# Donkey Republic Sustainability Framework

Presentation by Erdem Ovacik, Donkey Republic Bike-share

Roundtable on Micromobility, Equity and Sustainability
17-19 March 2021

# Donkey Republic Sustainability Framework

March, 2021

# UBER

**Everyone's Private Driver**

Request from your phone, ride in style, and enjoy hassle free payments. Sign up now!

Tech companies have a

*credibility problem*

when they talk about

*solving social issues.*

Boycott amazon!

Tax Avoider

Stripping away your public services to make your products cheaper

**Future MaaS Pyramid**

Cost per km for rider, including cost of time

Expected market in Europe
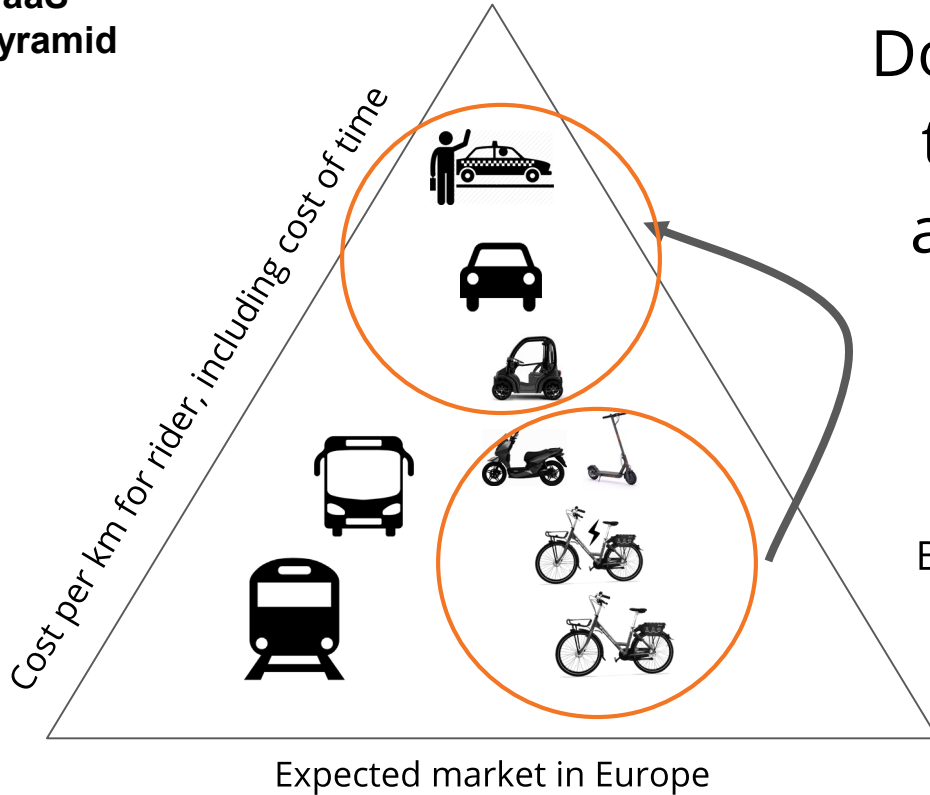
Do Uber, Lyft, Bolt etc aim to "acquire" customers and "graduate" them to the top ?

Car-centric mobility => higher profit

But not necessarily environmental or social well-being.

How do we build trust?

Do not assume that tech is good by definition.

Tech, unregulated, can be bad for society and the planet

# What if we bet on a well regulated future?
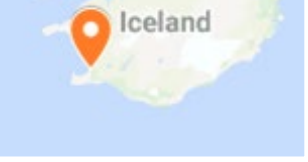
## from *wishful thinking*

## to *outcome measurement*

Need for:

- Rigorous framework and verifying 3rd parties for impact assessment
- As well as, financial incentives for positive footprint

Sir Ronald Cohen: "The Impact Revolution"

