TravelSmart: Planning for Sustainable Urban Transportation

Organization
City of Kamloops – Transportation Department, Community Development and Planning Department

Status
Implemented 1999

Overview
In response to rapid population growth and cost concerns about developing additional road capacity, the City of Kamloops launched an integrated land use and transportation planning program called TravelSmart.

Using computer modeling, TravelSmart evaluated different growth scenarios to identify a preferred land use scenario that minimized demands on the municipal transportation system to ensure its most efficient evolution.

The preferred land use scenario identified by TravelSmart was adopted in 1999 as a component of Kamloops' Official Community Plan.

Since its implementation, TravelSmart has helped improve local air quality, reduce transportation-related energy consumption and reduce planned future capital transportation expenditures from $120 million to $14 million.

TravelSmart received both an FCM-CH2M Hill Sustainable Community Award in 2000 and an Award for Innovation from the International City Managers Association in 2001.

Budget: $245,000. Funded through City general revenue, development cost charges funds and contributions from specific developers.

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Resources
- TravelSmart Plan (www.city.kamloops.bc.ca/transportation/index.html)

Community context

Kamloops is a fast growing city of 85,000 in British Columbia's southern interior and a major regional centre. With a relatively diversified service and resource economy and a high quality of life, the city has experienced significant growth over the past ten years.

Over the next 20 years, Kamloops is expected to grow by 35% to 120,000 people, placing considerable and possibly unbearable strains on the existing road network. To maintain quality of life and long-term community mobility, Kamloops embarked upon a unique planning exercise in 1997 called TravelSmart.

Policy context

TravelSmart provided clear direction for updating land use planning policies in Kamplan, the city's Official Community Plan, and is included as a section of the Kamplan document.

Its inclusion in Kamplan is considered one of the TravelSmart's key strengths and has helped ensure that transportation/land use integration remains a vital component of Kamloops' long-term strategic vision.

"Because TravelSmart is part of the OCP, it's part of the city's overall guiding policy," says Marni Gillis, the city's Environmental Management Coordinator. "Even though the people might change at City Hall, the overall strategic vision – integrating land use and transportation – remains the same and illustrates the sustainability of the program itself."

Rationale and objectives

Kamloops' growth has placed considerable demands upon its transportation system and has been responsible for an increase in transportation-related air pollution and the loss of agricultural and open space areas to urban development, including the construction of transportation facilities.

Unlike past transportation planning exercises that responded to growth by identifying new road and other capital facility requirements, TravelSmart integrates land use and transportation system planning to accommodate

population growth and new development while maintaining community mobility and quality of life.

By blending and balancing transportation supply and demand management, TravelSmart directs growth to optimize use of existing transportation facilities as well as to make the most efficient use of any additional facilities that may be required in the future. The approach accommodates the realities of reduced municipal budgets and actively promotes more sustainable community design.

The first objective of TravelSmart was to:

- Reduce the number of automobile trips per person during the peak afternoon hour by 5% from 1995 levels

Other objectives or planning principles were also developed with public input. They included:

- Maintain mobility levels as Kamloops continues to grow by means of a transportation system which is effective, yet affordable
- Integrate land use and transportation planning by managing future development patterns in a manner which minimizes the rate of increase in travel demand
- Protect the integrity of the provincial highway corridors with in Kamloops
- Recognize the linkage between the goal of environmental sustainability and an integrated land use and transportation system
- Encourage economic efficiency in providing and financing transportation services
- Ensure compatibility of transportation facilities with adjacent land uses and the overall character and image of the community

Actions

TravelSmart was officially adopted by the City in 1999 as one component of Kamloops' revised Official Community Plan (OCP), Kamplan. It includes the following key components and initiatives:

