

Organizational Models, Global Trends, and Financing of Bike-sharing

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Prepared for:

The City of Copenhagen



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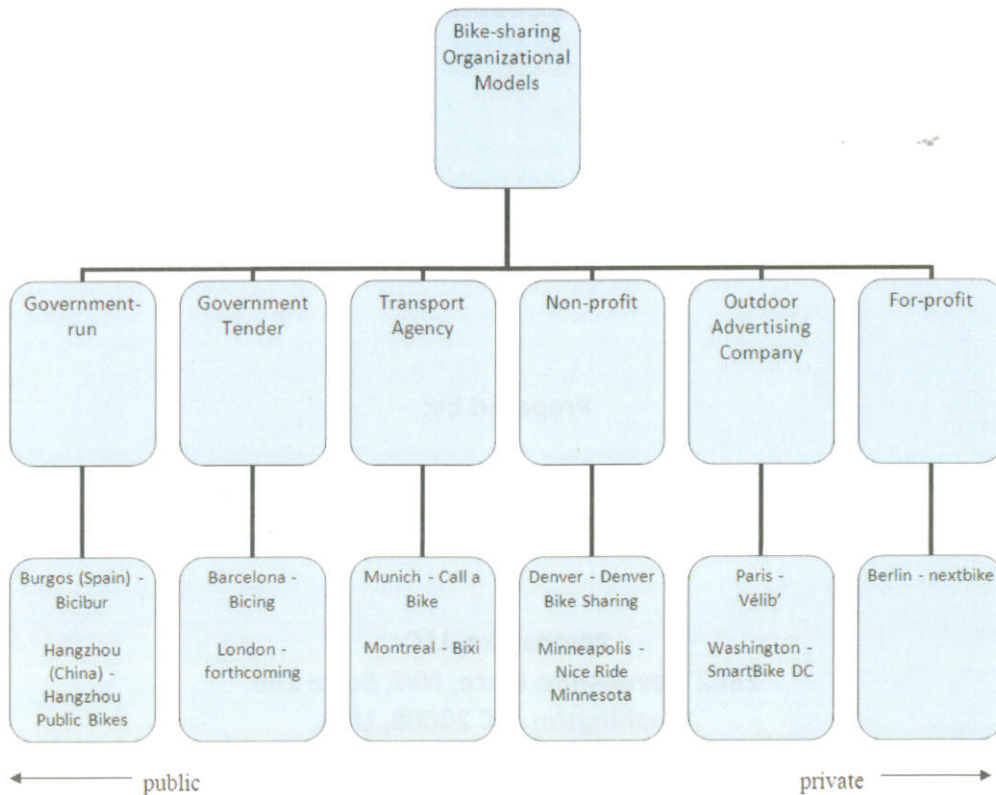
Introduction

For this report, MetroBike, LLC was tasked with examining the organizational models of bike-sharing provision, trends in the industry, and financing. The first section of this report will look at organizational models from around the world, including who is operating the services, how are the operators chosen, who chooses the operators, and the advantages and disadvantages of the various models. The second section will look at industry trends. The third will review the financial models of bike-sharing.

Organizational Models

As bike-sharing evolves, so do its organizational models. With Copenhagen's non-profit model being one of the earliest to Paris' outdoor advertising company model being one of the most commonplace, a greater number of organizational models have come into existence over the past decade. Illustrated in Figure 1 - Organizational Models, 3rd generation (high tech) bike-sharing service providers include local governments, firms selected through government tenders, quasi-governmental transport agencies, non-profits, outdoor advertising companies, and for-profits. Each model along with its advantage and disadvantages for the City of Copenhagen are described in this section.

Figure 1 - Bike-sharing Organizational Models



Government Model

In the government model, the locality purchases an off-the-shelf system and operates it as the government would any transit service, possibly with hiring a vendor(s) for maintenance and/or distribution needs, but keeping the operational responsibilities. An example of this is the government of Burgos, Spain which operates its service, called Bicibur.¹ According to Mari Luz of Burgos's Office of Mobility, having the locality provide the service is an economical way of providing the service to its population.²

Advantages of this model include the government's complete control over the program as the operator, so it maintains the full quality control of the service and how customers experience it. As there is no other party with which to negotiate, the government can design and operate the program exactly as it wishes. Luz also described the speed at which Burgos can respond to citizen needs and making improvements in the service as two major advantages of this model.³

Disadvantages with this model are that the government may not have the experience that existing bike-sharing operators have in managing a program, and therefore will experience a greater learning curve than an experienced operator. Second, the government must create every aspect of the service, if not offered by the system vendor. For example, if the vendor does not offer a call center, then the government must create this. Third, the government maintains the liability for the program.

