



Bike Sharing and Public Transport –  
Paving the way for future urban mobility

Once upon a time in...2005



Once upon a time in...2008



# Once upon a time in...2011





# Once upon a time in...2013



**metropolradruhr**

## Flexibel mobil

Für alle EVAG-Kunden: Täglich 30 Minuten kostenlos Rad fahren!

Mit Bus, Bahn und Rad sind Sie flexibel, schnell und umweltfreundlich in der Stadt unterwegs. Bis Ende 2012 werden allein in Essen 500 metropolradruhr-Räder an mehr als 50 zentral gelegenen Stationen ganzjährig zur Ausleihe für Sie bereitstehen.

Die Registrierung ist ganz einfach im EVAG-KundenCenter möglich. Weitere Infos zum metropolradruhr und zu ihren Tarifvorteilen als EVAG-Abokunde erhalten Sie auf [www.evag.de](http://www.evag.de).

**metropolradruhr**   **EVAG**



dt (Bochumer Straße)

**metropolradruhr**



**Wir erweitern Ihre Mobilität um 2 Räder...**

aboTicket der BOGESTRA haben Sie jetzt zum Radfahren.

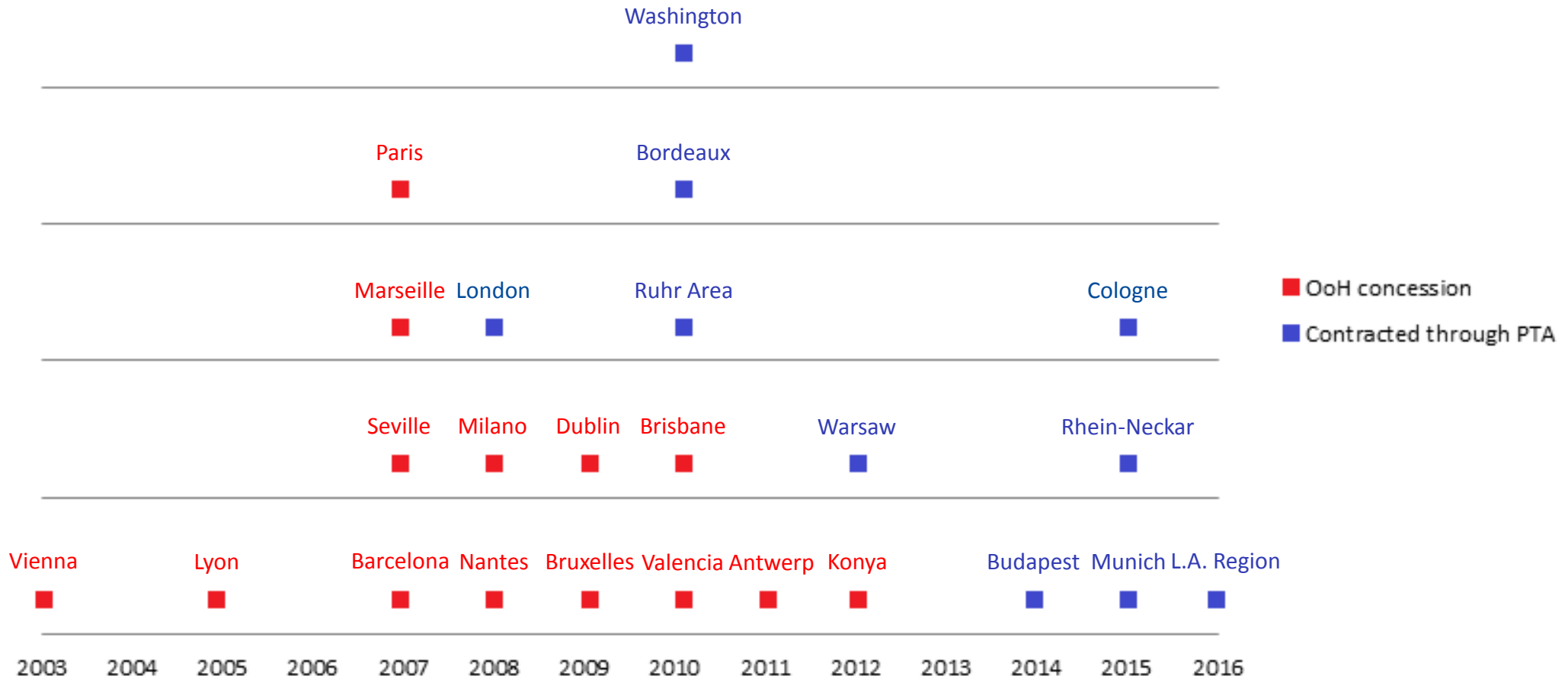
bybike an einer von vielen haltestellennahen r-Stationen ausleihen und losfahren.

