

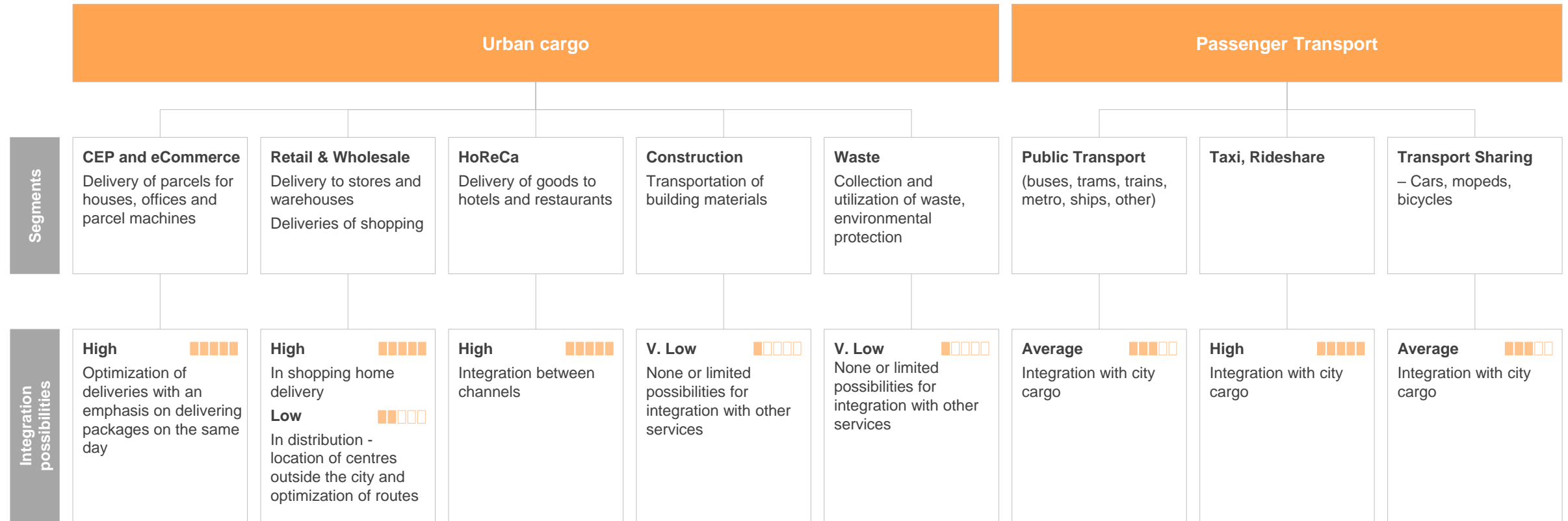
September 2018

# Own or share? Effective usage of cargo space

Introduction to debate at City Development Forum

Urban cargo creates moderate opportunities to integrate different types of services due to its large diversity and the growing level of optimization of individual services

### Definition of urban cargo



Source: PwC analysis, European Commission

In Poland >60% population dwell in cities, so it can be expected that significant portions of cargo markets are actually urban cargo

### The value of individual urban cargo markets



**CEP**

**3,5 bn PLN**  
(domestic CEP market in Poland in 2015 - transport)



**Retail & wholesale**

**PLN 805,7 bn**  
(retail market turnovers in Poland in 2017 - total)



**HoReCa**

**PLN 25 bn**  
(market value in 2016 in Poland - total)



**Construction**

**PLN 42 bn**  
(value of construction materials market in 2016 in Poland - total)



**Waste**

**PLN 7,2 bn**  
(agreements for urban waste reception concluded in 2014 in Poland - transport)

## Changes are also motivated by trends that directly affect the urban cargo sector ...

### Trends influencing urban cargo



#### Digitalisation

- **The Internet of Things** creates an ecosystem for the development of technologies that support process optimization.
- **Digitization of processes and models** allows for the creation of new services and the optimization of existing ones.
- **The increase in the availability of the Internet and mobile devices** makes it possible to popularize eCommerce



#### Changes in domestic and international markets

- **Focusing on environmental sustainability** and tightening emission standards will force logistics to use greener and safer solutions ("green logistics").
- **Deficiencies in a qualified labour force** make it difficult to implement modern solutions and increase the cost of processes.
- **Cities introducing entry fees** to reduce the number of vehicles
- **Fluctuations in fuel prices** (including oil) are difficult to predict due to changes in demand and supply
- **Changes in consumer needs:**
  - Reliability and delivery on the same day will create new challenges for the courier market.
  - Preferences that change towards online shopping



#### Software and hardware based changes in processes

- **Evolution of base tech** enabling innovative solutions (boosted by cost pressure):
- **Artificial Intelligence** to optimize and supply chains' effectiveness.
- **Big Data Analytics** enabling data-driven decision-making and development of Intelligent Transportation Systems.
- **Electro-mobility advancements** making electric-powered vehicles an important part of urban logistics and transportation systems.
- **Other Transport technology changes** (including autonomous transportation, drones).