- **Less expensive road structure alternatives.** To avoid expensive improvements to road networks, the city has slowed or halted development in some areas and identified underutilized arterial corridors for access to the downtown core.
- **Improved public transit.** A comprehensive transit plan was developed to improve the level of service and provide alternatives to the single occupant vehicle. Improvements include increased frequency of service to outlying communities and the use of smaller buses that feed into the main system.
- **Promoting bicycle use.** TravelSmart was the catalyst for developing the Kamloops Bicycle Plan which was completed in 2002. Among other things, the plan identifies and prioritizes over $6 million worth of bicycle route and facilities to be constructed over the next 20 years.
- **Promotional programs.** Transportation alternatives such as carpooling and biking are promoted through workshops and seminars in workplaces. Some of the programs include the "Safe Routes to School" program in schools and a "Go Green" advertising program for busy commuter streets.

The first step in the TravelSmart plan was the development of two land use scenarios to be evaluated for their transportation and urban development implications, including the cost of any capital improvements and facilities each would require. The models were developed using Module 5 software and used the most recently available land use data and transportation behaviour information (1995 baseline). The two scenarios developed were:

- **Trend land use scenario.** Envisioned growth occurring in a fashion where existing land use plans and their attendant commitments were honoured with remaining development unfolding with limited attempt to direct it.
- **Alternative land use scenario.** Integrated current and future land use with transportation network management by incorporating compact development standards to minimize infrastructure costs and making optimum use of present and future transportation facilities. It also shifted development and increased densities in appropriate areas, particularly around Downtown Kamloops.

In developing the two growth scenarios, community input on personal mobility was collected through public process that also determined the levels of acceptance for travel delay amongst residents, public concerns and ideas for neighbourhood design and transit system options, and suggestions for modifying transportation behaviour.

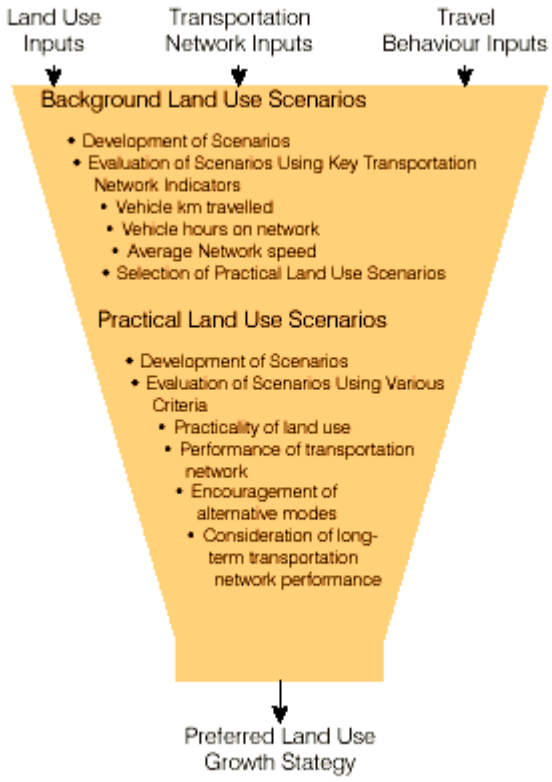
Following public review and input from a special project Steering Committee, the two scenarios were evaluated using the following criteria:

- **Land use.** How likely is it that the development pattern envisioned will be achieved?
- **Transportation network.** Which scenario achieves the best transportation network performance when measured in terms of general (e.g., vehicle kilometres traveled, vehicle hours on the network, average network speed, etc.) and specific (e.g., travel times through specific corridors) indicators?
- **Alternative modes.** Which scenario is most support of alternative modes?

- **Long-term transportation network considerations.** Which scenario best utilizes (and least compromises) the transportation network projected to be in place by the 120,000 population level?

During the evaluation process, the Alternative Land Use Scenario quickly emerged as the superior scenario and was selected as the Preferred Land Use Scenario that became the basis for the development of final TravelSmart policies, programs and recommendations.