Exklusiv für BOGESTRA-Abokunden mit der Flatrate für 5€ im Monat.

ServiceTelefon: 0180 3 504030

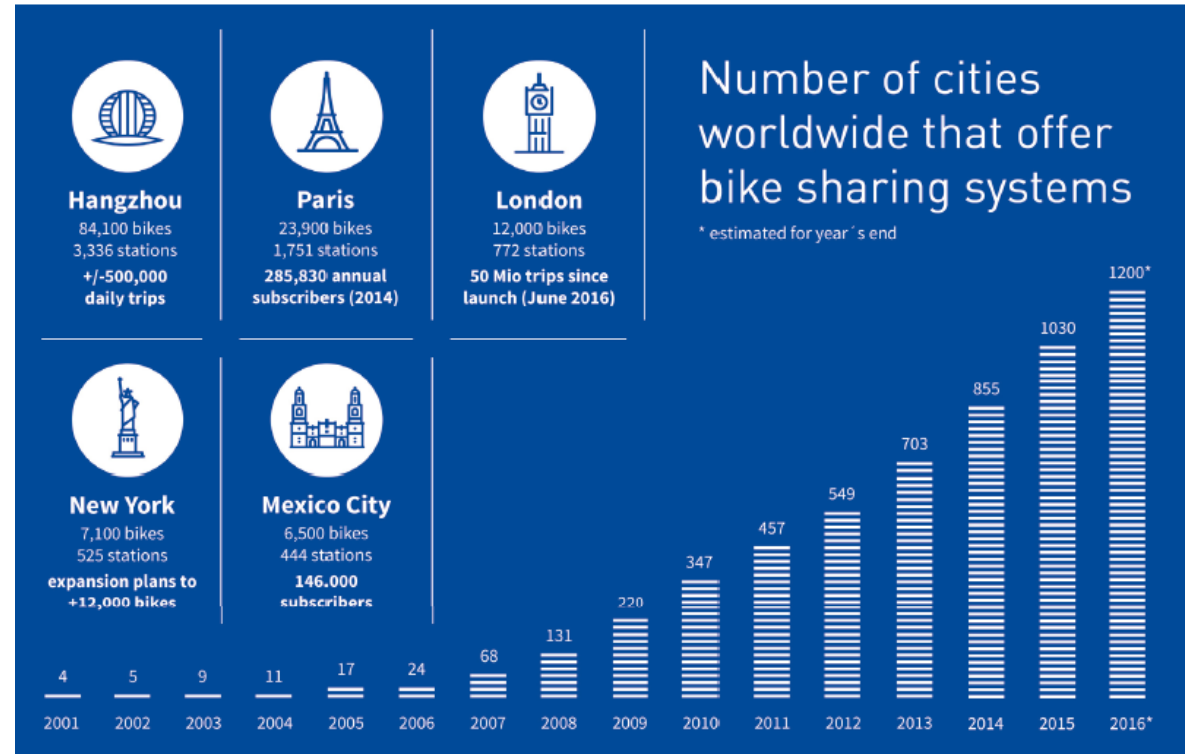
**BOGESTRA** **metropolradruhr** 

# Shift of Bike Share Business Models



# Evolution of automatized 3rd / (4th) generation bike share

- **2000 - 2005: exploring an idea**  
applying try & error  
overcoming barriers
- **2006 - 2010: proof of concept**  
learning from mistakes  
finding suitable operational models
- **2011 - 2015: maturing industry**  
sharing experiences (ITDP, OBIS, NABSA)  
new technologies (Apps, Smart Bikes, Electric Bikes)  
creating new alliances (PT operators, sponsors)
- **2016 – 2020: exploring added value**  
how can PBS be embedded into smart cities?  
how can we use bike share platforms to create cycling ecosystems?  
how can new business opportunities be tapped to reduce subsidies?