Government Tender Model

The government tender model is one in which the locality hires an operator through the tender process which specializes in bike-sharing service provision.⁴ With more bike-sharing systems in the marketplace than ever before, the locality may hire an operator who usually has selected an off-the-shelf system to operate. This happened with London, Boston, and Melbourne where local organizations - Serco, Alta Bicycle Share, and the Royal Automobile Club of Victoria, respectively - will be operating the bike-sharing service using Montréal's Public Bike System. The locality could also hire an operator who has its own system, as is the case with Veolia's Veloway system. This model has become prevalent over the past year as it improves upon many problems associated with the outdoor advertising company model (described below), and due to greater competition in the marketplace, it can be less expensive than other models.

The advantages of the government tender model are locality can place the liability for the service on the private sector operator. A second advantage is the locality has

¹ Civitas. 2009. City Bike Scheme in Burgos. http://www.civitas-initiative.org/measure_sheet.phtml?lan=en&id=302/.

² Luz, Mari. 2010. Email with the author. January 7.

³ *ibid.*

⁴ Examples of tenders are available at The Bike-sharing Blog, <http://bike-sharing.blogspot.com/>.

greatest flexibility over which system and operator are used by how it writes the tender. With a public tender, the government can choose either a system and operator or pre-select a system and only select an operator. With Copenhagen's recent juried competition, an option that could work well for the city would be to select the system with which it wants to move forward and find an operator willing to manage the city's chosen system.

One disadvantage of the government tender model is the time required for a public tender process. The writing of the tender, evaluation of the bids, and negotiating with the selected bidders is time-consuming, however, a necessary evil for the tender process.

Transport Agency Model

The transport agency model has a quasi-governmental organization providing the service. The transport agency's customer is a jurisdiction, region, or nation. Transport agencies, such as Deutsche Bahn (DB) and Stationnement de Montréal are prime examples. DB is the national railway provider of Germany which has its Call a Bike bike-sharing service. Stationnement de Montréal is the city's parking authority and provides its Bixi bike-sharing service. Both organizations have gotten into bike-sharing as an extension of their other transport offerings to be a well-rounded mobility provider. In the case of Montréal, Stationnement de Montréal volunteered itself to the city to develop a bike-sharing system using its expertise and network of multispace parking meters as a platform from which to launch its bike-sharing service.

The main advantage of the transport agency model is that the jurisdiction benefits from plugging into the experience and innovation of a bike-sharing service provider and system without needing to develop the capabilities internally. With DB, German cities are likely getting a subsidized service, which would explain the preponderance of DB's service throughout the country. Second, both the jurisdiction and transport agency's top priority is to provide a useful transit service, rather than generating revenues, so its ideas about the quality of the service are likely to be aligned.

A disadvantage of this model is that without the locality releasing a tender for the service, a more qualified operator with a better system may exist than the transport agency operator. Second, the locality could find that the service or system which the transport agency is offering may not be economical or another system would better meet the locality's needs.

Non-profit Model

The non-profit model is one in which an organization is either expressly created for the operation of the bike-sharing service or an existing entity folds the bike-sharing service into its offering. Examples of non-profit programs include the City Bike Foundation of

Copenhagen, of course; Transit for Livable Communities which will operate the Nice Ride Minnesota service in Minneapolis, USA; and Denver Bike Sharing in Denver, USA.^{5,6}

While the non-profit operates the program, they usually receive funding from a government in addition to collecting the revenues generated by membership and usage fees, sponsorships, and advertising on the bikes and/or stations. The non-profit model is advantageous to the locality as it removes liability from the locality and places it on the non-profit which has limited funding and therefore less likely to have legal action taken against it. Additionally, the non-profit has its own management which could make it nimble and quicker at making decisions than a government's bureaucracy. However, if a non-profit receives funding from the government, it may need to follow the government's spending requirements when these funds are used. Minneapolis and Denver will both receive funding from their respective city or the Federal government, with Minneapolis receiving 1.75M USD from the Federal government.⁷

