



The Bike-Sharing Phenomenon

The History of Bike-Sharing By Paul DeMaio

Bike-sharing programmes have received increasing attention in recent years as an answer to the public's desire to increase bike usage, and lessen the environmental impacts of transportation. Originally a concept from the revolutionary 1960s, bike-sharing's growth had been slow until new technology spurred a rapid expansion of this innovative concept.

Bicycles have several advantages as a mode of transportation for short-distance urban trips: they reach underserved destinations, require less infrastructure and generally do not add to congestion. In addition, they are relatively inexpensive to purchase and maintain, do not create pollution in their operation, and provide the user with exercise. Their value is undeniable when one also considers that these bicycles may increase trips on other modes of public transportation by expanding the reach of trains and buses.

There have been three generations of bike-sharing systems over the past 40 years. The 1st generation began in 1964 in Amsterdam with the *Witte Fietsen* or White Bikes. Ordinary bikes painted white were provided for public use. Individuals were to find a bike, ride it to their destination, and leave it for the next user. Things didn't go as planned, as bikes were thrown into the canals or appropriated for private use, so the programme collapsed within days.

Nearly 30 years later, in 1995, a 2nd generation was launched in Copenhagen called *Bycyklen*, or City Bikes, with many improvements over the previous generation. These bikes were specially designed for intense utilitarian use with solid rubber tyres, wheels with advertising plates, and could be picked up and returned at specific locations throughout the central city with a coin deposit. While more formalised than the previous generation – with stations and an organisation to operate the programme – these bikes still experienced theft due to the anonymity of the customer.

A new breed of bike-sharing was seen soon after in 1996 at Portsmouth University in England with Bikeabout. This involved

using a magnetic stripe card which the student would swipe to rent a bike. This and the following 3rd generation systems were 'smartened' with a variety of technological improvements including electronically locking racks or bike locks, telecommunication systems, smartcards, mobile phone access and on-board computers. Bike-sharing grew slowly in the following years until the launch of *Velo'v* in Lyon, France caused a stir.

Before bike-sharing, Lyon wasn't a bike-friendly city – only 1.5% of trips were made by bike. After Lyon created more bike facilities and introduced its *Velo'v* programme in 2005, bicycling increased as more felt safer cycling. Bike traffic has jumped around 500% since the launch of *Velo'v* with one quarter of this increase coming from bike-sharing. *Velo'v* reported 1.5 million km travelled by customers in June 2008, and 36 million km since the programme's inception in 2005. This equates to 7,260 tons of CO₂ saved for the same distance travelled by car.

As the success of France's second city became known, the capital took note. In 2007, Paris launched its own bike-sharing program, *Vélib'*, with about 10,600 bikes soon expanded to 20,600 bikes. This massive undertaking and its better than expected success changed the course of bike-sharing history and generated enormous interest in this transit mode around the world.

To date, bike-sharing programmes have primarily been offered as a bonus to local governments by advertising companies, such as the big three of JCDecaux, Clear Channel and Cemusa. The municipality gets a bike-sharing programme run by the advertising company while they gain locations for their adverts in public space. It's a convenient deal for governments who can't afford to provide the service otherwise.

As the demand for bike-sharing increased, more companies became involved in the industry and created their own technologies. Many of the new systems have no advertising component, but rather require direct subsidy from the local government in addition to user fees to be financially sustainable. These

new bike-sharing systems allow jurisdictions – and universities either with populations too small to make advertising profitable or where advertising on public space is prohibited, to consider launching their own services.

As we approach 100 bike-sharing programmes worldwide with as many as 10 times this planned, the future of bike-sharing is bright. Gérard Collomb, the President of Greater Lyon, said, "there are two types of mayors: those who have bike-sharing and those who want bike-sharing." This certainly seems to be the case as each bike-sharing programme creates more interest in this form of transit – call it a virtuous cycle.

Europe certainly has the lion's share of programmes due to forward-thinking elected officials and a greater commitment to cycling in general, but the idea is finally taking hold elsewhere. In the East, New Zealand realised three programmes this year and China one. North America saw its first couple of programmes late this past summer with the launch of Washington, DC's programme, followed by three additional programmes in Denver, Minneapolis and Montreal. Each bike fleet was small, but plans for the four cities include expansion. Many other cities and universities throughout North America are in the process of selecting their bike-sharing vendor. South America's first bike-sharing programme opens in November in Rio de Janeiro with a handful of others for 2009, including Buenos Aires and Santiago. The Middle East should see its first programme soon in Tel Aviv, and Melbourne and Brisbane are on their way in Australia.

As the price of fuel continues to rise, traffic congestion worsens, population grows, and a greater world-wide consciousness arises around climate change, it will be even more necessary for leaders around the world to find modes of transportation to move people in environmentally sound, efficient and economically feasible ways. Fortunately, bike-sharing fits these needs and not a moment too soon. Not a panacea, as bike-sharing's detractors point out, bike-sharing is a complementary mode of transport and another tool in the toolbox of public transportation. 