# PT & Bike Share – a Strategic Alliance



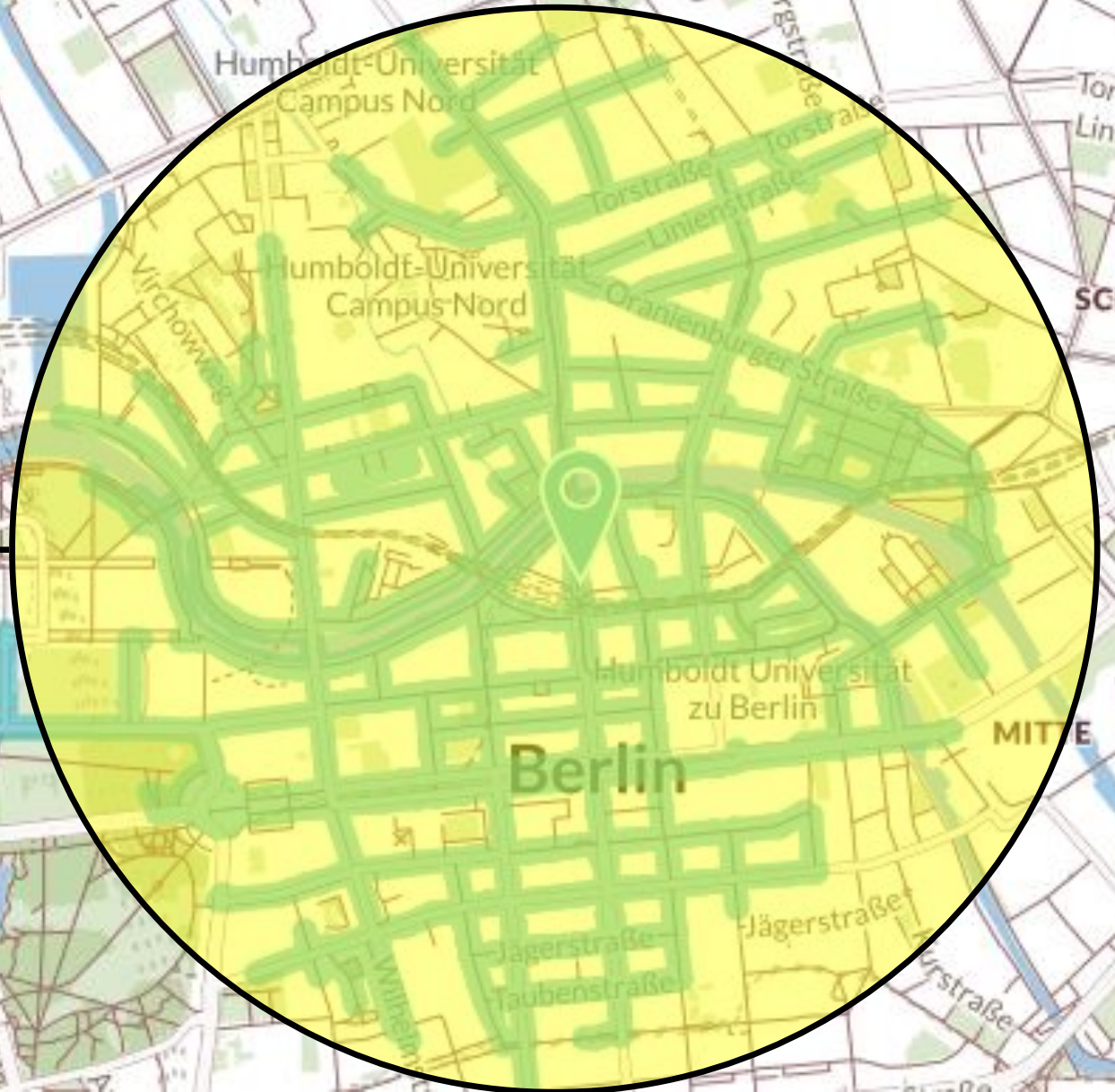
Foto: Münchener Verkehrsgesellschaft

nextbike 



# Bike Share increases the PT Catchment Area

5 min cycling = 1.3 km





# Bike Share offers seamless Mobility Options and increases Attractiveness of PT





# Bike Share reduces pressure on trains during Peak Demand





# Bike Share S.T.I.M...ulates multi-modal user behaviour



## S....ystem integration

- Integration of Bike Share into PT front end channels (App, website, ticketing machines, Invoicing)
- Open API for MaaS Applications
- NFC multi-application smart cards (DESfire EV2)





