global Climate Change by TAC’s Urban Transportation Council.*)

Changing Industries. Modern industries are cleaner, quieter and require less space, so geographic separation of homes and workplaces to protect public health is not as necessary as it once was. Mixed use development is therefore more feasible.

A NEW URBAN DEVELOPMENT MODEL IS NEEDED TO MOVE AHEAD...

In order to act on opportunities, overcome barriers, realize the goals of new urban area visions and urban transportation visions, and achieve more livable cities in the future, a new model for urban development is needed, as well as a process to implement it.

Eight Principles

The new model should be based on eight principles, which represent an evolution of thinking since publication of the *New Vision for Urban Transportation* five years ago.

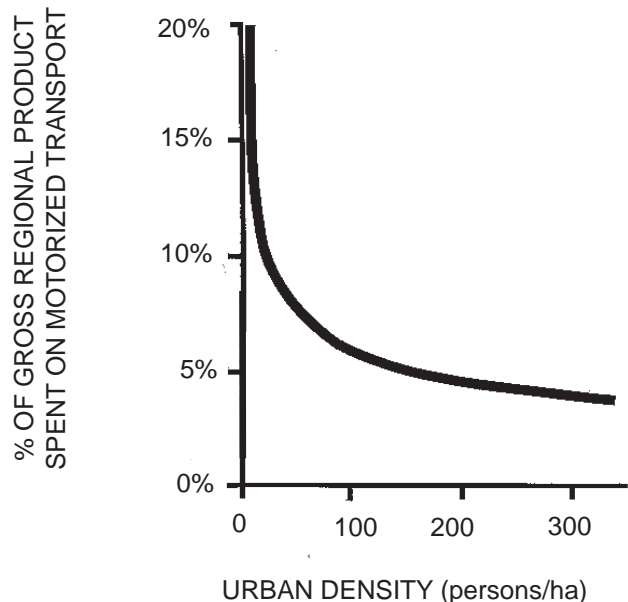
1. **Plan for increasingly compact, mixed use development**, with emphasis on community nodes and higher concentrations along transit corridors. This will require changes in zoning by-laws in support of policies in the official plan and community / neighborhood plans. This measure will: reduce municipal infrastructure capital and operating costs, stimulate pedestrian friendly streetscapes, help make transit more viable, reduce the need for motorized transport, and lower air emissions from transportation. Major economic benefits can flow from this approach. (See the box below.)
2. **Maximize the use of existing municipal infrastructure**. Larger populations can be accommodated by existing infrastructure in the suburban ring surrounding the central area and, in some cases, inside the central area itself. Infill and redevelopment in these areas are feasible, once zoning by-laws are altered to allow more compact and mixed use development to occur. Community / neighborhood plans should support this shift. An aging population, seeking smaller and more efficient housing may accelerate the trend. Government levers may be required in some cases (eg: public funds to clean up polluted industrial sites for new uses).
3. **Integrate land use, transportation, environmental and financial planning in each municipality**. This is a major key to success. The four cannot be separated, but must be integrated in support of new visions. Land use and development affects transportation demand and modal choice; transportation infrastructure and services affect land use; pricing mechanisms affect both development / redevelopment and travel behaviour, which in turn affect smog and GHG emissions. Coordination should be achieved from the official planning stage to the daily working level.

THE COST OF URBAN SPRAWL

Research in 1995, for the Greater Toronto Area Task Force, estimated that continued urban sprawl in the GTA over the next 25 years would cost \$69 billion in new infrastructure (road, sewer, water) capital, operating and maintenance costs. But it was found that the same growth could be accommodated through more compact urban development for only \$57 billion, a saving to tax payers of \$12 billion. When auto related costs of air pollution, health care, policing, congestion and land acquisitions were factored in, the total annual savings approached \$1 billion per year over the 25 year study period.

A current study of 30 cities around the world, by Peter Newman of Murdoch University (Australia) shows that "strategies to contain sprawl, to reurbanise, to traffic calm, to build new light rail systems into car dependent suburbs with focussed sub centres, and to facilitate biking and walking, all add to the economy of cities." The most important factor in urban transport efficiency is urban density; as density increases, less of the city's wealth is spent in transport.

OPERATING COSTS OF PASSENGER TRANSPORTATION VS. URBAN DENSITY



Source: Peter Newman

4. **Coordinate planning across all municipalities in the urbanized area.** The integrated land use / transportation / environmental / financial planning called for in Principle #3 should be coordinated and cooperatively applied across all municipalities in an urban area in order to be effective. It is self defeating for one municipality to adopt policies in support of new visions if neighboring municipalities do not; unconstrained sprawl will simply shift locations, as demonstrated in a 1997 study of the GTA, conducted by the Canadian Urban Institute.