**DONKEY REPUBLIC**

European bike share service
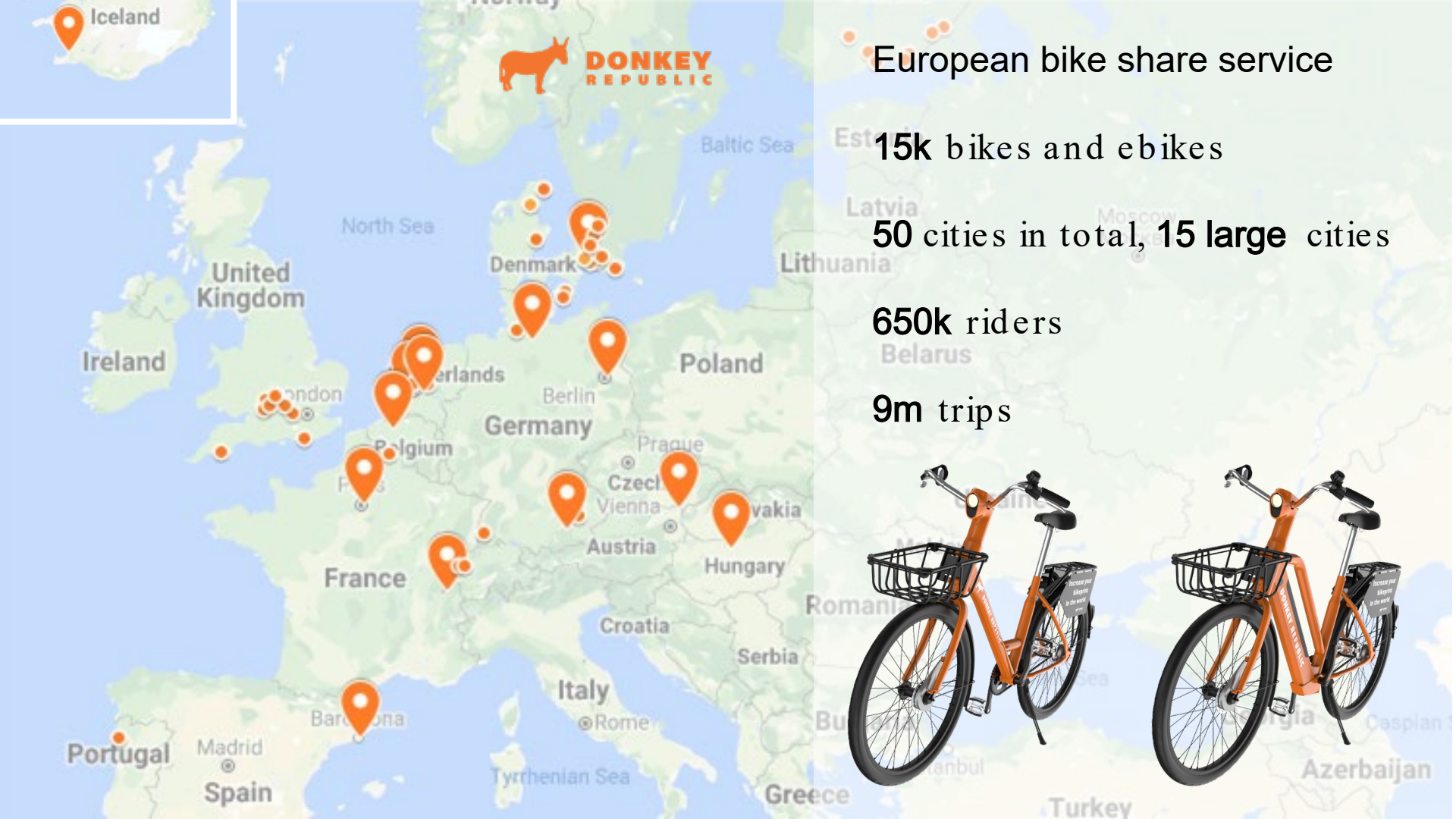
**15k** bikes and ebikes