## Tariff integration

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# PUBLIC BIKE-SHARING SYSTEM FARES

① + ② = ✓

Fare to be paid consists of access fee plus usage fee

## ① ACCESS FEES

### TICKETS

<p>24h</p> <p>MOI Bubi 24-hour ticket**</p> <p><del>HUF 500</del> HUF 100</p> <p>for 25,000 (gross)</p>	<p>72h</p> <p>MOI Bubi 72-hour ticket**</p> <p><del>HUF 1 000</del> HUF 100</p> <p>for 25,000 (gross)</p>	<p>7</p> <p>MOI Bubi weekly ticket**</p> <p><del>HUF 2 000</del> HUF 100</p> <p>for 25,000 (gross)</p>
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Discount applies to tickets purchased before midnight on 22 September 2014.

### PASSES

<p>2014</p> <p>MOI Bubi Start pass*</p> <p>HUF 3 000</p> <p>with sur 1 500 usage fee credit</p> <p>Valid until 31 December 2014</p>	<p>180</p> <p>MOI Bubi semi-annual pass*</p> <p><del>HUF 12 500</del> HUF 8 000</p> <p>with sur 3 000 usage fee credit</p> <p>Promotional discount valid until withdrawn, available only to natural persons.</p>	<p>365</p> <p>MOI Bubi annual pass*</p> <p><del>HUF 18 000</del> HUF 12 000</p> <p>with sur 5 000 usage fee credit</p>
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## ② USAGE FEES

up to 30 min.	HUF 0
up to 60 min.	HUF 500
up to 90 min.	HUF 1 000
up to 120 min.	HUF 1 500
up to 150 min.	HUF 2 000
up to 180 min.	HUF 2 500

+

between 181 min. and 5 hours 59 min.	HUF 1 000
every 30 min. started (HUF 3 500 – HUF 8 500)	
between 6 hours and 8 hours 59 min.	HUF 1 500
every 30 min. started (HUF 10 000 – HUF 17 500)	
over 9 hours	HUF 2 000
every 30 min. started (from HUF 19 500)	

## FURTHER DISCOUNTS

Promotional discount valid until withdrawn, available only to natural persons.

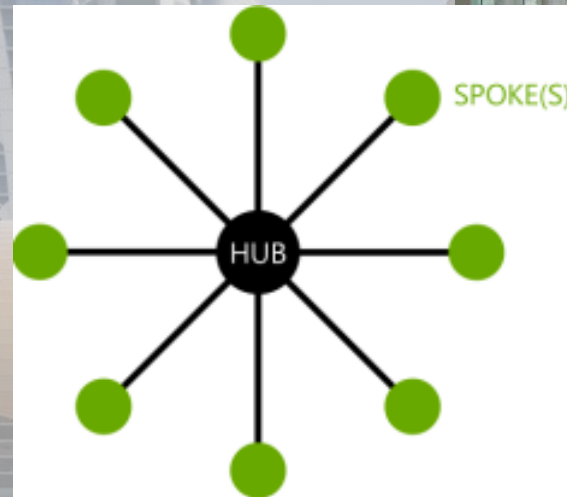
<p>In possession of BKK public transport annual pass:</p> <p>MOI Bubi annual pass***</p> <p>(with sur 5 000 usage fee credit)</p> <p>HUF 6 000</p>	<p>In possession of BKK public transport semester pass:</p> <p>MOI Bubi semi-annual pass***</p> <p>(with sur 3 000 usage fee credit)</p> <p>HUF 6 400</p>
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# Bike Share S.T.I.M...ulates multi-modal user behaviour

## I...nfrastructure integration

- Hub and spoke architecture
- Bike Share hubs at PT stations
- Satellite stations in cycling distance around hubs
- As dense as possible





