



ADVANCING
PUBLIC
TRANSPORT

PUBLIC TRANSPORT TRENDS

STRATEGY FORUM
10 MARCH 2016

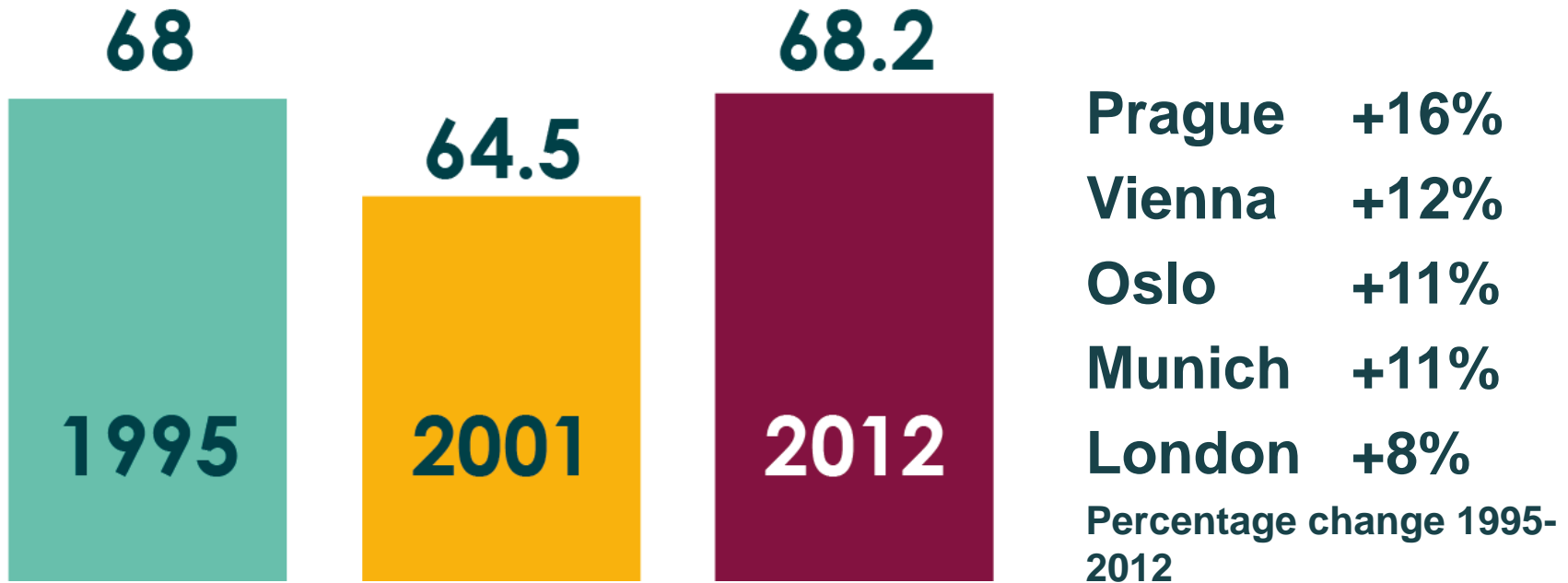
UITP



- Global network of public transport operators, regulators and suppliers
- 1,300 member organisations in 90 countries
- Supporting excellence and promoting a better policy environment for public transport

