

# Bike Sharing

Peter Midgley  
Urban Mobility Advisor

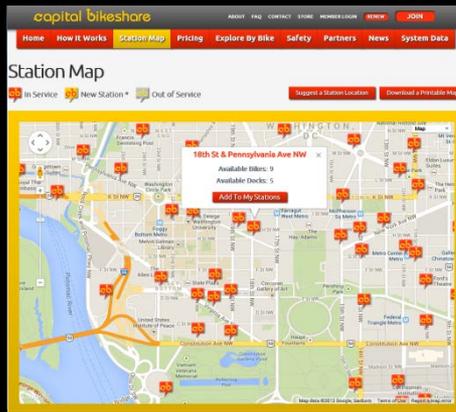


# Bike Sharing: Definitions



## Bike-sharing (bīk-sher-in)

- 1: short-term bicycle rental available at unattended urban locations;
- 2: bicycle transit



## Smart-bikes

- 1: Make use of applied technology (smart cards and/or mobile phones);
- 2: Provide users with real-time bike availability information on the internet/smart phones.

# Bike Sharing: Objectives/Benefits

Flexible mobility

Emission reductions

Individual financial savings

Reduced congestion and fuel use

Health benefits

Improve multimodal transport connections

Provide “last mile” connection to public transport

# Bike Sharing: Characteristics

## Bikes



- Attractive

# Bike Sharing: Characteristics

## Bikes



Velib (Paris)

- Attractive
- Rugged
- Simple
- At least 3 gears
- Baggage racks
- Unisex
- Weather proof
- Vandal “proof”

# Bike Sharing: Characteristics

## Bikes



- Attractive
- Rugged
- Simple
- At least 3 gears
- Baggage racks
- Unisex
- Weather proof
- Vandal “proof”

# Bike Sharing: Characteristics

## Bikes

Citibike (New York)



- Attractive
- Rugged
- Simple
- At least 3 gears
- Baggage racks
- Unisex
- Weather proof
- Vandal “proof”

# Bike Sharing: Characteristics

## Bikes



Call-a-Bike (Berlin)

- Attractive
- Rugged
- Simple
- At least 3 gears
- Baggage racks
- Unisex
- Weather proof
- Vandal “proof”
- + **Pedelecs (Electric Bikes)**

# Bike Sharing: Characteristics

## Docking stations



- 24/7 “pick-up” and “drop-off”

# Bike Sharing: Characteristics

## Docking stations



- 24/7 “pick-up” and “drop-off”
- Easy “smartcard” access

# Bike Sharing: Characteristics

## Docking stations



- 24/7 “pick-up” and “drop-off”
- Easy “smartcard” access
- Solar powered

# Bike Sharing: Characteristics

## Docking stations



- 24/7 “pick-up” and “drop-off”
- Easy “smartcard” access
- Solar powered
- Modular and movable

# Bike Sharing: Characteristics

## Docking stations



- 24/7 “pick-up” and “drop-off”
- Easy “smartcard” access
- Solar powered
- Modular and movable
- Some even provide helmets

# Bike Sharing: Characteristics

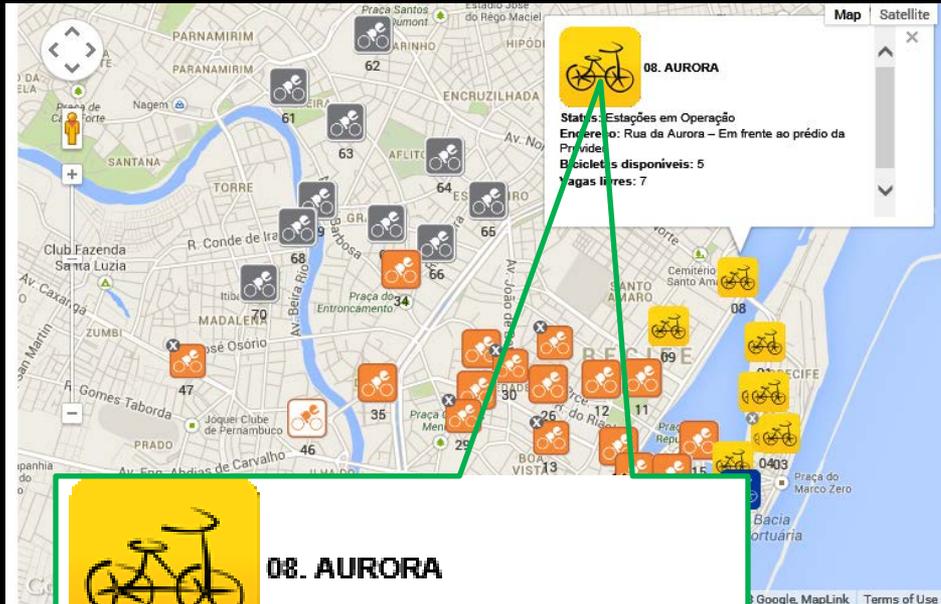
## Docking stations



- 24/7 “pick-up” and “drop-off”
- Easy “smartcard” access
- Solar powered
- Modular and movable
- Some even provide helmets
- All require “rebalancing”

# Bike Sharing: Characteristics

## Smart Technology



**08. AURORA**

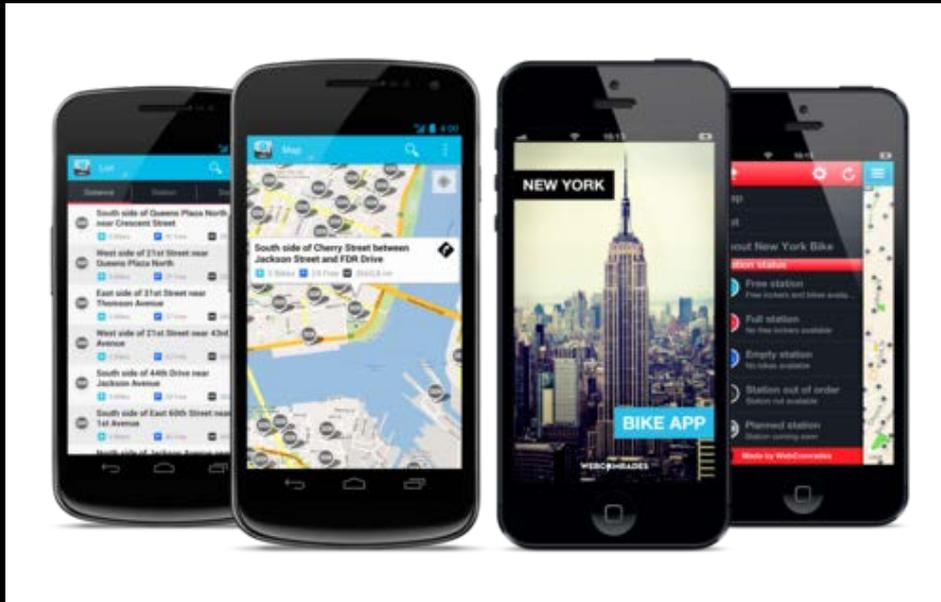
**Status:** Estações em Operação  
**Endereço:** Rua da Aurora – Em frente ao prédio da  
 Provider  
**Bicicletas disponíveis:** 5  
**Vagas livres:** 7