# Bike Share S.T.I.M...ulates multi-modal user behaviour

## M...arketing integration

- Multi-modal campaigns in busses, trains and on bikes
- Inclusion of Bike Share station network into city / PT network maps and electronic schedule systems
- Sign posting of Bike Share stations at train / metro stations





# Benchmark Projects from Germany – KVB-Rad Cologne

## System design and infrastructure

- 1.500 Smart Bikes in 45km<sup>2</sup> geo-fenced flex zone
- Localisation, rental and return via App or bike computer
- 100 hub stations until 2017 (“Hybrid System”)





# Benchmark Projects from Germany – KVB-Rad Cologne

## System and tariff integration

- Registration and access via KVB / VRS ((e-Ticket
- Students and KVB / VRS customers receive annual membership (VRS-Chipkarten-Tarif)





# Benchmark Projects from Germany – KVB-Rad Cologne

30 Min. gratis für  
VRS-AboKunden!

## Marketing integration

- Bike branding in KVB design
- Involvement of local VIP ambassadors
- Multi-modal mobility campaign



[www.kvb-koeln.de/kvb-rad](http://www.kvb-koeln.de/kvb-rad)

## Radfahren Bringts!

fit · spontan · umweltbewusst



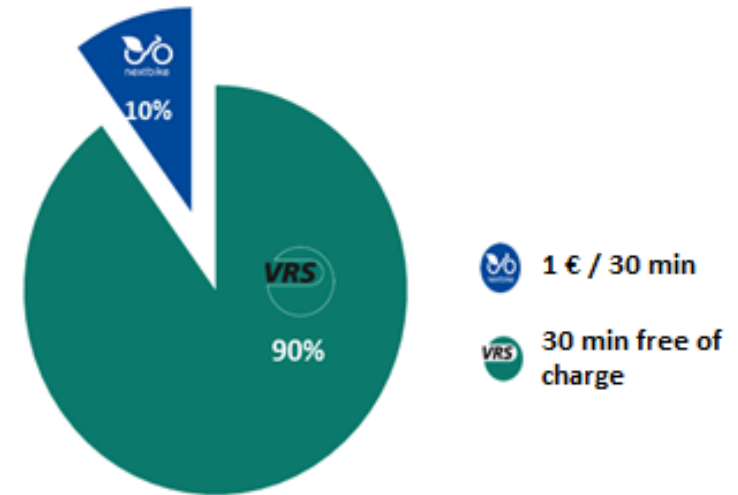


# Benchmark Projects from Germany – KVB-Rad Cologne

## Synergies between nextbike and KVB

- Shared data = optimized location network
- Joint sales activities (B2B / Universities)
- Operational flexibility (nextbike) = reduced service fees (KVB)