A disadvantage of this model is a non-profit must either already exist or be created to run the bike-sharing service. In the case of Minneapolis, the mayor selected the non-profit which would operate the service, whereas in Denver, an existing non-profit took the program under its wings until a new non-profit can be created to operate the service.^{8,9} Similar to the government model, the non-profit might not have the experience necessary to operate such a service. Also, without a tender, the non-profit might not select the most qualified service provider or system if parts of the service are contracted out.

Outdoor Advertising Company Model

With the outdoor advertising company model, a locality releases a tender for street furniture, which could include transit shelters, kiosks, public toilets, and even billboards. The jurisdiction provides the winning bidder with the right to use public space to display advertisements on the street furniture and the company may keep the revenues generated by this activity. A bike-sharing service can be requested in the tender and is provided to a jurisdiction, usually at no cost. The companies in this field include JCDecaux, Clear Channel Outdoor, and Cemusa. This model started about a decade ago and since then has become the predominant model of bike-sharing provision.

⁵ Transit for Livable Communities. undated. Walking and Bicycling. <http://www.tlcminnesota.org/walkingandbicycling.html/>.

⁶ Denver Bike Sharing. 2009. About Denver Bike Sharing. <http://www.denverbikesharing.org/about.htm/>.

⁷ Nice Ride Minnesota. 2009. Nice Ride Minnesota Moving Forward With Procurement of Bike Share System. http://niceridemn.com/index.php?option=com_content&view=article&id=98:nice-ride-minnesota-moving-forward-with-procurement-of-bike-share-system&catid=35:news-a-updates&Itemid=53/.

⁸ Dossett, Bill. 2009. Nice Ride Minnesota program manager. Conversation with the author. December 4.

⁹ Denver Bike Sharing. 2009. About Denver Bike Sharing. <http://www.denverbikesharing.org/about.htm/>.

While the contracts vary among the jurisdictions, the main advantage of this model is the economic benefit which the jurisdiction receives. In the case of Washington, D.C., which agreed to services from Clear Channel Outdoor, the city will receive:

- a direct financial payment of nearly 153M USD over a 20-year period, which includes a lump sum amount of 24M USD at contract signing, 25M USD at Year 10, and annual revenue sharing of between 2M-9M;
- 716 bus shelters with their installation and on-going maintenance;
- bike-sharing service of 120 bikes and 10 stations; and
- real-time bus arrival displays at bus shelters.¹⁰

Additionally, the city keeps the membership and usage fees generated by the bike-sharing service. (SmartBike DC allows up to 3-hour trips for no usage fee, so does not generate usage fees.)

Another benefit of this model is the locality receives a tested system and the expected quality of a company which is well-known for operating its system throughout Europe. Clear Channel Outdoor has been operating SmartBike since its first system in Rennes, France in 1998 and JCDecaux has been operating its first system in Lyon, France since 2005, so both companies are more experienced than their competitors. Due to their relative long duration in the marketplace, they have had the opportunity to improve upon their system's design to decrease the potential of theft and create a system that is more customer-friendly.

A disadvantage of the outdoor advertising company model is the very same thing that has made it successful - the coupling of a bike-sharing service with a street furniture contract. This coupling has sometimes made the cost of the bike-sharing service itself unclear to the locality as the contract is not detailed showing the cost of the bike-sharing service. Not knowing this cost, the locality could be foregoing greater revenues than the actual cost of the bike-sharing service. For example, a street furniture contract could generate 150M USD over a 20 year period and provide a "free" bike-sharing service or the contract could offer 200M USD over the same term without a bike-sharing service. If the locality could find a high-quality bike-sharing service for 20 years that costs less than 50M USD (the difference between the two amounts), the jurisdiction would do better with separate street furniture and bike-sharing contracts. By uncoupling a bike-sharing contract from a street furniture contract, jurisdictions can ensure they are getting the best prices for both contracts.