- Real time bike availability on the internet

Bike Pernambuco  
 (Recife Metro Area, Brazil)

# Bike Sharing: Characteristics

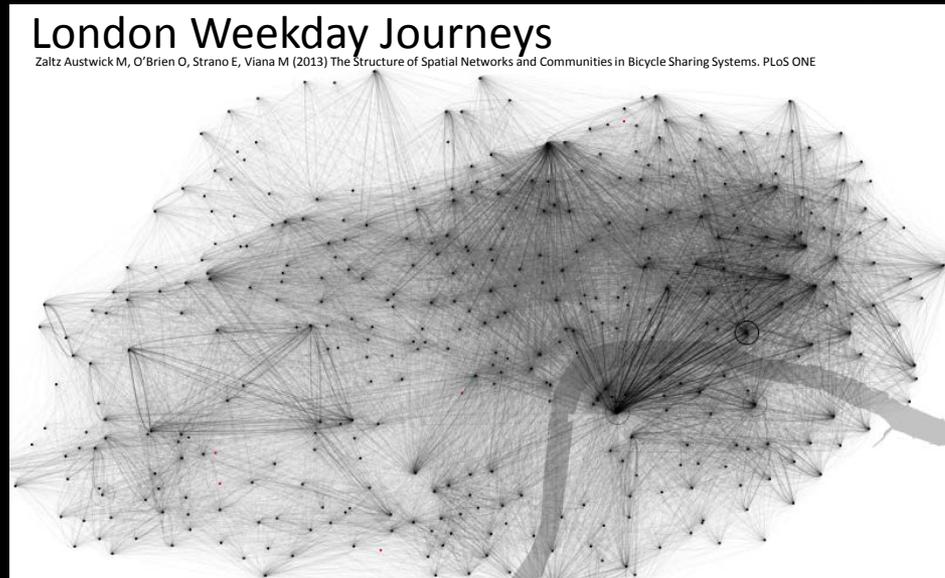
## Smart Technology



- Real time bike availability on the internet
- ..and on Smartphone apps

# Bike Sharing: Characteristics

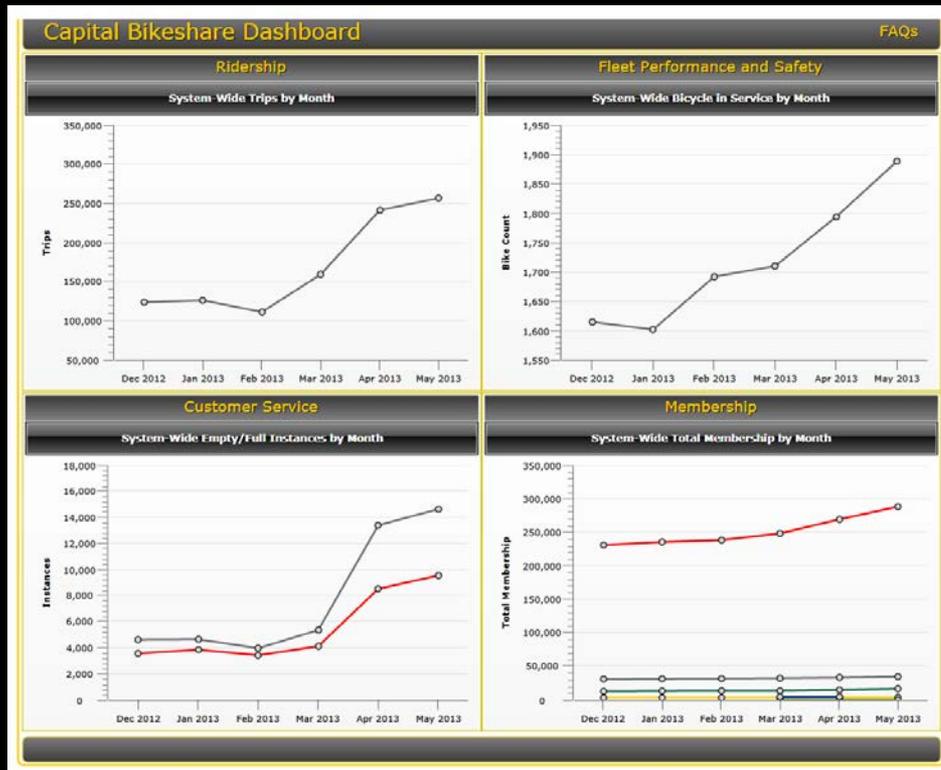
## Smart Technology



- Real time bike availability on the internet
- ..and on Smartphone apps
- Monitors bike movements

# Bike Sharing: Characteristics

## Smart Technology



- Real time bike availability on the internet
- ..and on Smartphone apps
- Monitors bike movements
- Provides data on bike use, fleet performance, etc.

# Bike Sharing: Characteristics

## Smart Technology



- Real time bike availability on the internet
- ..and on Smartphone apps
- Monitors bike movements
- Provides data on bike use, fleet performance, etc.
- Handles payments and subscriptions

# Bike Sharing: Characteristics

## Bike lanes



- For a bicycle-sharing to function, cyclists must be able to move around the city easily and safely

# Bike Sharing: Characteristics

## Bike lanes

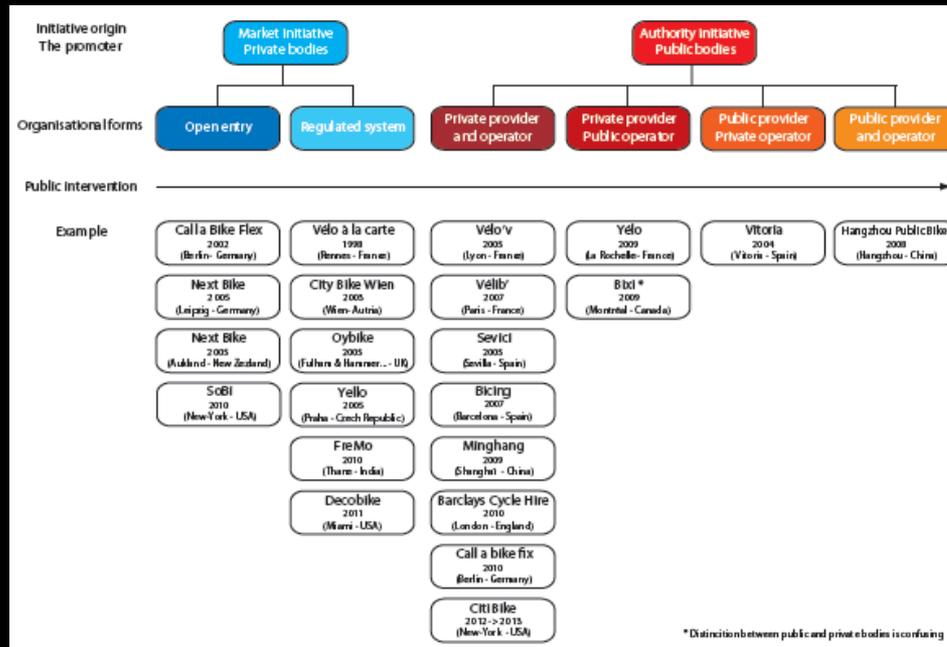


- For a bicycle-sharing to function, cyclists must be able to move around the city easily and safely
- A network of bicycle lanes is essential



# Bike Sharing: Characteristics

## Providers and Operators



Many options possible!