1. EVOLUTION OF URBAN MOBILITY PATTERNS

GROWTH IN URBAN DENSITY

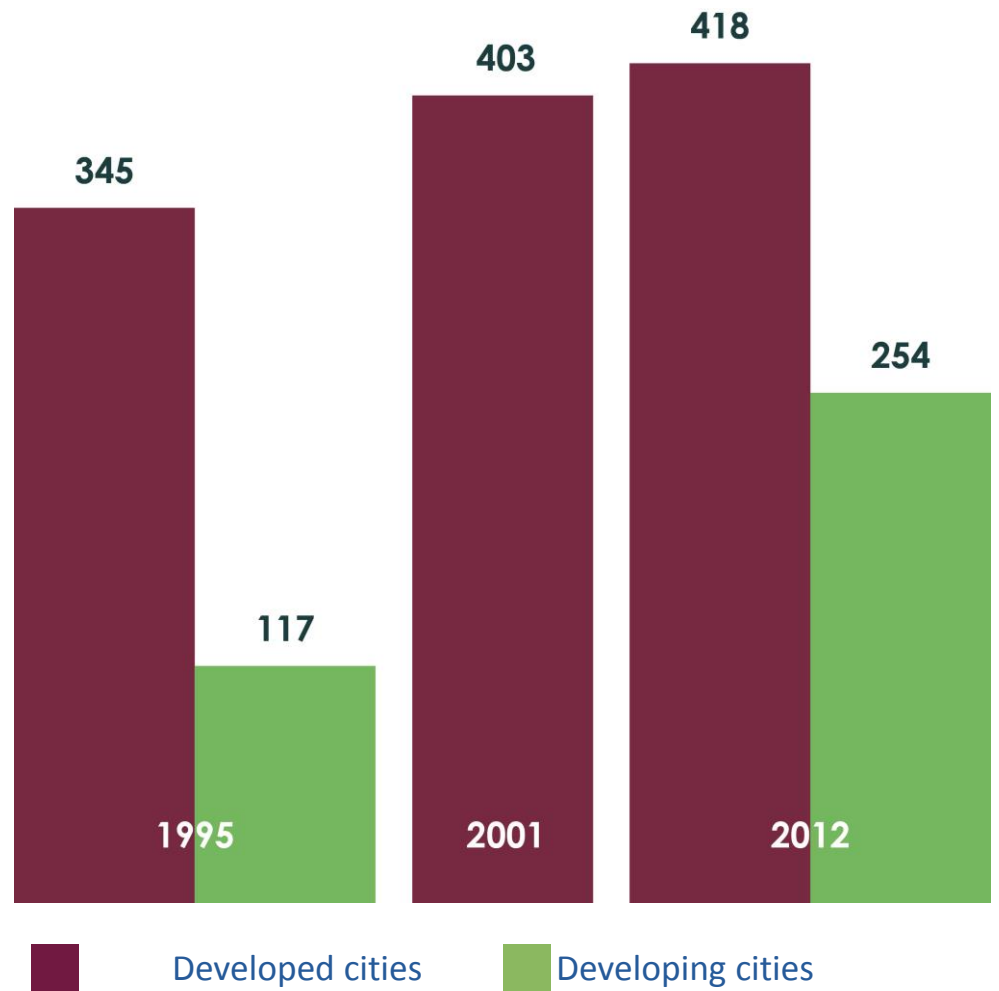


Average number of inhabitants per urban hectare in developed cities

EVOLUTION OF MOTORISATION

London -10%
Geneva -8%
Delhi +88%
Beijing +111%

Percentage change 1995-2012



Average number of cars per 1000 inhabitants

GROWTH IN PT SUPPLY



Average evolution of public transport vehicle x km produced

PT MODAL SHARE EVOLUTION

Oslo	+61%
Geneva	+35%
Stockholm	+32%
Singapore	+28%
Vienna	+26%
Paris	+22%
Budapest	-29%
Casablanca	-22%

