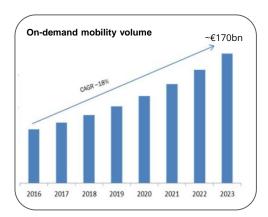


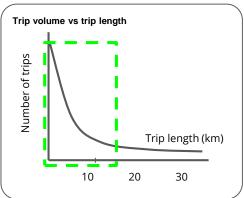
REGULATING MICRO MOBILITY

Do's and Don't's to benefit your city in this fast growing market

The Market

We are just seeing the beginning of the micro mobility revolution





- On demand mobility is growing at ~20% per year.
- Growth fueled by
 - People don't want to own their cars
 - Tech enabling access to vehicles
 - Tech enabling mapping and payments
 - More flexible jobs and fewer routines

- Most of the trips people take are short-distance trips
- Trips less than 15km are best addressed by micro mobility vehicles
- Fits very well in combination with long trips, ie rail plus bike

Why Micromobility

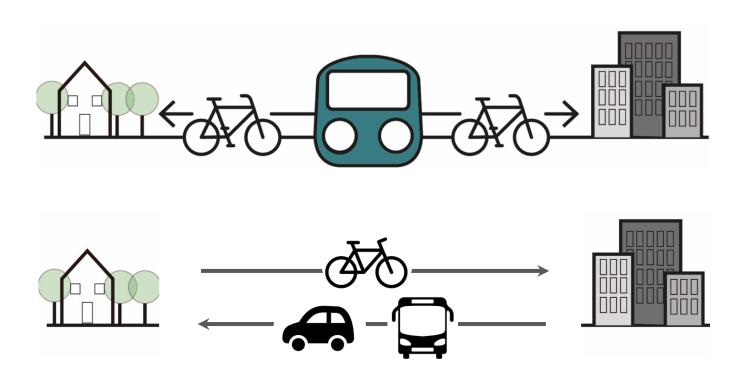
This is why every city is excited about the opportunity.



Congestion Air quality Physical exercise

Why People Want It

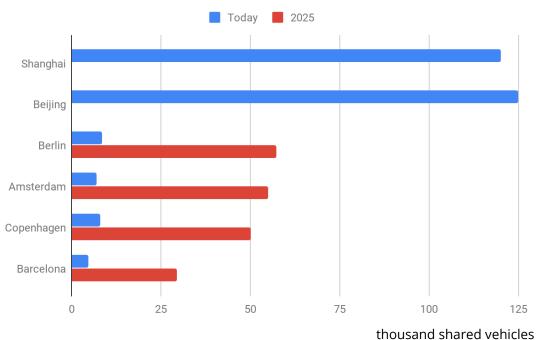
<u>Last mile</u> and <u>flexibility</u> make on-demand micro mobility very popular



The Market

Cities in Europe will have 5-10x on-demand vehicles compared to today

On demand vehicles per 1000 residents in select cities



The Market

More vehicles will keep getting introduced to market



- Pedal bikes
- Easy to maintain, 3 or 7 gears, safe vehicle



- Flectric bikes
- Electric assistance controlled by rider effort
- Typically need charging every 2nd - 3rd day



- Standup electric Kickscooter.
- 25+km/hr top speed.
- Typically need charging on a daily basis
- Small wheels are dangerous, so is riding on side-walks
- Lots of investment capital going into this vehicle type - expect in your city



- Ride with cars
- Requires drivers license
- Electric scooters require charging every 3-7 days



- Small climatized vehicles
- Less than 1m wide, less than 2m long
- Can seat 1 or 2 persons; side by side or back and forth
- Top speed less than 45km/hr
- Can ride without drivers license, can go into car restricted roads
- Can park on side walks

To set the regulatory framework for micro mobility, reflect on goals

<u>Social Goals</u>	Policy Implication For Micromobility Regulation	
1-Healthy / sustainable market	 Provide competitive environment with two or more operators permitted Instead of subsidizing single operator, subsidize all operators per ride (pay for success) Enforce data-sharing Defend against predatory pricing (operators running below cost service to kill competition) and loss-making operators with minimum price floor 	
2-Space management	 Apply a cap max no of vehicles based on usage; allow more vehicles at min 2 trips / day Apply a cap to max no of vehicles in any given spot. Strict guidelines where vehicles cannot be parked / where vehicles can be parked 	
3-Activity	Favor bikes (especially pedal bikes) over other vehicles using quotas, subsidies / taxes	
4-Cost of living	Provide subsidies / reduce taxes to ensure micro-mobility services are affordable for all	
5-Connected mobility	Implement standards on aggregation availability	
6-Safety	 Ensure quality of bikes Develop policies on how eScooter should be used and eScooter quality 	
7-Environmental impact	 How are the operations handled, ie how much congestion or pollution are generated to operate How long is the asset lifetime, and what happens to them after usage 	