- Private provider  
.....and operator
- .....and public operator
- Public provider  
.....and private operator
- .....and operator



# Bike Sharing: Issues

Vandalism

Helmets

Insurance

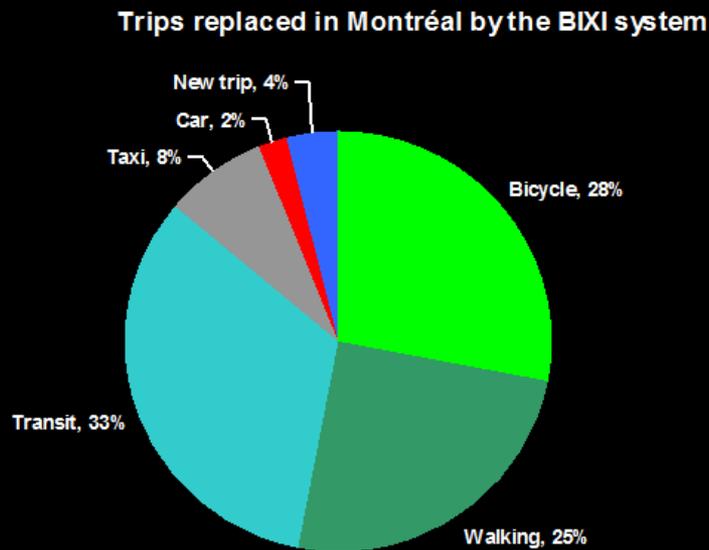
- Valencia offering supplemental liability and accident insurance

Weather

Terrain

# Bike Sharing: Impacts

## Modal shift



- Little impact on car trips
- Most impact on public transport trips

# Bike Sharing: Impacts

## Performance

EuroTest 2012: Test of 40 Public Bicycle Schemes in European Cities						EuroTest 2012: Test of 40 Public Bicycle Schemes in European Cities													
City	System	Accessibility		Information		Ease of rental		Bikes	Overall Rating	City	System	Accessibility		Information		Ease of rental		Bikes	Overall Rating
		weighting	35%	26%	25%	14%	100%					weighting	35%	26%	25%	14%	100%		
FR	Lyon	vélo'v	++	++	++	o	++		IRL	Dublin	dublinbikes	o	+	++	o	o	+		
FR	Paris	Vélib'	++	+	++	+	+		A	Vienna	Citybike Wien	o	+	+	o	o	+		
B	Brussels	Villo!	+	++	++	+	+		CH	Biel	velospot	+	-	+	++	+			
D	Berlin	Call a Bike	+	+	++	++	+		CH	Lausanne	velopass	+	+	o	o	o	+		
D	Stuttgart	Call a Bike	+	+	++	++	+		CH	Lugano	velopass	o	+	o	o	o	o	+	
L	Luxembourg	vel'oh!	+	++	++	o	+		GB	London	Barclays Cycle Hire	o	o	+	o	o	o	+	
E	Valencia	Valenbisi	+	+	+	+	+		DK	Aarhus	Aarhus bycykel	+	+	+	--	o	o	o	+
D	Hamburg	StadtRAD Hamburg	o	+	++	++	+		I	Parma	Punto Bici Bike Sharing	o	+	+	o	o	o	o	+
I	Milan	BikeMi	o	++	++	o	+		PL	Wroclaw	WRM nextbike	o	-	++	+	o	o	o	+
I	Turin	[TO]BIKE	+	++	+	+	+		DK	Copenhagen	Bycyklen i København	+	-	++	--	o	o	o	+
E	Seville	SEVici	+	+	+	o	+		N	Oslo	Smartbike	-	+	+	o	o	o	o	+
F	Marseille	le vélo	+	+	++	o	+		F	Strasbourg	Vélibhop	o	-	+	o	o	o	o	+
D	Munich	Call a Bike	o	+	+	++	+		E	Saragossa	Bizi	--	+	+	o	o	o	o	+
D	Cologne	Call a Bike	o	+	+	++	+		S	Stockholm	Stockholm City Bikes	--	++	+	o	o	o	o	+
D	Nuremberg	Norisbike	+	+	+	+	+		E	Barcelona	Bicing	--	++	o	o	o	o	o	+
B	Antwerp	Velo-Antwerpen	o	++	+	o	+		I	Bari	BARinBici	-	-	o	o	o	o	o	+
SI	Ljubljana	Bicikelj	+	++	+	o	+		P	Aveiro	BUGA	o	-	--	o	o	o	o	+
D	Leipzig	nextbike	o	+	+	o	+		NL	Utrecht	OV-fiets	--	-	--	o	o	o	o	+
CZ	Prague	HOMEPORT Praha	o	+	+	+	+		NL	Amsterdam	OV-fiets	--	-	--	o	o	o	o	+
A	St. Pölten	nextbike	o	++	+	o	+		NL	The Hague	OV-fiets	--	-	--	o	o	o	o	+

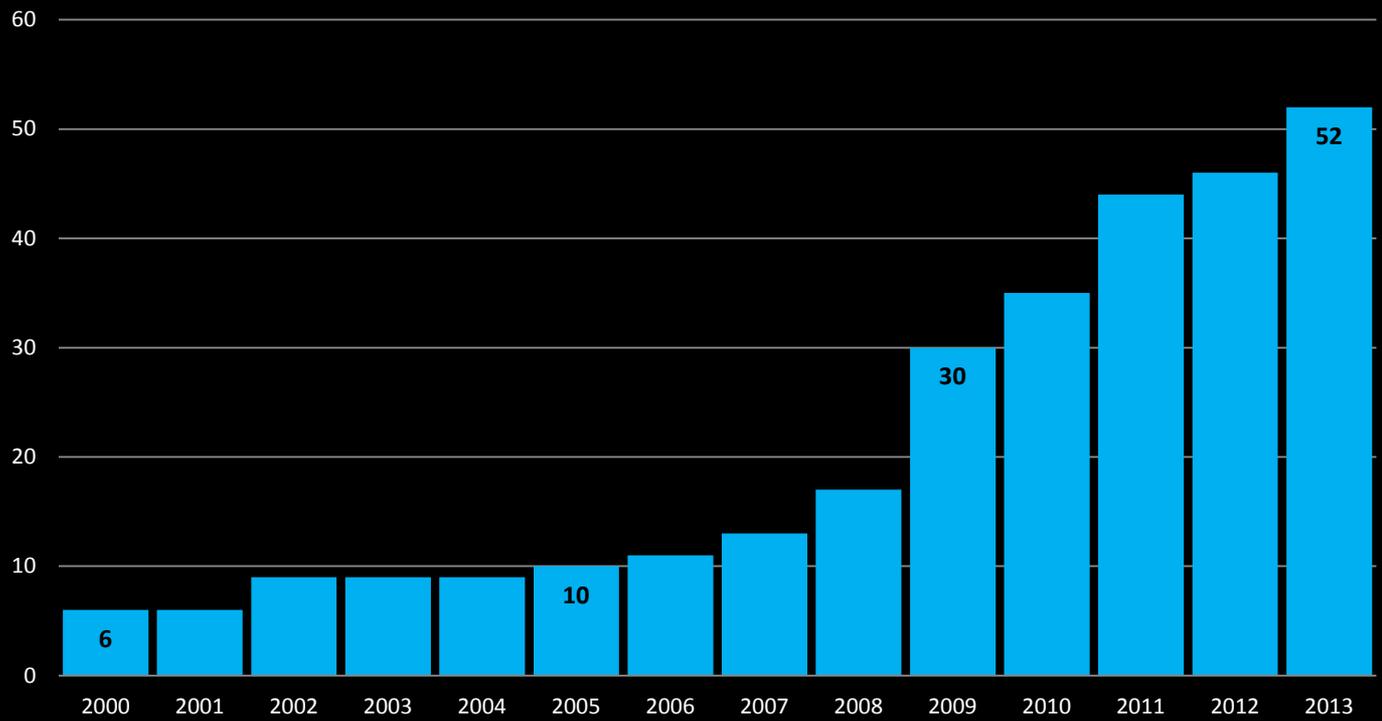
Rating: ++ very good, + good, o acceptable, - poor, -- very poor