A second disadvantage of the outdoor advertising company model is the problem of moral hazard. The outdoor advertising company usually does not benefit from revenues generated by the system, as the revenues usually go to the jurisdiction, so the

¹⁰ District of Columbia Department of Transportation. undated. Bus Shelter Franchise Agreement. <http://ddot.dc.gov/ddot/cwp/view,a,1249,q,633272.asp/>.

advertising company may not have the same incentive to operate the program as if the revenues were directly related to their level of service. This is highlighted in Paris with Remi Pheulpin, JCDecaux's director general, having said their contract with Paris is unsustainable due to the unexpectedly high level of theft and vandalism the program has experienced. "It's simple. All the receipts go to the city. All the expenses are ours," he stated.¹¹ This led to a renegotiation of the Velib' contract to provide JCDecaux a greater portion of the revenues in order to provide them with additional incentive to create a better service.

"In the original contract, 12% of the subscription and rental income went to JCDecaux, while Paris reaped hefty benefits. Now, when the rental income goes beyond €14 million, JCDecaux gets 35% of the amount above that level. When the rental income reaches €17 million, they receive 50% of the income above that level. This new financial incentive will give JCDecaux more reasons to maintain the bikes, give better service, and increase the number of customers."¹²

A third disadvantage is after the locality signs the street furniture contract, they are locked into the particular system and service provider for the length of the contract. The advertiser becomes a bike-sharing service monopoly, in effect, to the locality. Should the service decline or the system not be updated over time, it would be difficult for the locality to exit the contract unless specific service levels are described in the document. Conditions for expansion must also be detailed so both the locality and advertiser know what to expect.¹³

A fourth disadvantage with this model is that Copenhagen would be limited to the systems that are being offered by three outdoor advertising companies – Clear Channel Outdoor's SmartBike, JCDecaux's Cyclocity, and Cemusa. Accordingly, there would not be an opportunity to take advantage of Copenhagen's recent juried competition of bike-sharing systems.

A fifth disadvantage of this model is the locality can have difficulty maintaining quality control over the advertiser's responses to customer complaints. This is unless a process were to be defined in the contract.¹⁴ Sixth, bike-sharing is not how the outdoor advertising companies make their revenues; it is a secondary business that is used to generate customers for their primary business. Due to this, the quality of their secondary service could suffer.

¹¹ BBC. 2009. Thefts Puncture Paris Bike Scheme. February 10. <http://news.bbc.co.uk/2/hi/europe/7881079.stm/>.

¹² Meddin, Russell. 2009. Spinning Wheels of Gray are Now Spinning Gold for JCDecaux. The Bike-sharing Blog. November 23. <http://bike-sharing.blogspot.com/2009/11/spinning-wheels-of-gray-are-now.html/>.

¹³ Holben, Chris. 2010. Bicycle Planner for the District of Columbia Department of Transportation. Conversation on January 4.

¹⁴ *ibid.*

For-profit Model

The for-profit model has a private company providing the service with no government involvement. Nextbike is the only example of this model which uses an off-the-shelf *flexible* (no fixed station) system. Nextbike's website claims it "is a profitable bike renting system", however, the system has questionable locking capabilities which could make it unreliable as a large fleet.¹⁵

A model that does not exist at the present time, but may in the future with a creative and ambitious team, would be a public-private partnership (PPP) where a company would provide a bike-sharing service and the locality would provide dedicated public space at no cost to the bike-sharing operator. For this model to potentially be successful, the operator could generate revenues streams from on-bike and station advertising while earning usage and membership fees. Usage pricing would need to charge on a per trip basis rather than the common 30 minute free period and remove the membership fee. Various types of bikes could be offered for different fees.

Industry Trends

Just a couple of years ago, the most common method cities used in selecting a bike-sharing service was through outdoor advertising contracts. Outside of a few home-grown services, such as Copenhagen's and Arhus's, there were very few organizations that offered bike-sharing services other than the outdoor advertising companies. This lead cities to release a public tender for outdoor advertising contracts and include a bike-sharing component as part of the contract. The outdoor advertising companies generally do satisfactory work with their bike-sharing service offerings, however, this approach became problematic because the bike-sharing service's costs were rolled into the outdoor advertising costs, so it was difficult to accurately determine the unit cost per bike for capital and operating costs.