Evolution of the preferred land use growth scenario



Results

TravelSmart reduced projected future road network improvements from $120 million to $14 million. The projected reductions were accomplished without reaching unacceptable mobility levels.

Other forecast results of TravelSmart (forecast through traffic count, transit usage and vehicle kilometres traveled modeling) include:

- Reducing transportation-related energy consumption from 128 to 125 gigajoules per capita per year.
- Reducing carbon monoxide emissions from 116 to 111 kilograms per capita per year.
- Reducing carbon dioxide emissions from 7,200 to 7,000 kilograms per capita per year.

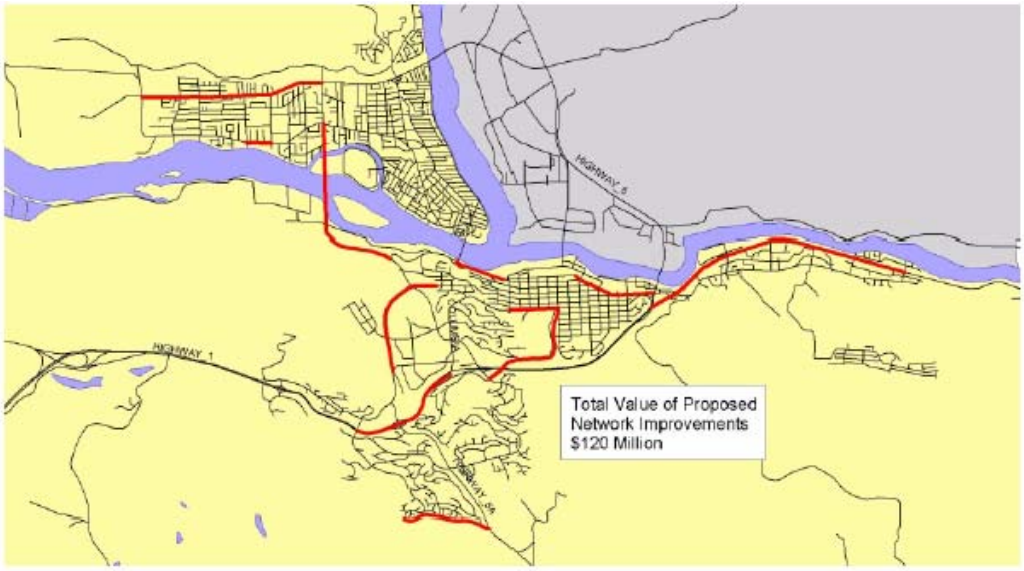
Although these results have yet to be more formally quantified, Kamloops will be monitoring quantifiable results more closely in the future, particularly with an update planned for this year.

"This time round we'll be looking more closely at a wider range of measurable results and outcomes," she says, adding, "We want to know exactly how successful we are with the update."

Other developments attributable to TravelSmart include the implementation and initiation of the following transportation demand management-related programs and developments:

- **Bicycle Master Plan and Pedestrian Master Plan.** Both plans were completed in 2002, based on TravelSmart principles and identified bicycle and pedestrian network deficiencies, recommended improvements and prioritized network improvements.
- **Official Transit Plan.** An Official Transit Plan was completed in 2000 that identified and prioritized service improvements, including a system-wide upgrade to "15 minute interval" transit on key routes. As part of the plan, a U-Pass transit program for students at the University College of the Cariboo in 2003. A new transit exchange was also constructed at the University College in 2003.
- **Safer City program.** A Safer City program was launched in 2001 to identify and fund improvements for dangerous intersections and areas of automobile-pedestrian and bicycle-automobile conflict in the city. The three year program was supported by a $900,000 grant from the Insurance Corporation of B.C. Among other improvements, the Safer Cities program has helped fund new pedestrian markings throughout the city, installed speed radar flashing message boards at key points, funded over two kilometres of painted bike lanes and shared shoulder lanes throughout the city, and supported a regular "Safer Cities" column on road safety in the local newspaper.
- **Traffic calming.** Assorted traffic calming measures, including road narrowings, corner bulges, pedestrian refuges and a demonstration traffic roundabout to calm traffic and improve traffic flow.
- **Trip reduction program.** A trip reduction program for Kamloops' two major employers, the regional hospital and the Weyerhaeuser mill, was implemented.
- **Fleet conversion.** A natural gas fleet conversion program in partnership with Terasen (formerly BC Gas) was launched in 2002. There is also a fleet demonstration and test program with five new hybrid vehicles for city use.