Percentage change 1995-2012



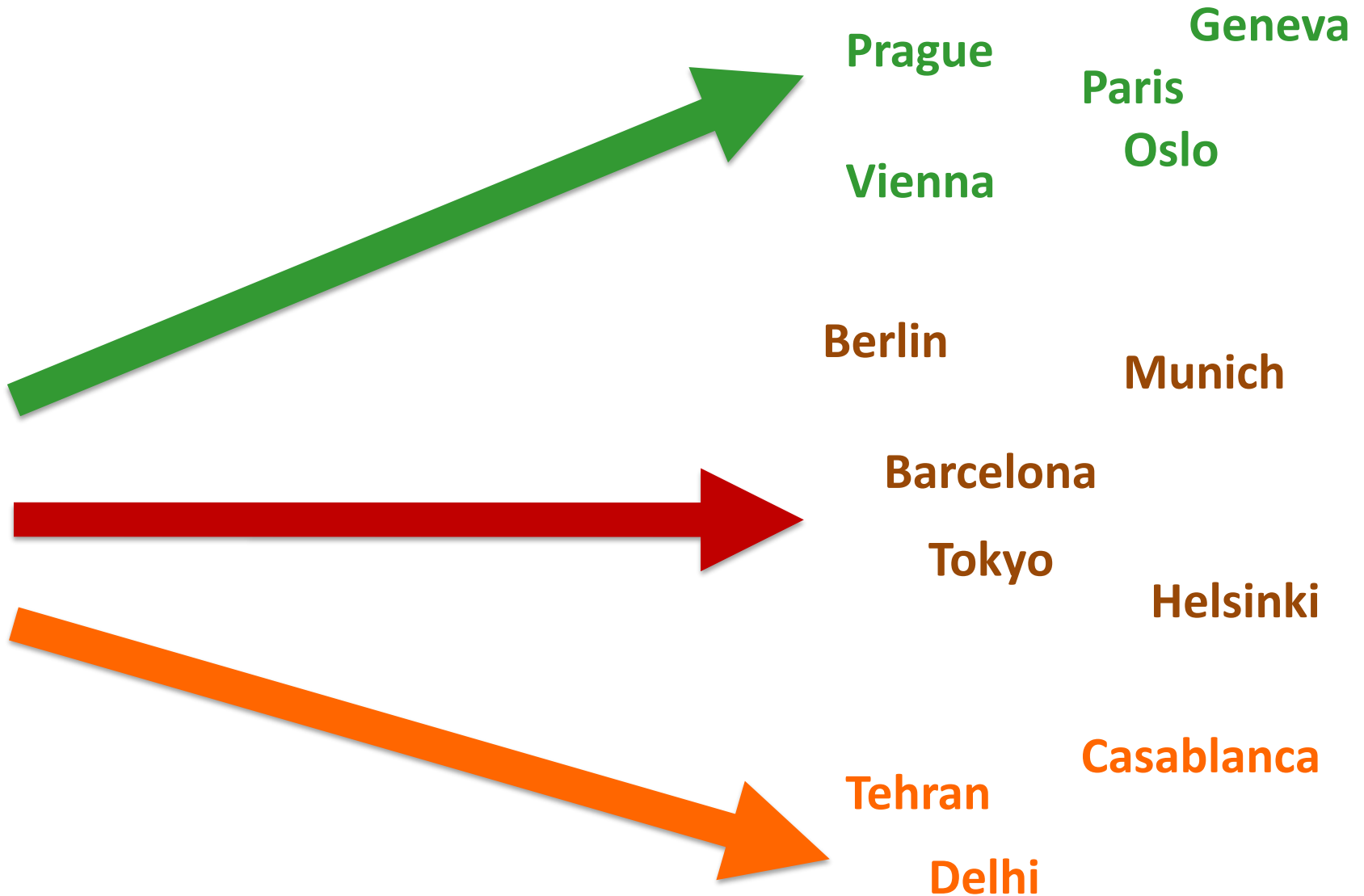
Developed cities



Developing cities

Average share of public transport out of motorised and mechanised trips

MODAL SHARE EVOLUTION



WE NEED A MIX OF MEASURES

- Increase in **public transport supply** necessary but not sufficient to improve modal share
- Must be complemented by policies that **manage the demand for private vehicle** travel, such as parking restrictions or congestion charging
- As well as **Integrated urban planning** and design aimed at increasing density and reducing urban sprawl

DISCUSSION



- Any question on these trends?

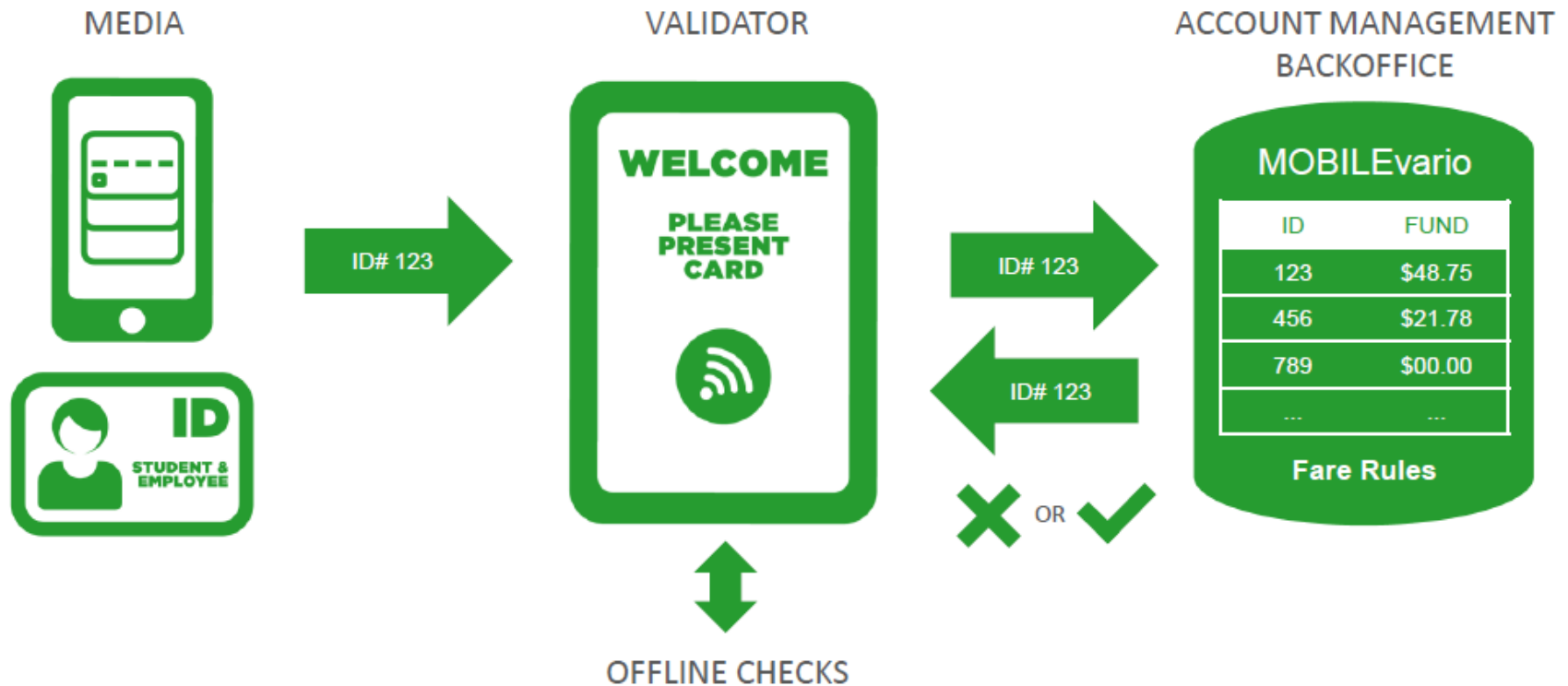
2. GLOBAL TRENDS AND IMPACT ON PUBLIC TRANSPORT