**50** cities in total, **15 large** cities

**650k** riders

**9m** trips

# Mobility services' social and environmental scorecard
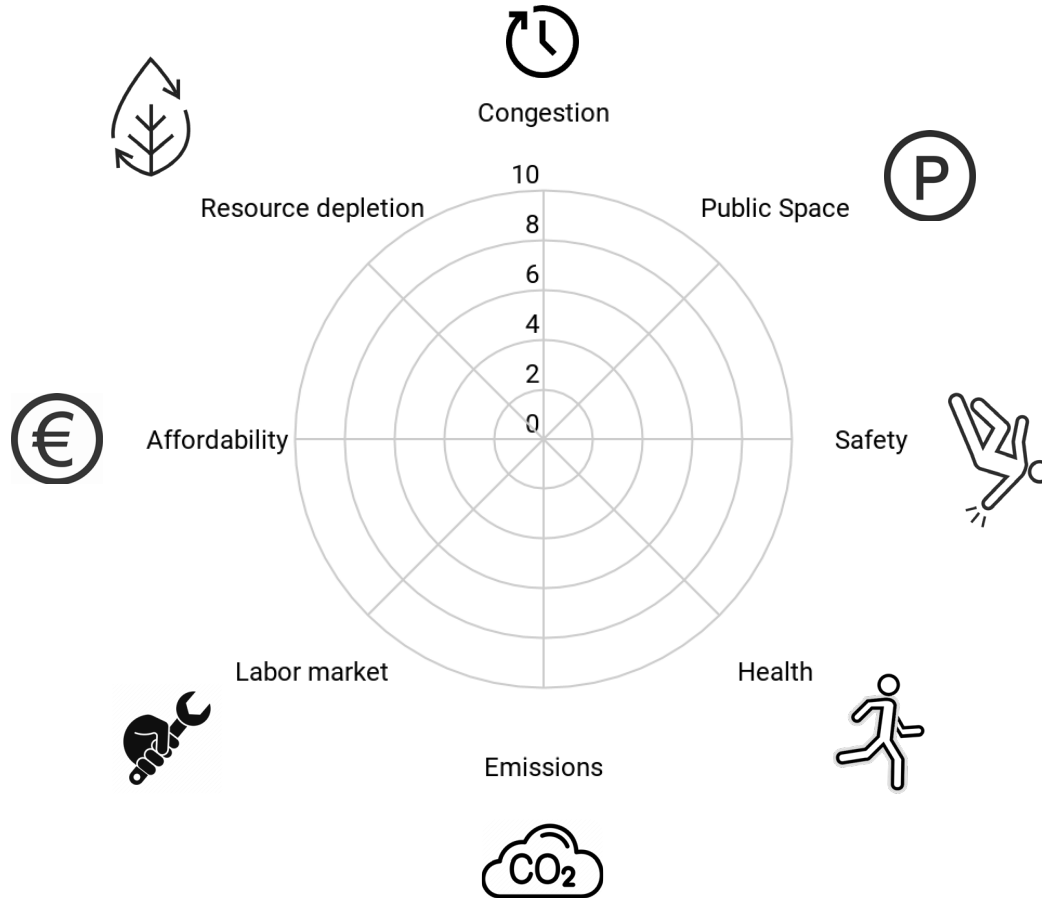


This is **not** about the value that user gets: convenience, availability, access, etc.

Private gains are expressed in what we pay to the operator.