As there are now off-the-shelf bike-sharing systems and entrepreneurs ready to operate services, cities have shifted away from including bike-sharing services as part of larger outdoor advertising contracts. In fact, London's feasibility study specifically recommends against linking an advertising contract with a bike-sharing contract.¹⁶ Jurisdictions instead are releasing tenders specifically for contractors to design, build, operate, and maintain a bike-sharing service.¹⁷ Due to this change in the demands of jurisdictions, entrepreneurs and system manufacturers are finding each other and devising plans to work together to offer their services.

¹⁵ Nextbike. 2009. nextbike: Rent a Bike. <https://nextbike.net/>.

¹⁶ Transport for London. 2008. Feasibility Study for a Central London Cycle Hire Scheme. November. p.73. <http://www.tfl.gov.uk/assets/downloads/cycle-hire-scheme-feasibility-full-report-nov2008.pdf/>.

¹⁷ Transport for London. 2008. Contract Notice. November 11. p.3. http://www.metrobike.net/index.php?s=file_download&id=14/.

While a locality may release a tender for a bike-sharing service, it need not relinquish all of the associated tasks to the vendor. In some cases the locality may wish to retain the tasks in which it excels. For example, the Arlington County, Virginia government released a bike-sharing tender which states that Arlington will retain the task of marketing the service due to its strengths in this area.¹⁸ The vendor is asked to participate in the marketing effort in a minor role. This concept can be extended in Copenhagen to ensure Bycyklen's social aspects, such as Copenhagen's rehabilitation agency providing bike maintenance assistance, are continued into the city's new service.¹⁹

As no locality is an island in itself, some frameworks of regional government allow tenders to be written to allow other governments to benefit from the same pricing without needing to spend the time and effort of their own tender. With the government tender model, a lead government would develop a contract and pricing with an operator, which other local governments could join when they have garnered sufficient political support and funding. The localities could collectively own the branding of the service, while the stations and bikes are the property of each respective member jurisdiction of the bike transit pact. A memorandum of understanding would spell out how revenues are to be distributed as well as the responsibilities of the member jurisdictions.

Another trend in the industry is the continuing improved efficiency of distributing bikes. Presently, staff moving bikes from areas of high supply/low demand to areas of low supply/high demand is time consuming, expensive, and polluting. To improve upon this, services will need to create "push" and "pull" stations which will either encourage trips to leave or arrive, respectively, at these stations based on the demand for bikes. Incentives will include free time or system credit. Vélib' has made an improvement in this area with the launch of its "V+" concept. As it requires more physical effort and time for customers to reach uphill stations, V+ gives an extra 15 minutes to access about 100 of these designated uphill stations. The extra time given has encouraged greater use of these stations.²⁰

Luud Schimmelpennick, a co-inventor of the bike-sharing concept, reports the operational cost of JCDecaux's distribution of bicycles is about 3 USD each.²¹ Schimmelpennick believes paying customers for distribution to stations which need more bikes, either through providing a customer credit towards future use or paying the customer outright would increase distribution efficiency at a fraction of the present

¹⁸ Arlington County, Virginia Invitation to Bid Number 56-09. pp.4-9.
http://www.metrobike.net/index.php?s=file_download&id=18/.

¹⁹ Fonden Bycyklen I København. undated. The City Bike and Copenhagen.
<http://www.bycyklen.dk/english/thecitybikeandcopenhagen.aspx/>.

²⁰ Vélib'. 2008. Velib et Moi - Le Blog. October 2. <http://blog.velib.paris.fr/blog/reportages/triomphe-des-bonus-v-vous-ameliorez-tous-les-jours-le-service-velib/>.

²¹ Schimmelpennick, Luud. 2009. Conversation with the author. March 5.

cost. While Copenhagen does not have hills, it likely has distribution needs based on the time of day and day of week. With a defined pattern of use, Copenhagen can select stations to benefit from a similar V+ mechanism to limit distribution costs and their negative externalities.