DIGITALISATION: MAKING MOST OF THE DATA

Case study: Transport for London

- Better planning of bus networks (e.g. inferring exit point from next boarding point)
- Enhancing customer experience (e.g. customer segmentation at stations)
- Building trust with users (e.g. automated fare refunds)
- Influencing travel (e.g. provision of recommendations)

DIGITALISATION: ACCOUNT BASED PAYMENT



Source: INIT

DECARBONISATION OF URBAN MOBILITY

- Strong trends towards decarbonisation of bus fleets.
- **Paris:** 100% ecological fleet in region by 2025 consisting of buses running solely on electricity and buses using renewable gases.
- **Zeeus project:** Innovative electric bus technologies and charging infrastructure solutions in 10 demonstration sites.

PUBLIC TRANSPORT FUNDING

- Rising **demand** and **renewal of existing assets** vs. public **budget** constraints.
- Fare often used as adjustment variable.
- Innovative use of **assets** by operators to generate additional funding.
- Acknowledgement of **indirect benefits** and location value capture
- Limited role of private sector in funding and financing.

RESTRUCTURATION OF PUBLIC TRANSPORT MARKET

- Emergence of **large transnational passenger transport operators** in several markets, with varying maturities and opportunities.
- Liberalisation encouraged **new entrants** to develop a mix of improved service quality and better price.
- **Several non-European players** have entered the global market, including in Europe.
- Since 2013, the market has undergone further developments which may lead to **disruptive evolution in the coming years.**

EMPLOYER BRANDING

- In order to attract and retain talented employees, public transports operators seek to build a **strong employer brand** and a unique Employer Value Proposition.
- Employer branding is the identity-based development and positioning of a company as a credible and **attractive employer**