**Here, we explore public impact that does not get addressed in the transaction.**

# Starting documentation with a few



Congestion

Resource depletion

Public Space

10
8
6
4
2
0

Inclusion

Safety

Labor market

Health

Emissions

CO₂
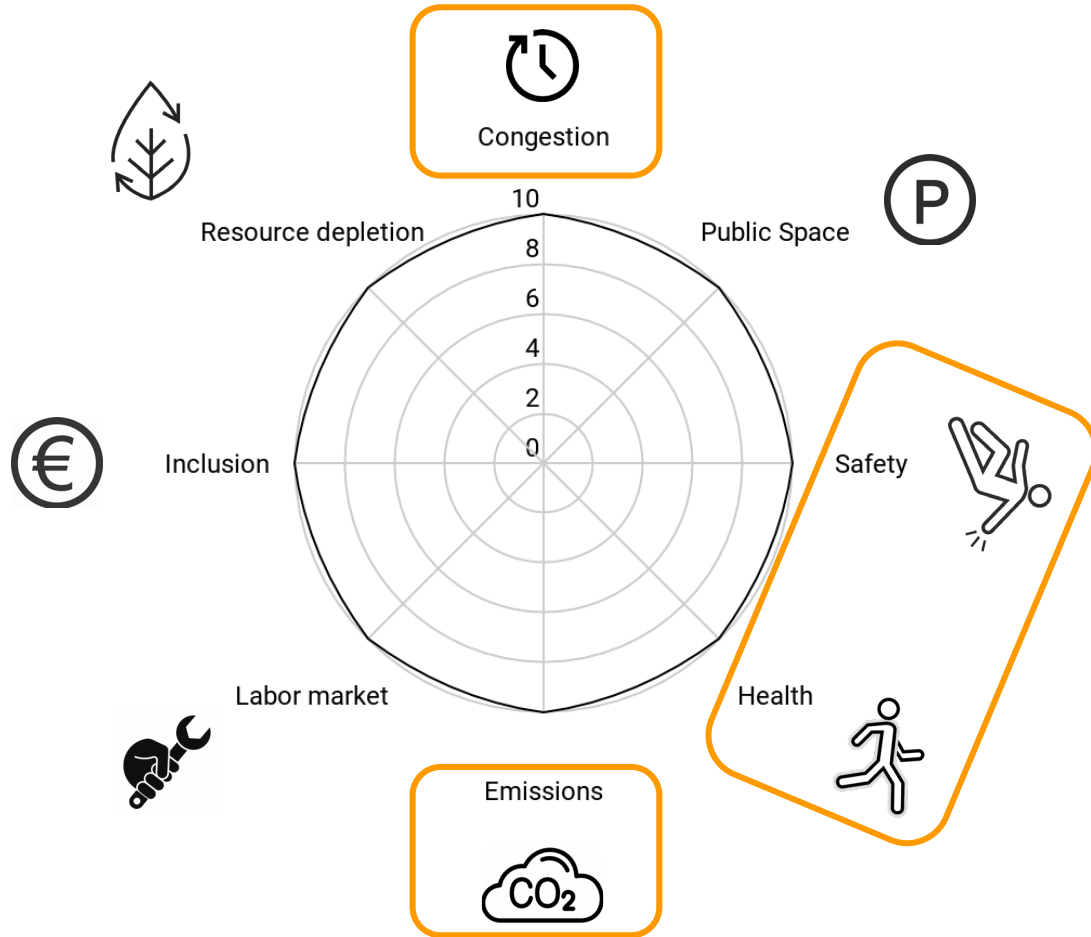
We started measuring the impacts with the marked ones

Reason:
- Available data
- Most interest

# Studies and areas covered

| Cost / Benefit to Society | Considered effects | Studies Utilized |
|---|---|---|
| Health | Physical activity | DTU / COWI: Transport økonomiske enhedspriser for cykling |
| | Accidents | DTU / COWI: Transport økonomiske enhedspriser for cykling<br>Min of Transport of Denmark: Evaluation of small motorized vehicles |
| | Air pollution | Eurostat: Handbook on the external costs of transport |
| Climate change | LCA - GHG emissions | OECD: Assessing the Environmental Performance of New Mobility |
| Congestion | Time delay costs | Eurostat: Handbook on the external costs of transport |

See more about sources, and calculations on this GoogleSheet:
https://docs.google.com/spreadsheets/d/1fQD_fa6x0CI3z1tA3brdQQl1iTL9QjHyJnuMJHOkfIM