- Accessibility (35% weight)
- Information (26%)
- Ease of rental (25%)
- Bikes (14%)
- Key performance demands:
  - Lots of stations
  - Easy to use
  - Clear-cut rates

# Bike Sharing: Countries

Countries with Bike-Sharing Systems 2000-2013

(Source: Peter Midgley)



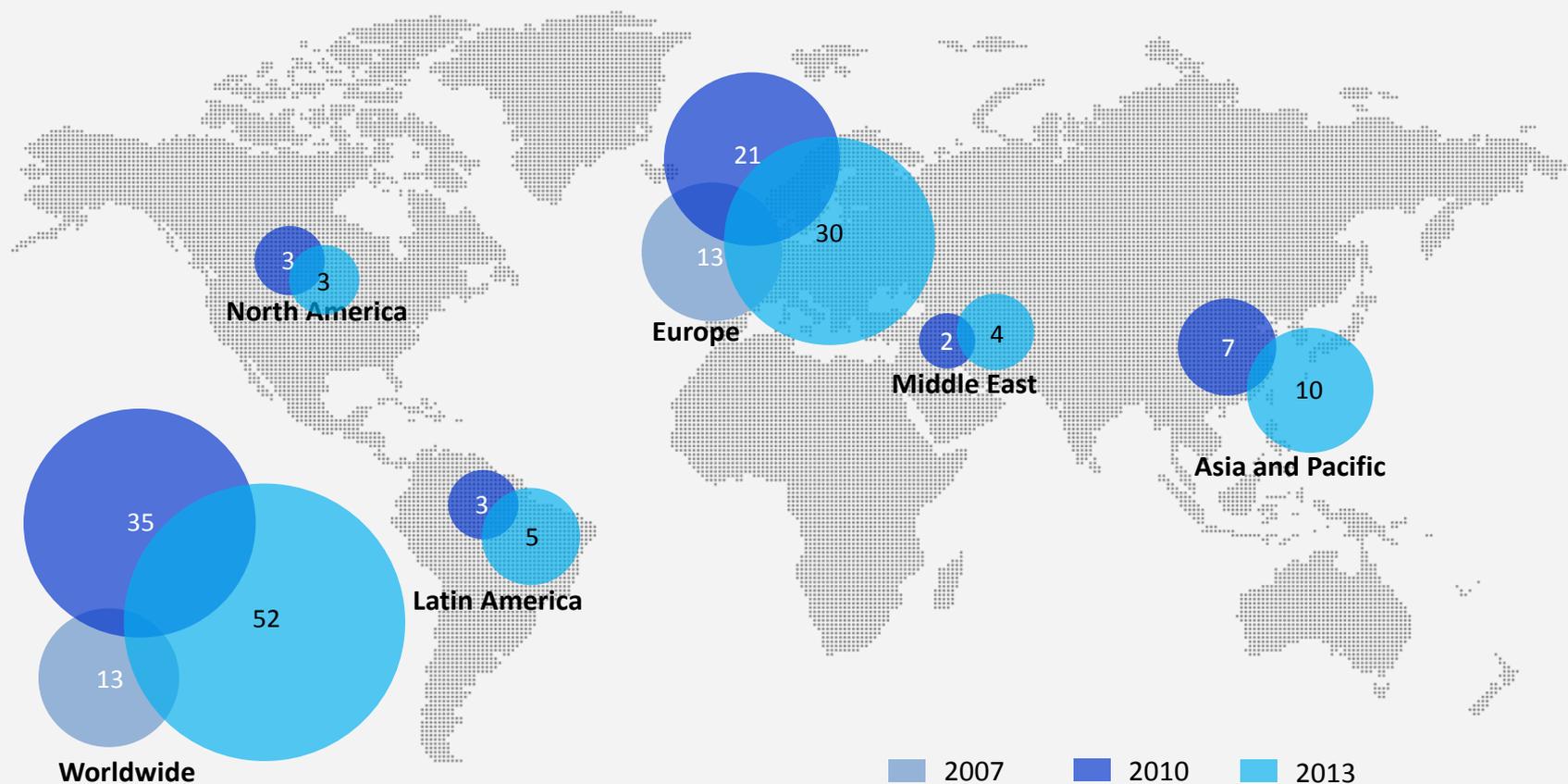