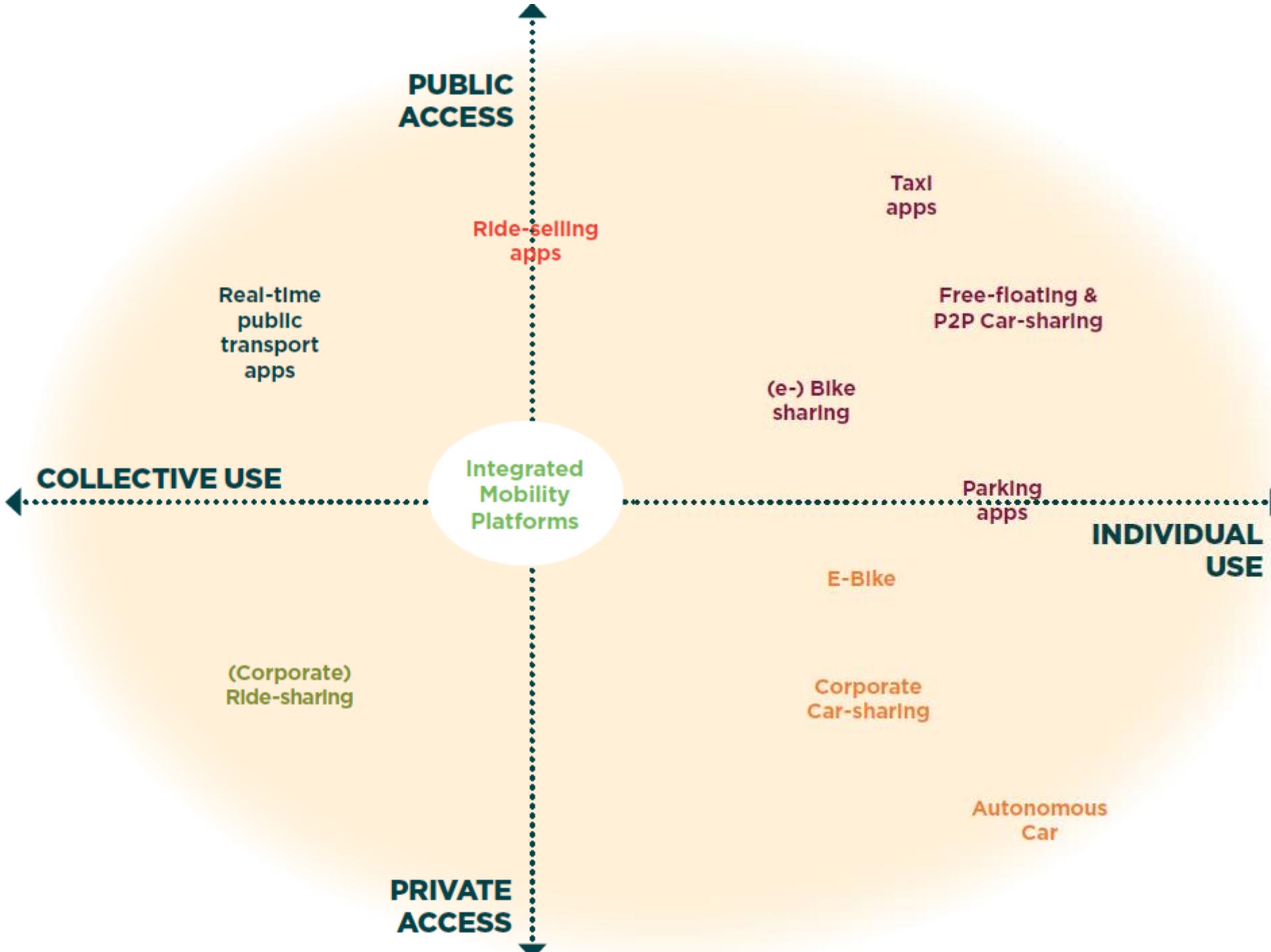
DISCUSSION

- Digitalisation
- Decarbonisation
- Alternative funding
- Incentives / share of risks
- Employer branding