Proposed improvements — 1991 Transportation Plan



Proposed improvements — 1999 TravelSmart Plan

Participants

A wide range of community stakeholders and agencies participated in the development of the TravelSmart program, including:

- BC Ministry of Transportation and Highways
- BC Ministry of Environment, Lands and Parks
- Kamloops First Nation
- BC Transit
- University College of the Cariboo
- Kamloops residents

Resources

The total budget for TravelSmart's development and implementation was $245,000 funded through:

- City general revenue
- Development cost charges funds
- Contributions from specific developers

The province also funded $55,000 through the BC Transportation Financing Authority and federal infrastructure funds. Additional network improvements have been funded through City general revenue, development cost charges, BC Transit and the Ministry of Transportation and Highways.

Lessons learned

The success of TravelSmart has illustrated the importance of several key factors in developing more sustainable urban transportation options, including:

- **Coordinate with other policies and programs.** Incorporate principles and policies that support the integration of transportation planning and land use in both higher level Official Community Plans and lower level operational plans that determine day-to-day activities to help maintain ongoing commitment and policy consistency.
- **Seek motivated staff and elected officials.** Motivated and supportive elected officials are critical to facilitating successful plan development and implementation. There is also a need for both a dedicated staff team to implement the plan and a succession plan should the staff team change.
- **Use an incremental planning approach.** As a departure from conventional planning practices, an incremental or "learning by doing" approach to developing and implementing TravelSmart policies was important.
- **Budget appropriately.** Include a significant budget for public awareness and educational materials to encourage participation in less well know transportation demand management programs, such as employer-based trip reduction (e.g., ridesharing, guaranteed ride home), city-wide ride matching (matching commuters with common origins and destinations), alternative work arrangements (telecommuting, alternative work hours) and non-motorized transportation options (e.g., bike paths, pedestrian routes).

Dave Dean, the now-retired City Transportation Manager responsible for bringing TravelSmart to fruition, believes that it can serve as an example for other communities in Canada.

"There are many approaches to managing a community's transportation system, but TravelSmart demonstrates that blending both the transportation supply and demand approaches in a balanced way will help ensure the most efficient evolution of a city's transportation system," says Mr. Dean. "The approach holds tremendous potential for communities in Canada and internationally."

Next steps

Despite TravelSmart's successes, there is some concern that its policies have yet to be played out effectively at an operational or day-to-day level. "To be truly successful, TravelSmart requires a little more attention and a little bit of tweaking," says Gillis.

"Although we are working towards fuller and better implementation of the plan, we still need to do a better putting the principles on the ground and incorporating them as part of regular, every day operations so that they get the constant attention they need."

In order to help "bring down" more of the TravelSmart principles and objectives to an operational level, an Environmental Management Strategy and an Asset Management System are proposed to be developed for Kamloops Transportation Department over the next two years.

"We know that our day-to-day decision making needs to be more sustainable," says Gillis, "and we're hoping that these initiatives will really help build our commitment to TravelSmart and help with succession planning – we don't want the ideas behind TravelSmart to stay locked up at the OCP level only."

In addition to Environmental Management Strategy and Asset Management System initiatives, some of the specific program areas being targeted for update include bicycle and pedestrian facilities and an expansion of Kamloops' trip reduction programs.

Images are courtesy the City of Kamloops