# Bike Sharing: Countries

52 Countries with Bike Sharing Systems in 2013



# Bike Sharing: Countries

Countries with Bike Sharing Systems by region 2007-2010-2013

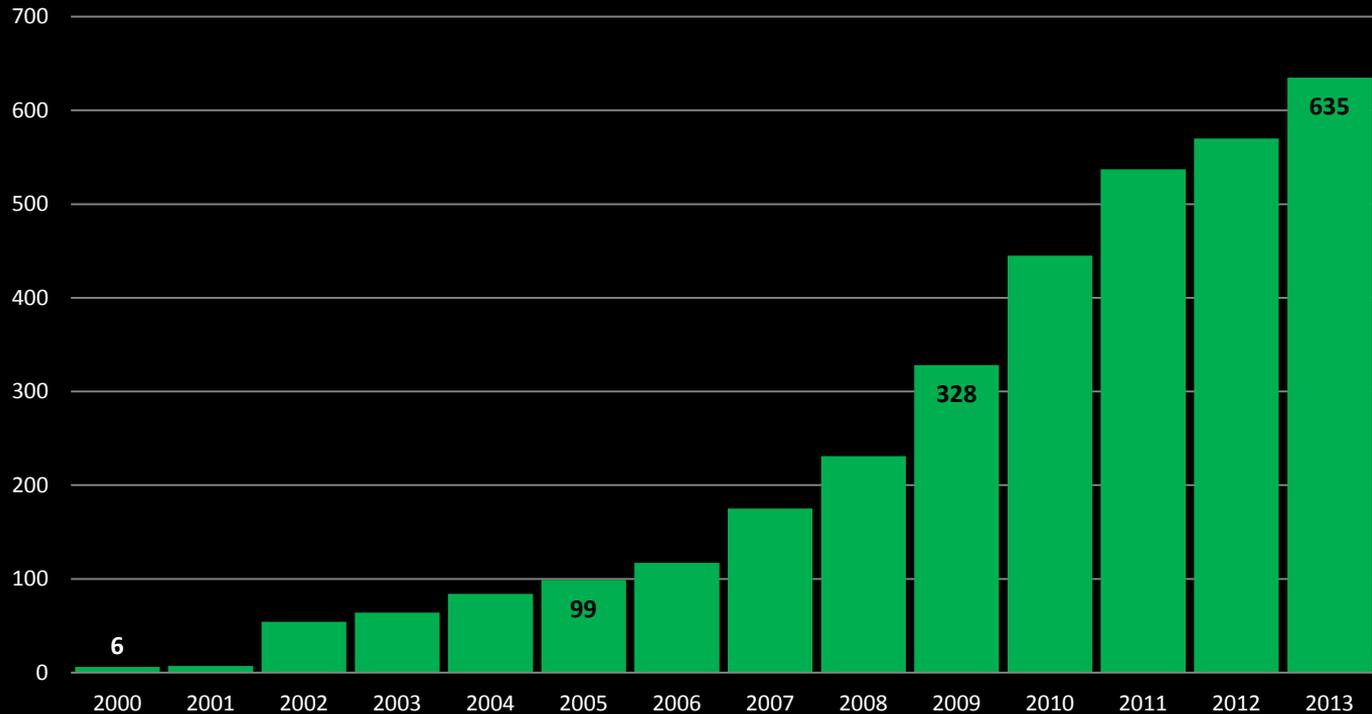




# Bike Sharing: Systems

**Growth in Bike-Sharing Systems 2000-2013**

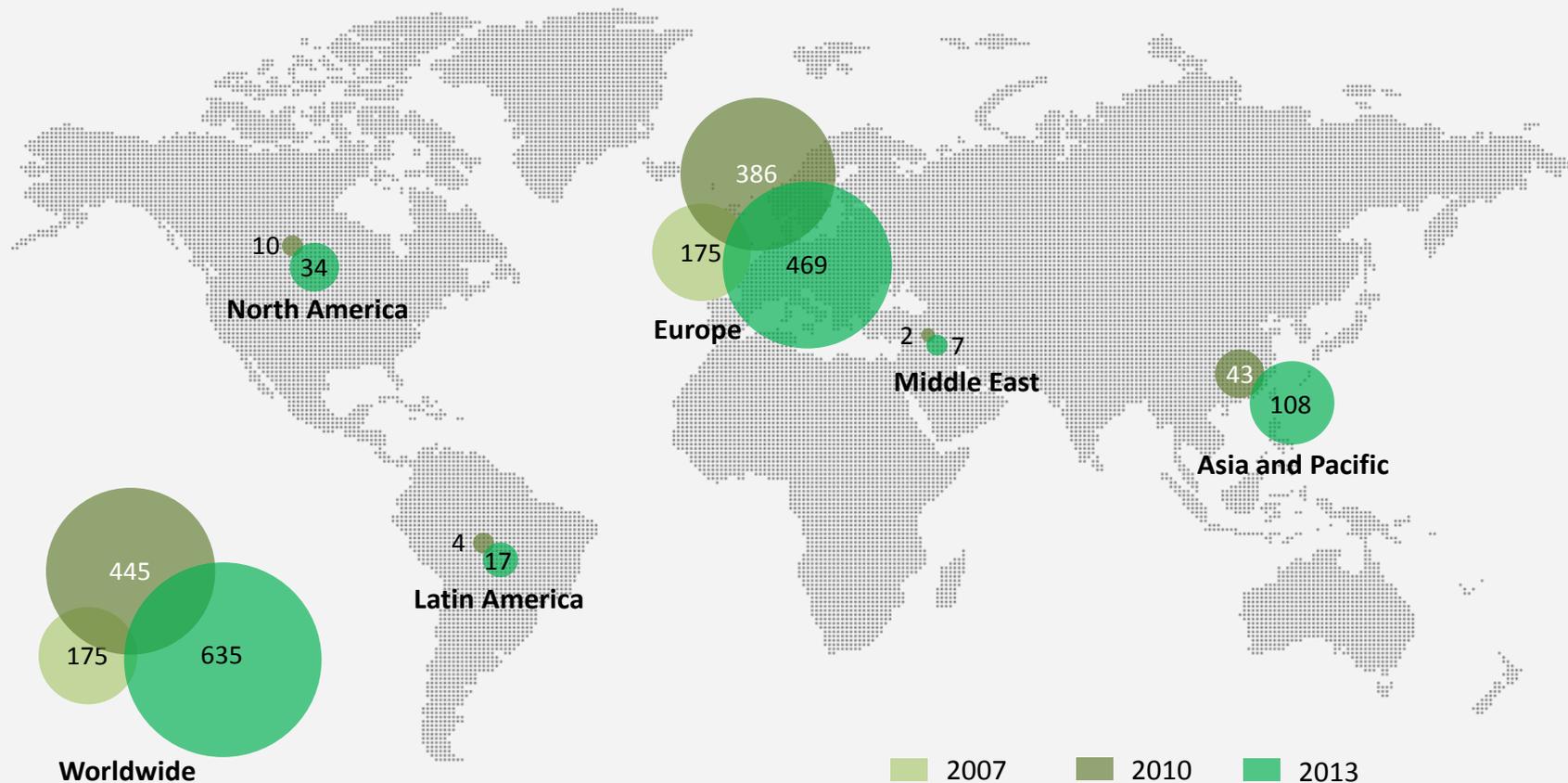
(Source: Peter Midgley)