3. DIGITAL TRANSFORMATION OF THE URBAN MOBILITY LANDSCAPE

NEW SERVICES, NEW PLAYERS, NEW BUSINESS MODELS





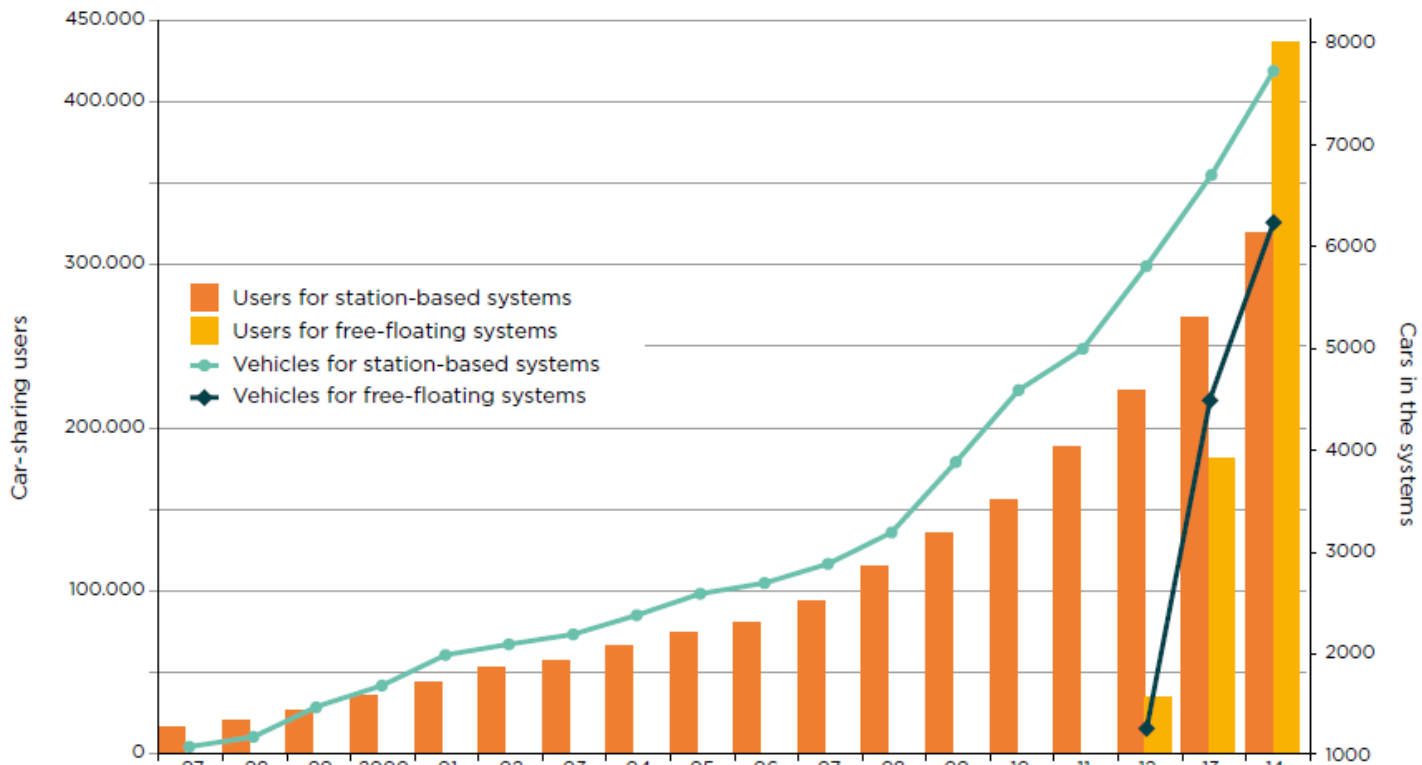


Car-sharing

and public transport: an evolving interaction

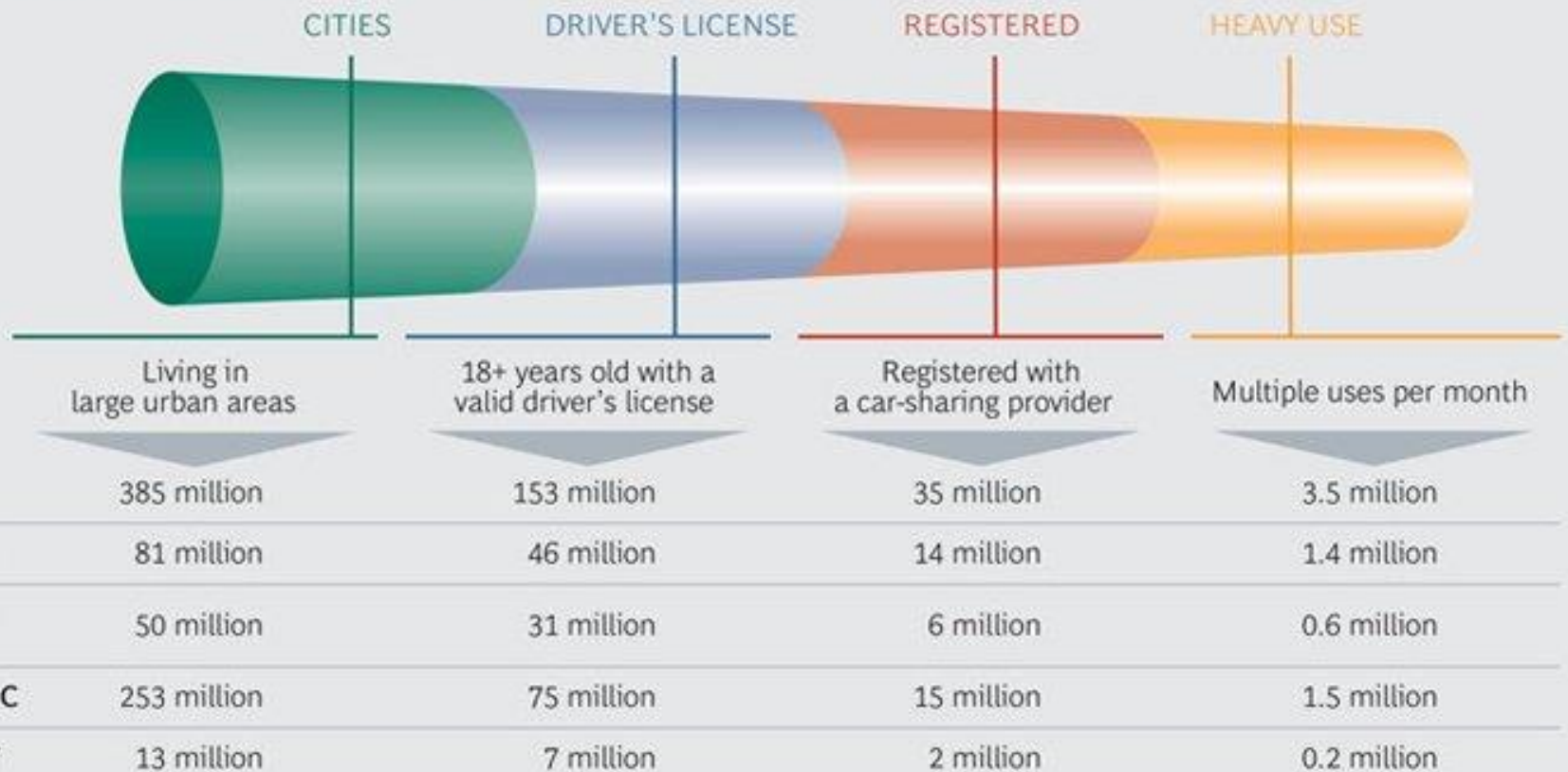
“One car-sharing car replaces up to 12 privately owned cars.”