# After Some Work, Getting To Numbers

| | EUR-cents per marginal passenger-km in urban areas | | CO2 emissions per passenger km | Dresden Uni Study |
|---|---|---|---|---|
| | Congestion | Health | GHG (LCA) | Replacement |
| Donkey | 0 | 131 | 17 | 100% |
| eDonkey | 0 | 88 | 45 | |
| Car (ICE) | -35 | -12.2 | 162 | -6% |
| eCar | -35 | -11.6 | 124 | -1% |
| Bus (ICE) | -6 | -2.0 | 92 | -30% |
| Rail | 0 | -0.5 | 66 | -20% |
| eScooter (shared, 2nd gen) | 0 | -140 | 107 | -5% |
| Bike | 0 | 131 | 16 | -14% |
| eBike | 0 | 88 | 34 | |
| Walk | 0 | 151 | 0 | -24% |

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# What trips does bike sharing replace?

| Impact Summary | Per Donkey km | Avg Donkey Trip |
|---|---|---|
| GHG savings (gr CO2) | 42 | 126 |
| Healthcare benefits (EUR-cent) | 84.7 | 254 |
| Congestion savings (EUR-cent) | 4.3 | 13 |
| | | |
| Average trip length | 3 | km |

24%      14%      5%      5%      2%      30%      20%

Average benefits of each car substitution to a Donkey Republic pedal bike in Copenhagen

**1.1 EUR** in congestion savings per trip [1,4]

**434g** in saved $CO_2$ emission per trip [1,5]

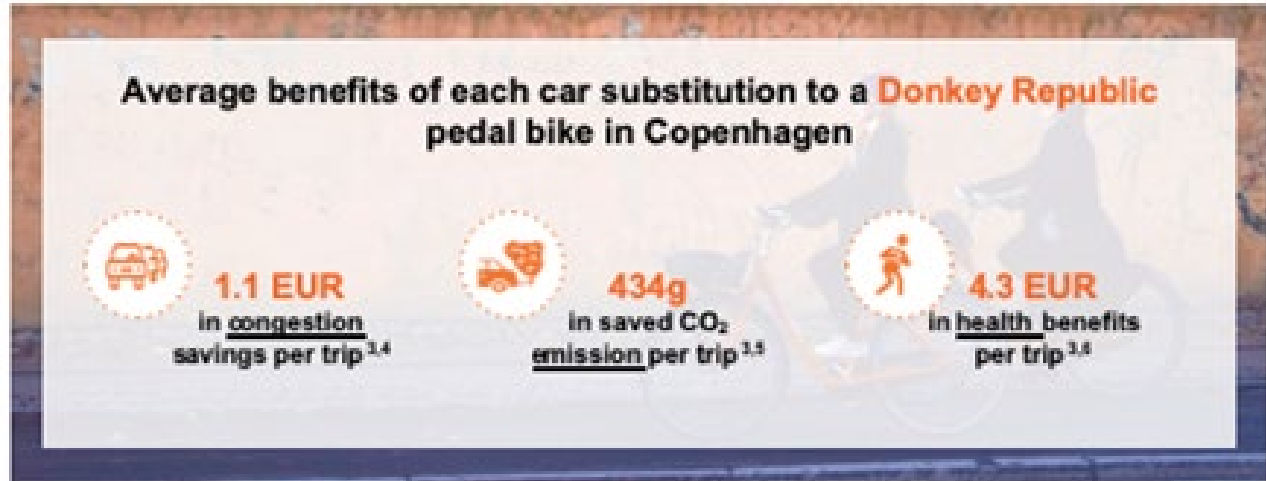**4.3 EUR** in health benefits per trip [1,6]

# From Current Investor Presentation



Bike sharing has proven to be the best solution to address cities' needs

| Shared mobility market[1] | Benefits of choosing bike share as a mode of transportation |
|---|---|

**MICROMOBILITY**
*(62% of all transportation[2])*

0-5 km

Bikes   e-bikes

e-scooters

**MID DISTANCE**
*(15% of all transportation[2])*

5-10 km

e-bikes   Free float car-sharing

Metro   Bus   Ride hail

**LONG DISTANCE**
*(23% of all transportation[2])*

+10 km

P2P car sharing   Ride-sharing

Train   Bus

**Average benefits of each car substitution to a Donkey Republic pedal bike in Copenhagen**

**1.1 EUR** in congestion savings per trip [3,4]

**434g** in saved CO$_2$ emission per trip [3,5]

**4.3 EUR** in health benefits per trip [3,6]

**Bike shares can be a tool for cities and citizens in reaching the United Nations SDGs (Sustainable Development Goals)** [7,8], e.g.:

**3 GOOD HEALTH AND WELL-BEING**

**11 SUSTAINABLE CITIES AND COMMUNITIES**

**13 CLIMATE ACTION**

Note: [1]Frost & Sullivan 2020 and Management assessment [2]European Commission. Figures are for Germany [3]Donkey Republic Footprint Analysis. One trip is average 3km [4]European Commission 2019 [5]ITF 2020 [6]COWI 2020 [7]United Nations 2020 [8]European Cyclists' Federation 2018

| 6
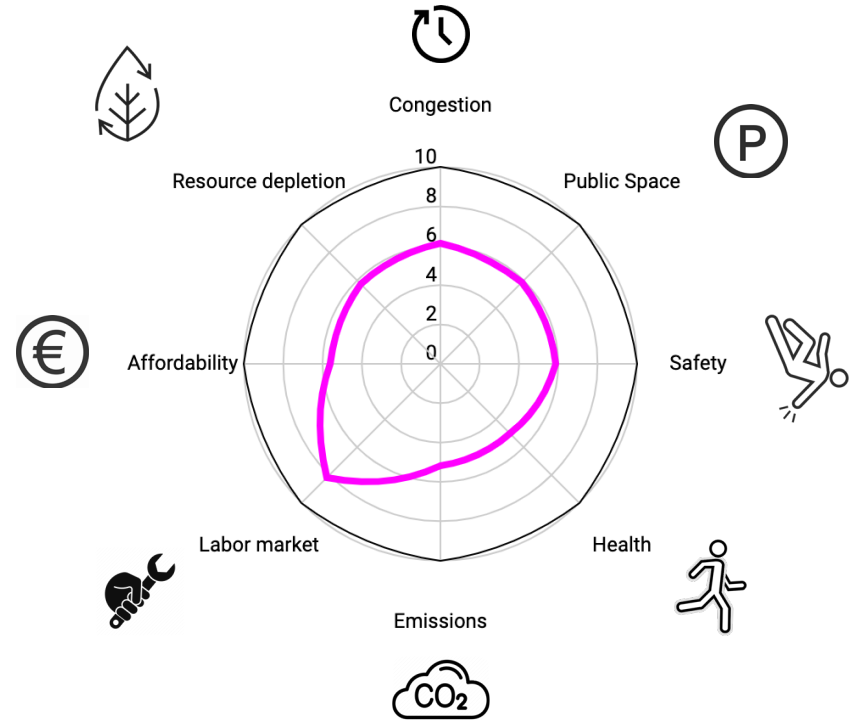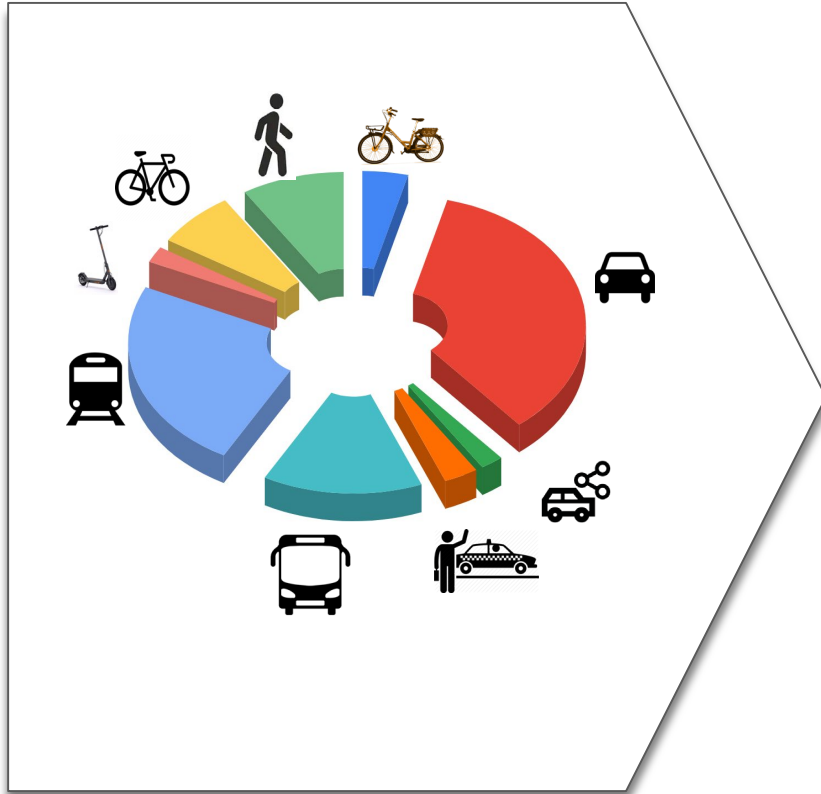
# Key Considerations in Regulating and Procurement