# Bike Sharing: Systems

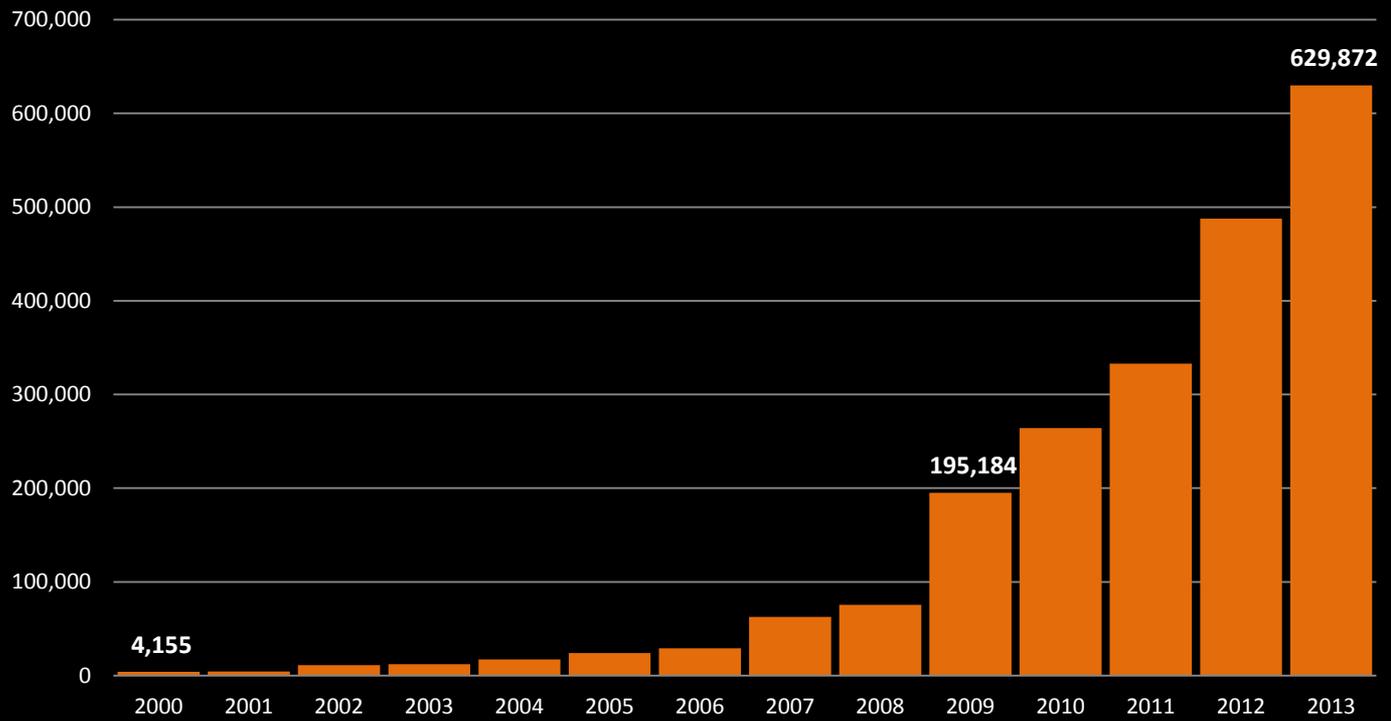
Bike Sharing Systems by region 2007-2010-2013



# Bike Sharing: Fleet

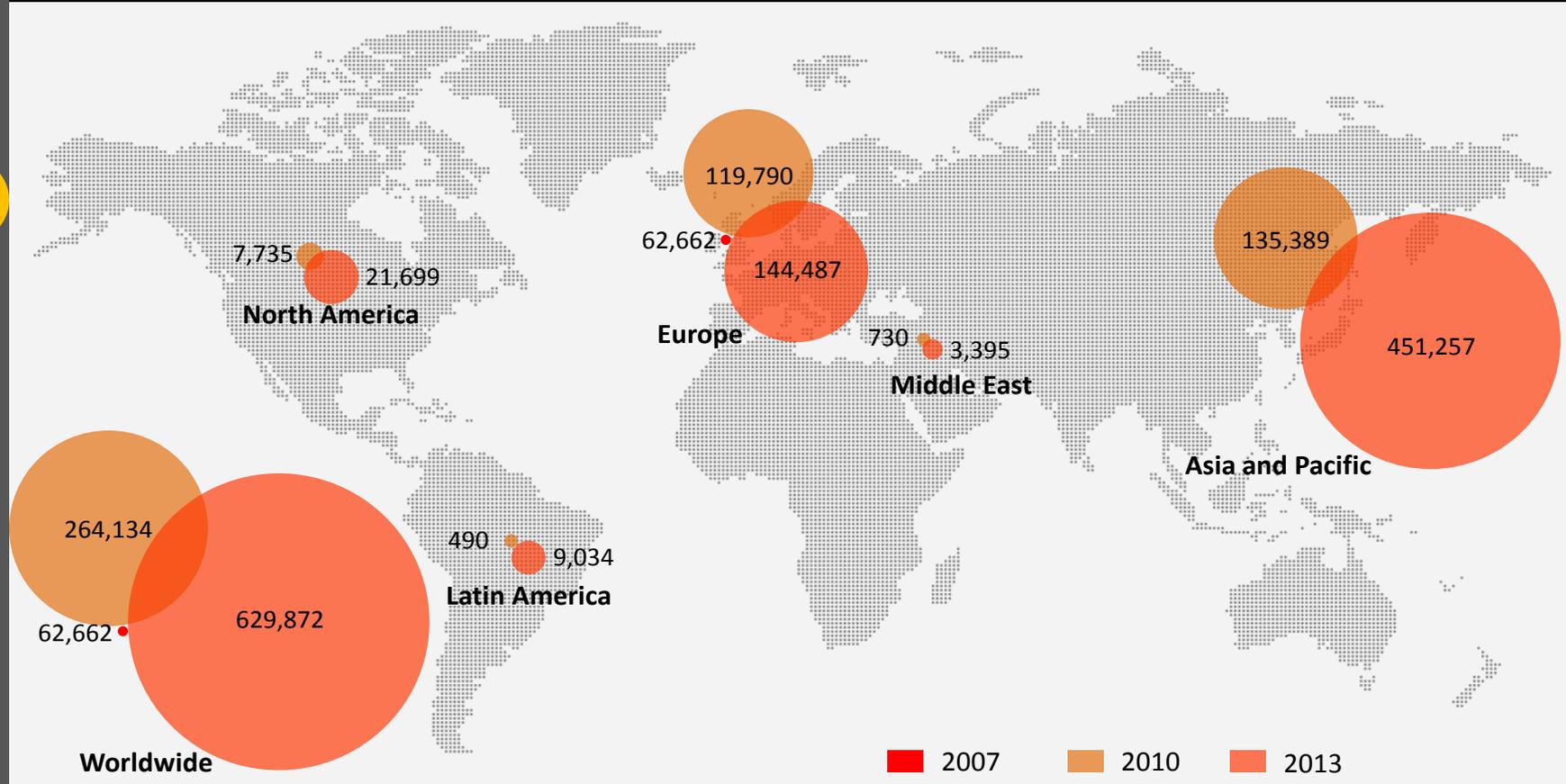
Global Bike-Sharing Fleet 2000-2013

(Source: Peter Midgley)



# Bike Sharing: Fleet

Bike Sharing Fleet by region 2007-2010-2013



# Bike Sharing: Winners

USA: 17 new systems (2012-13)



# Bike Sharing: Winners

USA: 17 new systems (2012-13)