In some cases, a new form of transportation governance and financing may be required to achieve coordination. Early examples exist in the *Metropolitan Transportation Agency* (for transit in the Montreal Region) and the *Greater Vancouver Transportation Authority* (for transit, major roads, transportation demand management and vehicle emissions control in the GVRD).

5. **Send development and transport pricing signals that support new urban area and urban transportation visions.** Cities must manage land use, transportation and public works to minimize public costs if they are to remain competitive and limit tax burdens. Municipal tax structures and development fees should support new visions, including fees that recover the full lifecycle cost of developments which create them. In many municipalities today, sprawl and auto commutes are encouraged by: charging less than the full costs for suburban infrastructure and services; and by allowing excess off street parking on sites awaiting redevelopment. At the same time, infill and redevelopment are discouraged because development charges do not recognize the underutilized existing infrastructure.

A 1997 briefing by TAC's Urban Transportation Council, titled **Financing Urban Transportation** proposed a new method in which: transportation is increasingly treated as a utility; users are charged based on consumption; and revenues are dedicated, by law, back into urban transportation system improvements. Its principles are compatible with practices of the *Metropolitan Transportation Agency* and were used by GVRD municipalities when negotiating the agreement for the new *Greater Vancouver Transportation Authority*.

6. **Make smog and greenhouse gas reductions an element of public policy.** Environmental considerations should not be an afterthought, but should be an integral part of the planning and design process. This can be facilitated with changes at the policy level. More compact, mixed use development can result in space heating efficiencies and also lower the consumption of fossil fuels by reducing the need for motorized transport. Such measures will complement other municipal programs such as: "greenfleets", building retrofits for energy efficiency, and methane reclamation from land fills.

7. **Make consultation between municipal leaders, developers and citizens the norm, with benefits communicated to all.** Educational campaigns are required. Most people are unaware of the economic, social and environmental problems with current urban development and transportation practices.

Elected leaders and their staffs should understand the lifecycle cost savings which are possible through more compact urban form. Motorists should know that there are alternatives to auto dependent cities. Developers should be aware of commercially successful developments which conform to new urban area visions.

Politicians follow public opinion and developers respond to market demand. Therefore, average citizens who vote, pay taxes, buy and use motor vehicles, and purchase homes, are the most critical audience for consultation and communication programs.

8. **Make changes in manageable steps.** Most official plans and transportation plans are beginning to say the right things. The problem is that changes to community / neighborhood plans, zoning by-laws, minimum space standards, subdivision approvals, and engineering practices have not kept pace. Progress will be incremental over many years, since an extensive built area already exists. Time is required for professional planning and engineering practices, market forces, and public opinion to adjust to the new concepts of livable cities.

A Process of Change

Implementing the principles in the new urban development model will require a fundamental shift in thinking and acting about the way cities are developed and transportation systems are provided. That shift, in terms of moving from where we were, to where we want to be, is illustrated in the following table.

A PROCESS OF CHANGE TO ACHIEVE LIVABLE CITIES

<i>PRINCIPLE</i>	<i>YESTERDAY</i>	<i>TODAY</i>	<i>TOMORROW</i>
1. Urban Development	Low density, single use, unrestricted urban sprawl with inefficient use of resources.	Some town centres, infill and redevelopment, but continued sprawl and inefficiencies.	Efficient, compact, mixed use form with pedestrian, cycle and transit friendly design, and increased personal safety.
2. Municipal Infrastructure	Urban sprawl without regard to underutilized infrastructure.	Little or no change.	Full use of infrastructure through compact development, infill and redevelopment.
3. Integrated Planning	Land use and transportation decisions often made independently.	Some integration between land use and transportation planning.	Fully integrated land use, transportation, environmental and financial planning within the municipality.
4. Coordinated Planning	Each municipality in the urban area followed its own course.	Some regional coordination of land use and transportation planning (where authority exists or cooperative mechanisms are in place).	Fully coordinated land use, transportation, environmental and financial planning across the urban area, through new cooperative mechanisms or governance structures.
5.a) Development Pricing	Suburban infrastructure and services subsidized by property taxes in central areas.	Suburban infrastructure and services still subsidized, but with some full cost charges on raw land development.	All development charges based on lifecycle costs. Rehabilitated infrastructure in central areas.
5.b) Transport Pricing	Unrestricted road expansion paid from public budgets, and auto dependence.	Limited road expansion, maintenance backlog, declining transit funding, and increased auto dependence.	Transport increasingly treated as a utility, with user charges dedicated to quality system delivery, offering choice and affordability.
6. Air Emissions	Unrestricted growth in auto travel, smog gases and greenhouse gases.	Attempts to control smog through better technology.	Healthy air quality and less greenhouse gas emissions through new technology and less need for auto use.
7. Consultation	Policies, decisions and actions with little public input or understanding of long term consequences.	Increasing public consultation at the official planning stage and increased public understanding.	Extensive consultation with public and developers throughout the entire process, with costs and benefits widely communicated and understood.