Financing

Bike-sharing services have generally not proven to be revenue positive as membership and usage fees will only likely cover operating and maintenance expenses, but not capital expenses. So like other transit services, outside funding is usually necessary to assist a bike-sharing service in becoming financially sustainable. There are a variety of funding methods which have assisted bike-sharing services, including local funding, grants, advertising, and sponsorship. Local funding has come from parking meter revenue, as is the case in Barcelona, and other municipal financing, as is the case in Prague and Krakow.^{22,23} Grants have come from the state/provincial, national, and international governments through such organizations as the Virginia Department of Rail and Public Transportation (USA) for the upcoming Arlington service and the Institute for the Diversification and Saving of Energy (IDAE) for many Spanish services.²⁴ London's upcoming service is expected to cost 82M GBP and be funded through Transport for London whose funding is composed of "fares (user charges) and government grants, with broadly half of its income coming from each source."²⁵ The European Union has two programs, Civitas and Intelligent Energy, which have assisted bike-sharing services with funding.²⁶

Advertising and bike-sharing seem to go well together. Certainly, outdoor advertising companies are not the only ones who can place advertisements on the stations and bikes, as The City Bike Foundation of Copenhagen and others have done. Montréal has hired Astral Media Outdoor to use its stations' map frames to place ads.²⁷ Barcelona generally has not allowed advertising on its system, however, it made an exception when the Tour de France rode through by placing event ads on the rear fenders of the fleet's bikes. Suisse Roule in Switzerland has also taken advantage of advertisements as a revenue source.²⁸

Sponsorship is a common method of generating revenues with program and station sponsors. Minneapolis' upcoming Nice Ride Minnesota program has a health insurance

²² Ferrando et al. 2007. Guía Metodológica para la Implantación de Sistemas de Bicicletas Públicas en España. p.97. http://www.idae.es/index.php/mod.documentos/mem.descarga?file=/documentos_Guia_Bicicletas_8367007d.pdf/.

²³ Spicycles. 2009. Cycling on the Rise. March. p.9. http://spicycles.velo.info/Portals/0/Deliverables/SpicyclesFinal_Booklet_small.pdf/.

²⁴ Ferrando et al. 2007. p.97.

²⁵ Osman, Adam. 2010. Transport for London. Email with the author. January 13.

²⁶ *ibid.* p.98. Civitas: <http://www.civitas-initiative.eu/>. Intelligent Energy: http://ec.europa.eu/energy/intelligent/index_en.html/.

²⁷ Astral Media Outdoor. 2009. Bixi. <http://www.astralmediaaffichage.com/en/products/street-furniture/bixi/default.idigit/>.

²⁸ Ferrando et al. 2007. Guía Metodológica para la Implantación de Sistemas de Bicicletas Públicas en España. p.97.

company providing 1M USD as a 5-year sponsor of the service.²⁹ For this, the company will receive identification as the program sponsor on the service's website and on each bikes' right rear fender. Nice Ride Minnesota will also have individual businesses as station sponsors.³⁰ Montréal has a service sponsor which is an aluminum producer.³¹ Arlington will have business improvement districts as sponsors and require building developers to contribute the cost of installing and operating a station as a development requirement.

Bike-sharing as Part of the Public Transport Network

In many instances around the world, bringing bike-sharing into a locality's menu of mobility options has been the role of the bike staff, rather than the transit staff. Bike-sharing likely has been on the radar of localities' bike staff for a longer period of time than transit staff. This, as well as bike-sharing's proven role of increasing bike mode share in jurisdictions with low bike use, has made bike-sharing a crusade readily taken up by bike staff, even though our skill set has been different from those who run transit services. While bike-sharing is bike transit, the transit half of this term is hefty as operation management skills are needed to administer a transit service that just so happens to be on two wheels. When operated and financed as any other public transport service, there need not be any differences regarding how a bike-sharing service "looks". It is wise to draw transit staff into various stages of service development to ensure consistencies between other modes of public transport and bike-sharing.

Conclusion

The City of Copenhagen has many exciting steps ahead as it determines the best organizational model with which to proceed. Copenhagen set a new standard in 1995 with the launch of its first of its kind 2nd generation Bicyklen. Now Copenhagen is being watched with anticipation from around the world yet again in how it will bring a 4th generation bike-sharing service into its world-class cycling city.