**Citibike New York**



**Bikenation Anaheim CA**



**B-Cycle Boulder CO**

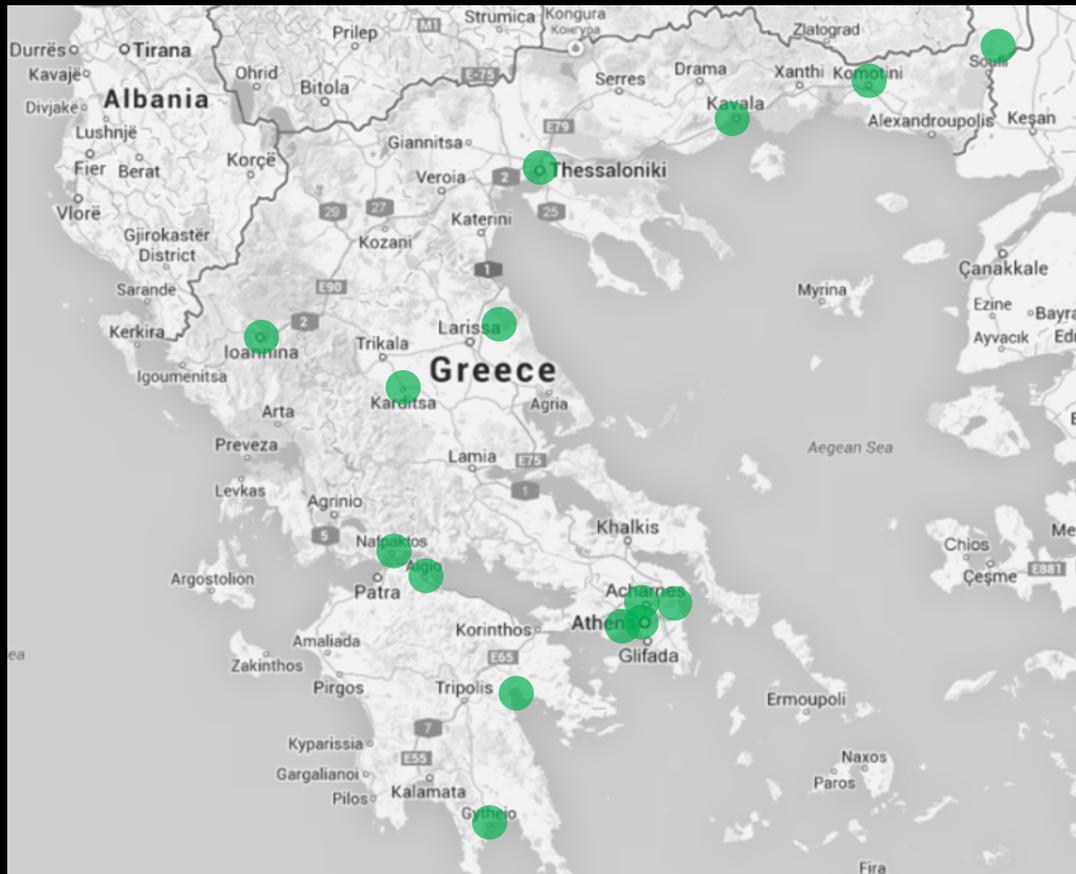


**Capital Bikeshare Washington DC**

# Bike Sharing: Winners

*“The Ministry of Environment , Energy and Climate Change “Green Fund” provided 100% financing to create Bike Sharing systems in 16 municipalities.”*

Greece: 18 new systems (2013)



# Bike Sharing: Winners

*“The Ministry of Environment , Energy and Climate Change “Green Fund” provided 100% financing to create Bike Sharing systems in 16 municipalities.”*

Greece: 18 new systems (2013)





# Bike Sharing: Winners

China: 30 new systems (2012-13)



# Bike Sharing: Winners

China: 30 new systems (2012-13)



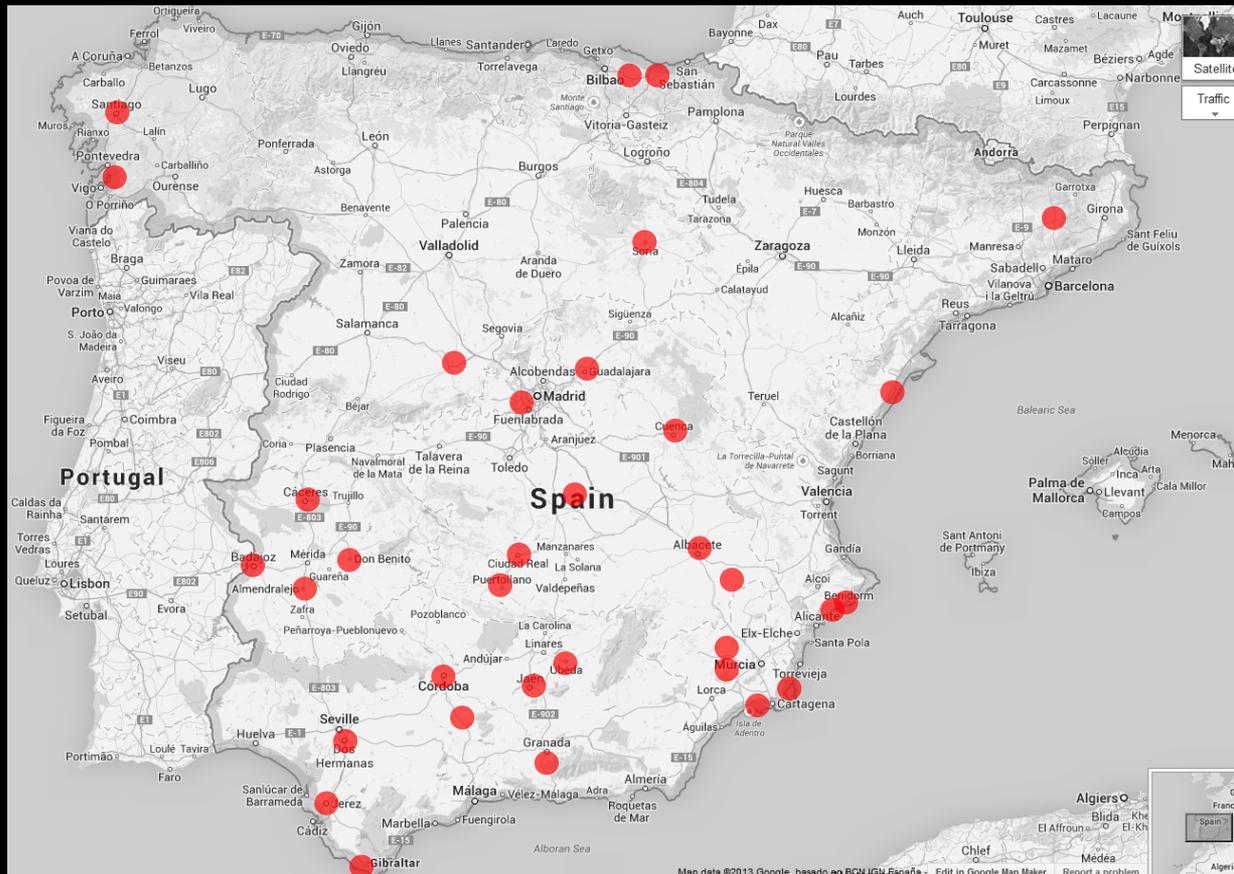
# Bike Sharing: Losers

Bike Sharing Systems closed 2012-13



# Bike Sharing: Losers

Most closures (34) in Spain (2013)



# Bike Sharing: Losers

Most closures (34) in Spain (2013)



# Bike Sharing: Information

Bike Sharing World Map (Meddin and DeMaio)



# Bike Sharing: Information

**18th St & Pennsylvania Ave NW** ✕

**Available Bikes: 9**

**Available Docks: 5**

**Add To My Stations**

\* New Stations are stations installed within the last 30 days.