FIGURE 7: CAR-SHARING DEVELOPMENT IN GERMANY IN THE LAST YEARS
 Source: BCS Germany (Bundesverband Car Sharing)



CAR SHARING TRENDS

EXHIBIT 4 | Approximately 35 Million Drivers Will Use Car-Sharing Services by 2021



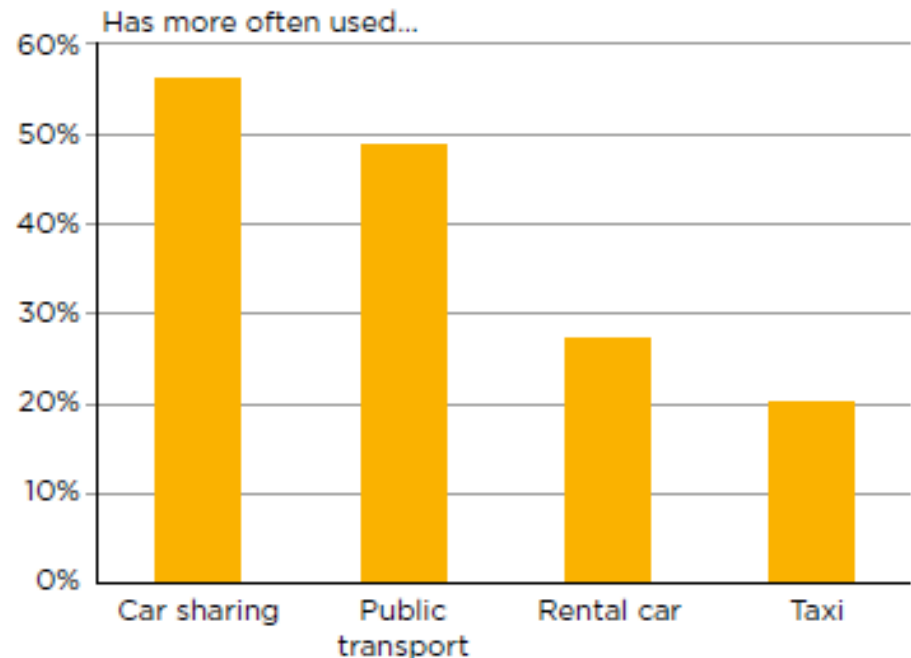
Sources: Statista; BCG analysis.

MOBILITY PLATFORMS

84 out of the 86 public transport companies worldwide surveyed by UITP in 2014 see combined mobility as an opportunity for their organisation.

One-stop-mobility shops or integrated mobility platforms are emerging, bringing convenience, time, and cost savings to the traveler.