Government Cooperation

This briefing stresses the need for municipalities within urban regions to coordinate their efforts to realize a new urban development model. Voluntary cooperation is good government and, in the right climate, it can be good politics. One successful example was the Joint Administrative Committee on Planning and Transportation (JACPAT), created in 1973 by municipal, provincial and federal agencies in the National Capital Region.

Provinces, as the level of government with the entire constitutional responsibility for local government, have a critical role to play. Where voluntary cooperation among municipalities has been absent or insufficient, they have created legislated mechanisms for cooperation such as BC's Growth Strategies Act and Québec's Ministère de la Métropole, or they have restructured local governments entirely, beginning with the creation of Metro Toronto in 1953 and more recently with the Regional Municipality of Halifax.

Support for local autonomy and local self-determination is a strong and growing theme in provincial-local relations in most provinces. In that context, provinces have an ongoing responsibility and opportunity to support the new urban development model in their enabling legislation and other activities. Examples include:

- planning and development legislation that discourages urban sprawl and auto dependency.

- property assessment and taxation legislation that is equitable and does not subsidize urban sprawl.
- locational policies for provincially supported facilities (universities, hospitals, schools) that promote compact, mixed-use development, and transportation investments that fit local government development plans.
- local government access to a portion of fuel taxes and vehicle licence fees to finance urban transportation systems (now in place in the Montreal and Greater Vancouver regions).
- provincially mandated vehicle emission control programs to reduce urban smog and greenhouse gases (in place in the Greater Vancouver region and proposed for the Greater Toronto Area).

Federal government policies and legislation can also help build better Canadian cities. The major terminals and gateways in the national transportation system are in urban areas, and local visions should be coordinated with the long-range plans for facilities in federal jurisdiction. Canada's current effort to meet its Kyoto target offers opportunities for synergies with programs to reduce urban transportation greenhouse gases through initiatives such as: higher federal fuel economy standards for new vehicles; revisions to the collection and allocation of federal fuel taxes; and support for innovation, research and development leading to more sustainable urban transportation systems.

MANY BENEFITS WILL RESULT...

Achieving livable communities in the face of shrinking financial resources requires:

- an urban area vision,
- supported by a complementary transportation vision (using TAC's *New Vision for Urban Transportation* as a generic guide),
- followed by implementation through a new urban development model, based on a process of change, as described in this briefing.

Along the way, coordination, cooperation and consensus building between governments, the private sector and citizens will be needed. More and more, users will be charged based on consumption. Lifestyle changes must occur. New forms of urban governance may evolve. Provincial (and federal) policy shifts and enabling legislation may be appropriate in some places.

None of this will come easily but the resulting benefits will be many.

In society:

- safer, healthier, cleaner, less stressful, more equitable and more affordable places to live, work and play.
- greater choice of housing and living styles and locations.
- people oriented communities, neighborhoods and street-scapes.

In the economy:

- more competitive cities in the new global economy.
- more attractive tourist destinations and places to do business.
- adequate and well maintained municipal infrastructure and services at lower total capital and operating costs.
- fairer and more equitable sharing of development costs.

In the environment:

- reduced air pollution and urban smog.
- less contribution to Canada's greenhouse gas emissions.
- conservation of land, water, energy and mineral resources.

In transportation:

- more efficient and affordable urban transportation systems, with less auto dependency.
- reduced travel requirements and more (modal) options when travel occurs.
- fairer and more equitable sharing of transportation system costs.

More livable and sustainable cities, for this and future generations of Canadians, will make the effort worthwhile.

TAC is a national, multi-modal, multi-jurisdictional organization promoting the provision of safe, efficient, effective and sustainable transportation services in support of Canada's social and economic goals.

This Briefing was prepared by the TAC sponsored **Urban Transportation Council** and assembled by **John Hartman**, Council Secretary and member of the TAC Secretariat staff. Permission to reproduce or quote is granted, provided the source is acknowledged.

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