Social Goals

Policy Implication For Micromobility Regulation

1-Healthy / sustainable market

- Provide competitive environment with two or more operators permitted
- Instead of subsidizing single operator, subsidize all operators per ride (pay for success)
- Enforce data-sharing
- Defend against predatory pricing (operators running below cost service to kill competition) and loss-making operators with minimum price floor

Social Goals Policy Implication For Micromobility Regulation

2-Space management

- Apply a cap max no of vehicles based on usage; allow more vehicles at min 2 trips / day
- Apply a cap to max no of vehicles in any given spot.
- Strict guidelines where vehicles cannot be parked / where vehicles can be parked

Responsible Parking: Dockless IS NOT Free-Float

Dockless does NOT mean free-floating. Control of parking locations can be built into the service model





- Shares regular bike racks
- Only allow certain # of bikes
- Drop-off location every 200m

Social Goals Policy Implication For Micromobility Regulation

3-Activity

 Favor bikes (especially pedal bikes) over other vehicles using quotas, subsidies / taxes

Social Goals Policy Implication For Micromobility Regulation

4-Cost of living

 Provide subsidies / reduce taxes to ensure micro-mobility services are affordable for all

Social Goals Policy Implication For Micromobility Regulation

5-Connected mobility

• Implement standards on **aggregation** availability

Social Goals Policy Implication For Micromobility Regulation

6-Safety

- Ensure **quality** of bikes
- Develop policies on how standup **eScooter** should be used and eScooter quality

Social Goals

Policy Implication For Micromobility Regulation

7-Environmental impact

- How are the **operations handled**, ie how much congestion or pollution are generated to operate
- How long is the asset lifetime, and what happens to them after usage

Best Practices & Inspiration - Berlin

Current market

- 3.5m city population w/ ~10% bike modality
- Official city bike share called Deezer with 4k bikes
- 30k total bike shares offered by 9 operators



Recommendable policies

- Cap number of operators
- Cap max number of bicycles
- Permit operators with controlled bike parking, and high quality and long lifetime bikes
- Instead of subsidizing one bike share, extend support to all based on rides



Specific policies currently in place in Berlin

- The market is open to any bike share operator to enter
- Max of 4 bikes allowed any spot



Current problems

- Still, too many dockless bikes in inconvenient places
- Low quality bikes thrashed and unmaintained
- Lack of bike racks

What is working well

- High availability of rentable bikes
- Operators starting to pay attention to bike parking locations



Best Practices & Inspiration - Paris

Current market

- 2..2m city population w/ ~4% bike modality
- Official city bike share called Velib with 15k bikes
- 24k total bike shares offered by 4 operators



Recommendable policies

- Cap number of bikes in one spot
- Cap number of operators
- Cap max number of bicycles
- Permit bikes with high quality and long lifetime
- Instead of subsidizing one bike share, extend support to all based on rides



Specific policies currently in place in Paris

The market is open to any bike share operator to enter



Current problems

- Still, too many dockless bikes in inconvenient places
- Low quality bikes thrashed and unmaintained



What is working well

High availability of rentable bikes



Best Practices & Inspiration - Cologne

Current market

- 1m city population w/ ~10% bike modality
- Official city bike share called FordPass with 2k bikes
- 10k total bike shares offered by 4 operators



Recommendable policies

- Cap number of bikes per operator on a given spot.
- Instead of subsidizing one bike share, extend support to all based on rides



Specific policies currently in place in Berlin

- The market is open to any bike share operator to enter
- Max of 5 bikes allowed any spot
- Defines different level zones; where bikes cannot be parked, where they can be parked with permission and where they can be parked freely.



Current problems

- Lack of enforcement of zone placements.
- Many different operators on the same spot, making it hard for users to get to bikes and making space messey.