| | |
|---|---|
| Subsidy Model | If there is subsidies, place some on trips |
| No of operators | Depending on the size of city 1-3 operators |
| Rider fee earnings | Regulations shall not inhibit operators making money from each marginal trip they conduct |
| Control on prices | Operators should be able to regulate their prices to run a viable business |
| Control on operations | Requiring vehicle conditions unnecessary |
| Control on coverage | Requiring certain areas to be covered can disturb service, due to vandalism, usage levels |
| Control on availability | Specific no of bikes in specific locations unnecessary with subsidies on trips |
| Control on parking | Parking: Consider virtual stations. |
| Sponsorships | Limits will reduce scalability of service |
| Data sharing | Require high level of sharing |
| Integration | End-game is full integration, but only if well-regulated who the MaaS platforms are |

Currently, most contracts have focus on **outputs** of operators with high level of control:
- Bikes, specified,
- System specified
- Operations specified

Too little innovation or scaling
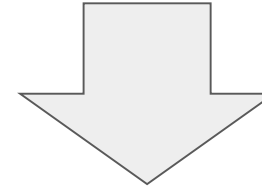
Make contracts and permits based on **outcomes:**
- Generate trips
- In desired time and locations
- Allow operators to run viable business

Examples exist in the UK, including: Hereford, Watford, Norwich, Bournemouth, Poole, Isle of Wright

# Venture Capital Control vs Politician Control

**Traditional Bike Shares**

Driven by public procurement
Very high level of control on everything
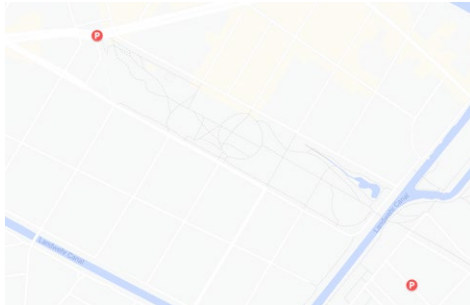Bespoke system
Doesn't scale without new public contracts

**VC Backed Businesses**

Standard system
Focus on scaling fast
Some can see regulation as interference
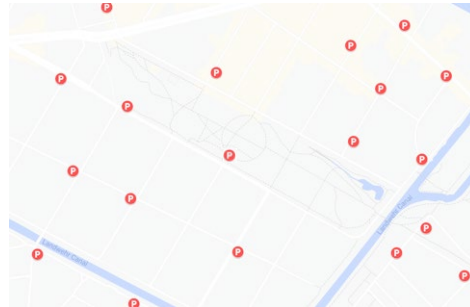Sustainability of business model questionable

# Controlled Parking



Physical Station

Virtual Station

Free Float

# What if we bet on a well regulated future?

from *wishful thinking*

to *outcome measurement*

Need rigorous framework for impact assessment

Sir Ronald Cohen: "The Impact Revolution"

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