²⁹ Newmarker, Chris. 2009. Blue Cross Donates \$1M to bike sharing program. Minneapolis St. Paul Business Journal. September 2.

<http://twincities.bizjournals.com/twincities/stories/2009/08/31/daily38.html/>.

³⁰ Nice Ride Minnesota. 2009. Nice Ride Minnesota Announces First Kiosk Sponsors. November 23. http://niceridemn.com/index.php?option=com_content&view=article&id=94:nice-ride-minnesota-announces-first-kiosk-sponsors&catid=35:news-a-updates&Itemid=53/.

³¹ Rio Tinto Alcan. 2008. Rio Tinto Alcan and Bixi: a Partnership on a Roll. October 28. http://www.riotintoalcan.com/ENG/media/media_releases_1332.asp/.

Appendix A

Approximately how much of the costs of running a system should Copenhagen be prepared to cover?

The percentage of revenues Copenhagen can expect to generate from membership and usage fees, ads, and sponsorship to cover capital and operating costs will vary greatly based upon which model of service provision the City selects. To determine these percentages, data from cities with bike-sharing services that have populations above 500,000 was collected by the EU-sponsored OBIS Project (Optimising Bike Sharing in European Cities).¹ Representative data for the three models - Outdoor Advertising Company, Government Tender, and Government-run - are provided below.

Data from localities using the Outdoor Advertising Company model show that advertising revenues generated from this model pay for between 70 - 98% of the cost, while revenues generated from users (i.e., subscription and usage fees) pay for between 2 - 30% of the cost, as shown below. Data from localities using the Government Tender model show that the public contributes between 40 - 90% of the capital and operating funds, as shown below, with the remainder of funds coming from service revenues (subscription fees, usage fees, and advertising). A locality using the Government-run model shows that the public contributes 100% of the capital and operating funds.

Outdoor Advertising Company Model Examples:

City: Milan, Italy

Revenues from Users (Subscription and Usage Fees): 30%

Revenues from Advertising: 70%

Bikes: 1,400

City: Stockholm, Sweden

Revenues from Users (Subscription and Usage Fees): 11%

Revenues from Advertising: 89%

Bikes: 500

City: Vienna, Austria

Revenues from Users (Subscription and Usage Fees): 2%

Revenues from Advertising: 98%

Bikes: 626

Government Tender Model Examples:

City: Barcelona, Spain

Revenues from Users (Subscription and Usage Fees): 50%

Public funding: 50%

Bikes: 6,000

City: Montpellier, France
Revenues from Users (Subscription and Usage Fees): 10%
Public funding: 90%
Bikes: 650

City: Bristol, UK
Revenues from Users (Subscription and Usage Fees): 20%
Revenues from Advertising: 40%
Public funding: 40%
Bikes: 16

Government-run Model Example:ⁱⁱ

City: Burgos, Spain
Public funding: 100%
Bikes: 100+/-

Having a fully “free” system (i.e., no public funds needed) is only likely if Copenhagen were to select the Outdoor Advertising Company model of bike-sharing service provision. Outside of this model, use of the Government Tender model with a hybrid funding method that takes advantage of multiple revenue streams would be ideal. Montreal funds its service with a hybrid use of user-generated revenues, on-station advertising, service sponsorship, and likely public funding. The former three revenue streams likely contribute a majority of the service’s funding, thereby taking pressure off of the fourth. (Public Bike System (Bixi) was contacted for this report, however, hadn’t responded about the percentages of its revenue sources.)

If Copenhagen were to develop its bike-sharing service with the Government Tender model and use a hybrid funding method similar to that of Montreal to pay for the service, Copenhagen should still expect to partially finance the service with public funds, based on the experiences of other bike-sharing services. It’s difficult to provide a concise and accurate range of the required public financing due to the limited data, however, the data do provide guidelines as to what can be expected and improved upon with multiple revenue streams.

ⁱ Optimising Bike Sharing in European Cities. 2009. Common Country Study and Market Potential Data File. Common Data File tab. Cells A106-A109. November 23.
http://obisproject.com/palio/html.wmedia?_Instance=obis&_Connector=data&_ID=93&_Checksum=-1658835408/.

ⁱⁱ Email conversation with Mari Luz from the Burgos Mobility Office. February 9, 2010.