What is working well

 Operators starting to pay attention to bike parking locations



Best Practices & Inspiration - Vienna

Current market

- 1.8m city population w/ ~5% bike modality
- Official city bike share called CityBike Wien with 1.2k bikes
- 2k total bike shares offered by 2 operators



Recommendable policies

- Cap number of operators
- Cap max number of bicycles
- Permit bikes with high quality and long lifetime
- Instead of subsidizing one bike share, extend support to all based on rides



Specific policies currently in place in Berlin

- The market is open to any bike share operator to enter
- Strict rules of where bikes cannot be parked with high fines
- One time registration fee per bike



Current problems

- Too few sharing bikes
- All subsidies directed at one operator with no connection to performance

What is working well

Bikes parked orderly



Best Practices & Inspiration

City	Select City Regulation Aspects	Implications of Proposal
Barcelona	 €71 fee per shared bike per yr Max 3 operators 2500 total vehicles 	 City subsidized bike share (Bicing) heavily protected, kills any healthy competition Bike fees will reduce pedal bike usage and physical activity
Amsterdam	 Max 3 operators €30-€90 fee per shared bike per yr Mix of virtual station in center and free float out of center Max 9000 total vehicles 	 Bike fees will reduce pedal bike usage and physical activity Complicated operational demand will confuse users concerning free-float vs station based operation Decent number of total vehicles
Madrid	 Would allow only up to 50% of the existing bike rack space to shared vehicles 	 Capping shared bike use in each public rack is a pragmatic and workable solution
Aarhus	 Bike parking must be tightly controlled, while not requiring custom stations 	Dockless shared bikes are not creating public backlash



Your Priorities

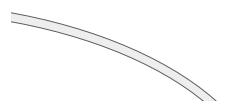
Now time to work on your goals

- Take next 15 minutes to work on your city
- Grab a sheet to fill out and one sheet with of policy summary

Your City!

Current market

- Population and bike modality
- On demand bike share situation: City sponsored? Total no of operators? Total fleet?



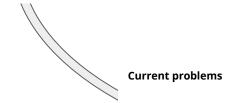
Recommendable policies

(see policy list)



Specific policies currently in place

(see the policy list)









To set the regulatory framework for micro mobility, reflect on goals

Social Goals	Policy Implication For Micromobility Regulation	
Healthy / sustainable market	 Provide competitive environment with two or more operators permitted Enforce data-sharing Defend against predatory pricing (operators running below cost service to kill competition) and loss-making operators with minimum price floor Instead of subsidizing single operator, subsidize all operators per ride (pay for success) 	
Space management	 Apply a cap max no of vehicles based on usage; allow more vehicles at min 2 trips / day Apply a cap to max no of vehicles in any given spot. Strict guidelines where vehicles cannot be parked / where vehicles can be parked 	
Activity	• Favor bikes (especially pedal bikes) over other vehicles using quotas, subsidies / taxes	
Cost of living	Provide subsidies / reduce taxes to ensure micro-mobility services are affordable for all	
Connected mobility	Implement standards on aggregation availability	
Safety	 Ensure quality of bikes Develop policies on how eScooter should be used and eScooter quality 	
Environmental impact	 How are the operations handled, ie how much congestion or pollution are generated to operate How long is the asset lifetime, and what happens to them after usage 	

Best Practices & Inspiration - Aarhus

Current market

- 28.000m city population w/ ~27% bike modality
- Official city bike share called Donkey Republic with 500 bikes



Recommendable policies

- Allow competition
- Subsidize operators based on usage



Specific policies currently in place in Berlin

- 1 operator
- Must have a system to control location of bikes, but not use docking-stations.



Current problems

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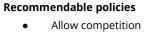
- Controlled parking locations
- Data sharing



Best Practices & Inspiration - Utrecht

Current market

- 350.000 city population w/ ~33% bike modality
- **OV-Fiets**
- Picking one operator to have up to 700 bikes initially



Subsidize operators based on usage



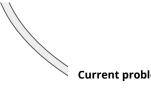
Specific policies currently in place in Berlin

- 1 operator
- Must have a system to control location of bikes, but not use docking-stations.
- Sustainable / environmentally friendly operations



What is working well

- Controlled parking locations
- Data sharing



Current problems