Riding along with a smartphone? Download the free **Spotcycle** application for quick reference to the location and status of Capital Bikeshare stations! **Spotcycle** is available for iPhone, Blackberry and Android devices. Find more information at [Spotcycle.net](http://Spotcycle.net).

Real Time Bike Availability

Capital Bikeshare  
(Washington DC Metro Area)

**08. AURORA**

**Status: Estações em Operação**

**Endereço: Rua da Aurora – Em frente ao prédio da Provider**

**Bicicletas disponíveis: 5**

**Vagas livres: 7**

Atendimento ao Cliente  
Call Center/ Centro de Informação:  
+55 (81) 4902 9589

Map data ©2013 Google, MapLink, Terms of Use

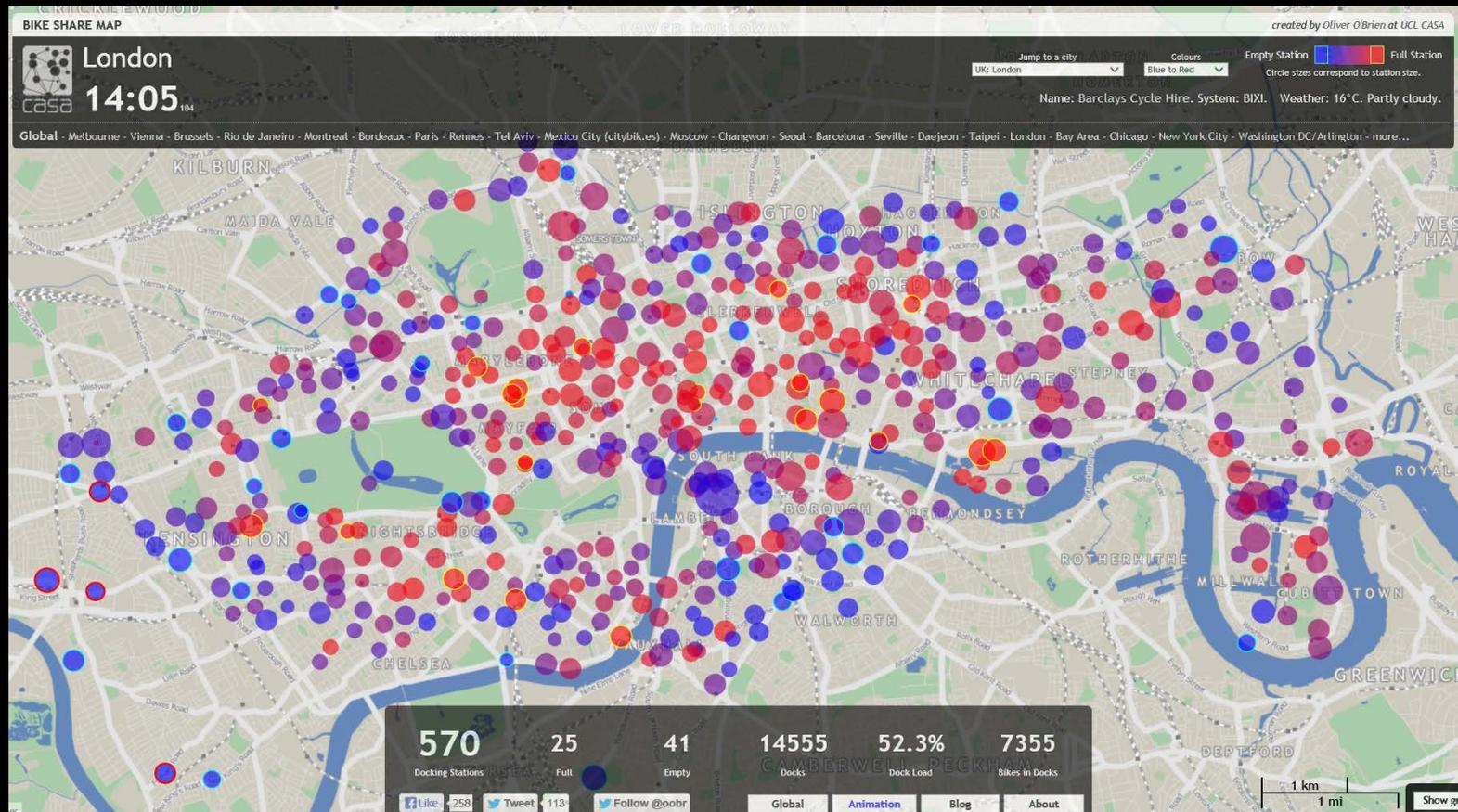
Bike Pernambuco  
(Recife Metro Area, Brazil)



# Global Consultation for Decision-Makers on Implementing Sustainable Transport

## Bike Sharing: Information

O'Brien Bike Share Map (100+ Cities in real time)



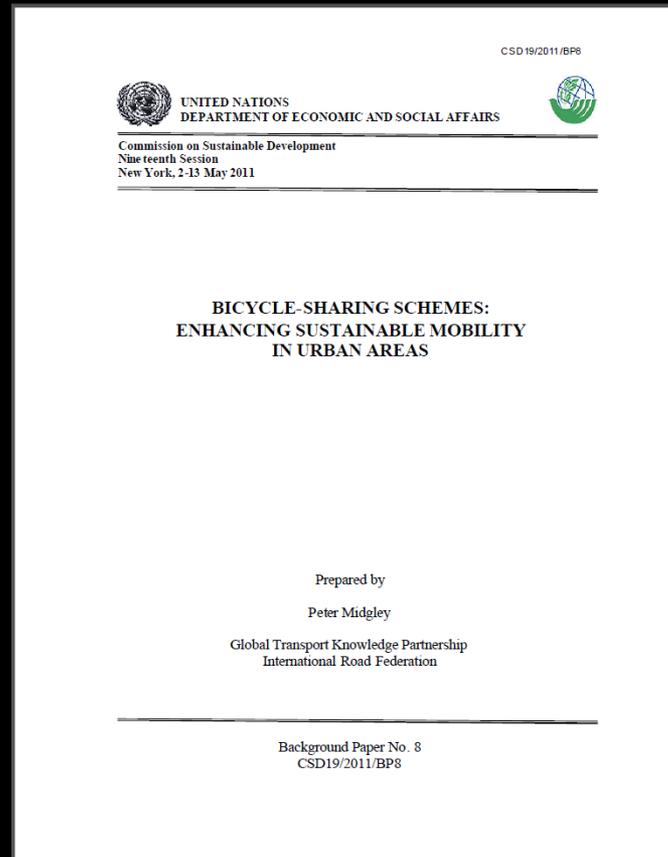
# Bike Sharing: Information

O'Brien Bike Share Visualisation (London)



# Bike Sharing: Information

UN DESA Report 2011



# Bike Sharing: Thank You

Sorry I could not be with you !



[pmidgley@earthlink.net](mailto:pmidgley@earthlink.net)