FIGURE 6: MOBILITY BEHAVIOUR CHANGE OBSERVED WITH UBIGO USERS Source: web.viktoria.se/ubigo

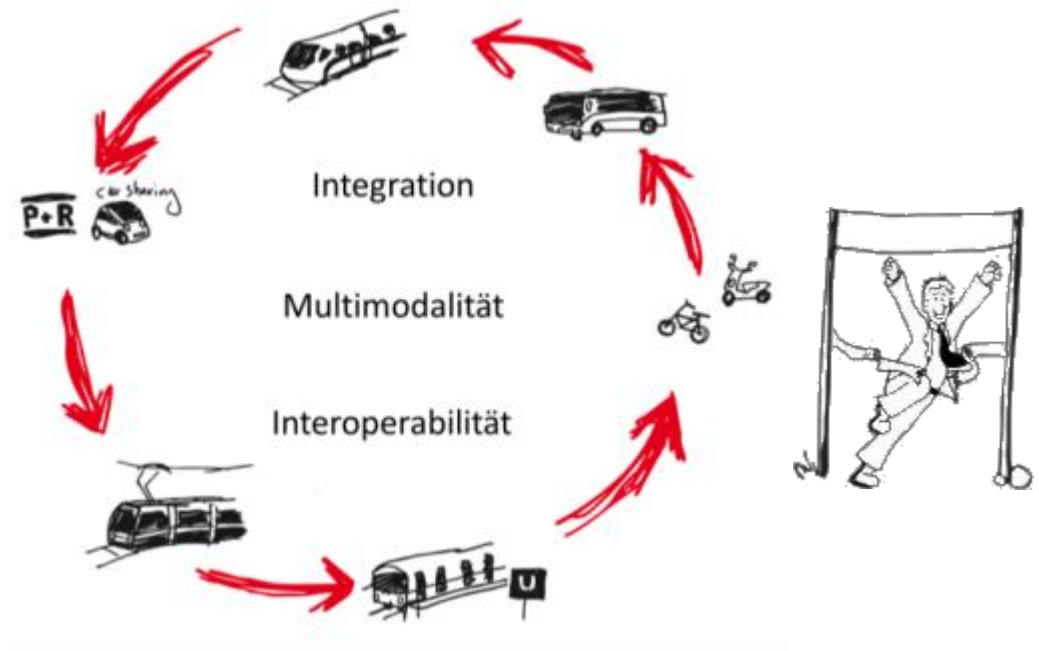


PT AS INTEGRATOR : VIENNA

Main goal of project „**SMILE**“ is developing and evaluating a prototype of a **multimodal, integrated information-, booking and payment-system** („Integrated Mobility Platform“) which connects **private and public transport** in a smart and efficient way.

Personal Mobility Assistent

- + info
- + key
- + entry
- + ticket
- + assistance
- + clearing
- + bill



PROJECT UBIGO GÖTEBORG

UbiGo



70 households in Gothenburg subscribing to a fully integrated mobility service called UbiGo.

The service combines Public Transport, car-sharing, rental car service, taxi and a bicycle system, all in one app and all usage on one invoice every month.

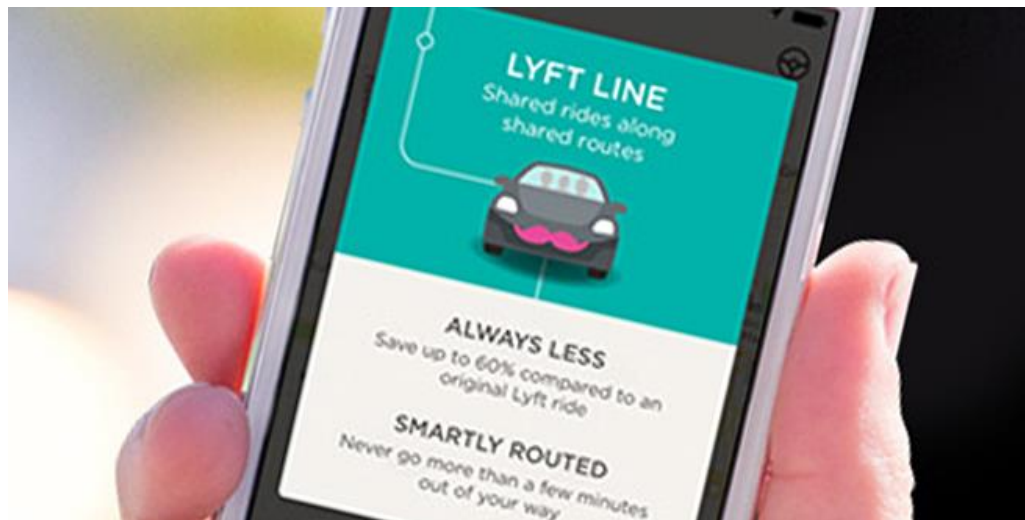


DISCUSSION

- Opportunity or threat for PT?

4. EMERGING TRENDS IN URBAN MOBILITY

ON-DEMAND BUSES



SHARING AUTONOMOUS VEHICLES



DISCUSSION



- Reorganisation of bus network design?
- Joint ventures with app-based on-demand service providers?
- Profiling public transport as natural manager of autonomous vehicle fleets?