eBikes and Sustainable Communities: A New Opportunity

February 2010
The Challenge and the Opportunity

• As the global population shifts from rural to urban, congestion and pollution due to the automobile becomes a greater and greater challenge

• We must find new and innovative approaches to getting people out of their cars.
Bicycle infrastructure....why invest?

In 2007, 130 million bicycles were produced worldwide, more than twice the 52 million cars produced.

In 2007, congestion caused 4.2 billion hours of travel delay and 2.8 billion gallons of wasted fuel, equaling a cost of more than $87 billion.

More than half of commute trips, and three out of four shopping trips, are under five miles in length ideal for bicycling. Forty percent of all trips are under two miles.

Past national polls have found that 17 to 20 percent of adults say they would sometimes bike to work if safe routes and workplace parking and changing facilities were provided.
Commuting: A Global Perspective

Could North America improve?

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Source: John Pucher, Transportation Quarterly, 98-1 (from various transport ministries and depts., latest avail. year)
Municipalities, Bikes, and eBikes

What can government do?

Funding bicycle facilities and programs can be a cost-effective means of reducing motor vehicle emissions, reducing congestion, and improving the health and well being of residents.

*Examples of bike friendly initiatives include construction of bicycle lanes and paths, bicycle parking facilities at transit stations, bicycle racks on transit buses, and bicycle loan programs.*
People choosing to pedal rather than drive usually replace short automobile trips that are disproportionately high in pollutant emissions.

Bicycling is important to the health of Californians and not just to those doing the cycling. Statewide, about seven tons per day of smog-forming gases and almost a ton of inhalable particles are spared from the air we breathe due to use of bicycles rather than motor vehicles.
Municipalities and Active Transportation

Municipalities Lead the Way....

The City of Davis, for example, has the highest rate of bicycling in the nation. Among its 64,000 residents, 17 percent travel to work by bicycle and 41 percent consider the bicycle their primary mode of transportation.

City officials place strong emphasis on provision of adequate, safe facilities for cyclists -- both travel lanes and properly configured traffic signals.
Press Release • October 26, 2009

More than one million BIXI trips!

This morning, Roger Plamondon, chair of the board of the Public Bike System Company, and Alain Ayotte, the company’s president, were pleased to announce that the one millionth BIXI bike trip has been made. The two men were accompanied by Gérald Tremblay, mayor of Montréal, and André Lavallée, chair of the City of Montréal’s executive committee and member responsible for the transportation plan, as well as the user who reached this important milestone in the young company’s history.
Bike Share Programs: The Paris Example

The benefits of Vélib’ on your health

Vélib’ Paris Riders took 27.5 million trips in the first year.

The current pace is about 120,000 trips per day.

The program includes 20,600 bikes.

“Specialists, business owners, and residents are all on the same page in attesting that Velib improved their business results and their overall lifestyle”.

The next opportunity......

• Bike infrastructure and bike share programs are significant steps forward in the effort to move people out of their cars and into active transportation

• Bionx and Magna Marque are proud to be at the forefront of the next significant innovation in Transportation Demand Management with its Intelligent Mobility System
Magna Marque International

• Established in 2006 as a joint venture with Magna International

• Leveraging the strengths of Magna to enter new markets
  – Design, engineering, system integration, manufacturing and capital base

• Building subsidiaries focused on innovative products in growing markets
  – 2009 BionX RaX – Infrastructure for the outdoor lifestyle & recreational market

• Assembly, product engineering & industrial design in Aurora, Ontario

• Advanced engineering Centers in Lebring, Austria and Sherbrooke, Quebec

• European Sales & Service Office in Munich, Germany
The Bionx Vision

Enable healthy active lifestyles for all ages and abilities

Promote sustainability through active transportation and innovative commuting solutions

Providing leadership in building healthy, sustainable communities where more people can leave their car at home

Directly participate in the reduction of carbon emission and traffic congestion
Market

• Over 23 million e-bikes sold globally in 2008 and expected to double in 4 years
  – China currently accounts for 90% of eBike sales
  – eBikes are the fastest growing sector in European bike market
    • 500,000 units in 2008 and projected at 700,000 for 2009
  – North America lags the rest of the world with targeted 200,000 units for 2009 but momentum is growing
    • Trek’s “most exciting” initiative for 2010 is the launch of their BionX-equipped eBike in North America

• Production Growth
  – 2007 – 6,000 units
  – 2008 – 10,000 Units
  – 2009 – Est. 40,000 units
  – 2010 – Projected at 100,000+ units
EPS - BionX
Easy to use as a “plug and play” system
With a state of the art product for all
BionX System

• A “Ped-Elec” system that incorporates a battery powered electric motor to supplement a rider’s pedaling effort

• This Hybrid cycling technology is based on a torque sensor incorporated in the ‘smart’ motor that measures how much pressure the rider is exerting with each stroke

• The overall effect gives the rider a ‘bionic’ power feel

• The intelligent control can be set at 4 different assist levels depending on the terrain and the rider’s capability (35%, 75%, 150% and 300%)

• In addition to regenerative braking, the system offers 4 resistance levels for recharging the battery while training or riding downhill

• Electric power is supplied by batteries discretely mounted, capable of assisting a rider up to 113 kilometers (70 miles) on a 35% assist mode
Sustainability and EBikes

Bionx…..

• Helps individuals and corporations to actively participate in carbon emission reduction

• Allows communities to be innovative leaders in a new smart commute solution

• Helps individuals to improve overall health thus promoting a productive work force and reducing health care costs

• Allows community members to choose to leave their car at home by commuting to work on their bike more often and for longer distances

• Improves overall quality of life and engages users in the day to day life of their neighbourhood and community.
The way forward....what can we do?

• Recognize and embrace the enormous potential for eBikes to move people out of their cars and into active transportation

• Educate the public that improvement to the environment, traffic congestion and health far outweigh the community investment needed to encourage bikes and eBikes

• Ensure your community has encouraging bylaws and infrastructure for the eBike revolution that awaits
Thank you

MAGNA MARQUE