Trips from KVB / VRS customers and non PT-customers





# Bike Sharing – Combining a 19th Century Vehicle with 21st century technology

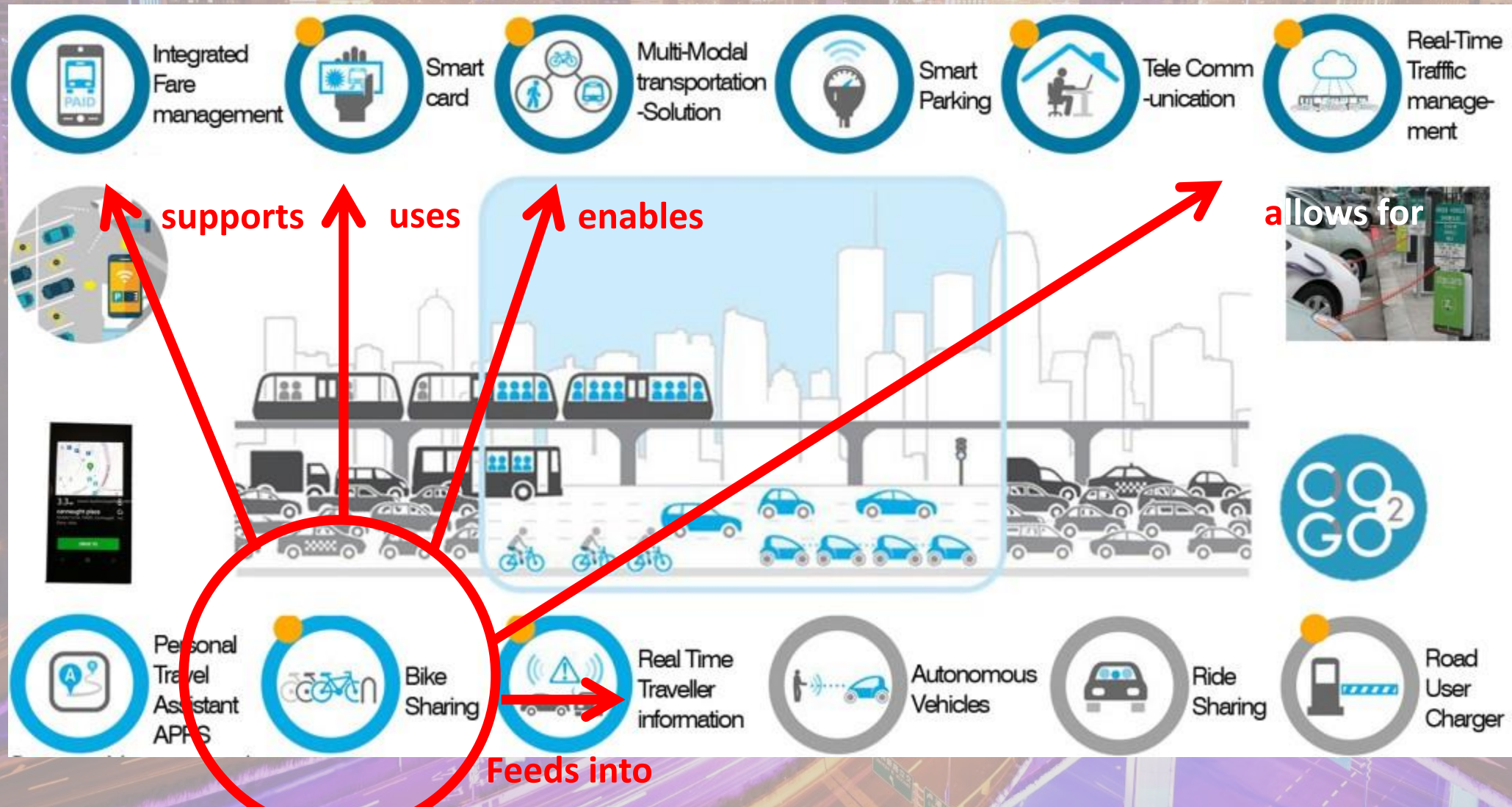
Real-time information about

- Trip data (start / end time, start / end location, duration, distance, etc.)
- Financial data (turnover per bike / station / customer product, etc.)
- Performance data (bike / station availability, incident log, call statistics, etc.)
- Easy access to customer database e.g. for customer surveys or advertisement





# Smart Mobility – Mobility as a Service





# Added value for sponsors and partners

## Seamless Integration

- Single-Sign-On via Smart Cards and multi-modal Apps
- Real-time information

## Innovation & Technology

- Wifi hotspots
- contactless payments
- sensors to measure air quality, surface conditions, etc

## Supporting Businesses

- Attractive B2B packages
- Data analytics to calculate savings

## Supporting Higher Education

- Providing Open Source Data
- Involve the Tech Community





# Added value for sponsors and partners

## Fair Treatment of Customers

- user feedback
- UX rating

## Improving Cities

- traffic monitoring and sharing data
- user surveys

## Care for the Environment

- Evaluate environmental benefits (CO<sup>2</sup>, NO<sub>x</sub>)
- Apply sensors to collect supporting data

## Community Value

- Evaluate health benefits (calories)
- social inclusiveness through free memberships





# What's next? Innovative ideas around PBS

- PBS as a digital platform for local bike culture
  - Crowdsourcing tools for participatory planning process
  - App and Social Media based community activation
  - Webshops with locally produced cycling clothes / accessoires
- PBS as vehicle for innovation
  - NFC technology / mobile payments / seamless verification
  - „Predictive Balancing“
  - „Remote Diagnostics“
  - Laser lights
  - Etc. etc. etc.





# When do you ?

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Please visit us at our stand



# nextbike