## Sharing economy solutions, digitalization solutions and electro-mobility will shape sharing solutions in the next few years

### Solutions for urban cargo



#### Sharing economy

##### Examples

- Sharing of unused space in warehouses
- Common car journeys on the route specified by the driver
- Crowdsourcing of courier parcels in urban space



#### Digitalisation

##### Examples

- Transfer of reporting systems to the digital sphere
- Identification of packages using databases
- E-payments



#### Electro-mobility

##### Examples

- The use of electric buses in public transport
- Delivery of packages by bicycles and electric cars



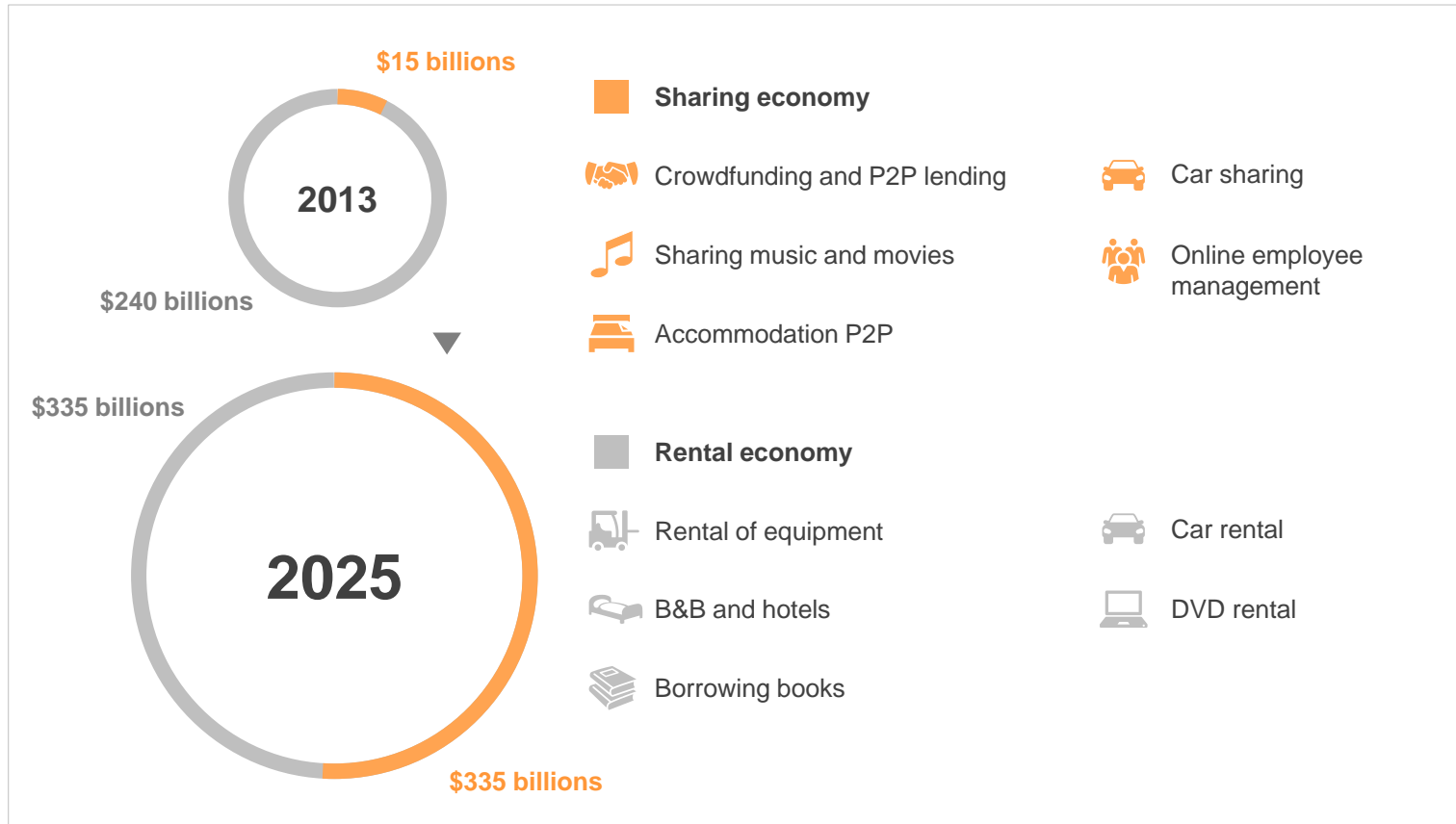
#### CEP solutions for eCommerce

##### Examples

- New services for eCommerce companies and expansion of the offer
- Shortening delivery time in cities from several days to several hours
- Significantly facilitate the return of parcels

# Sharing resources can have a positive impact on the optimization of urban cargo

## Sharing economy – growth and examples in Urban Cargo



### Examples of shared resources

- „Coolomat” – parcel machines with refrigeration
- Subway transporting goods
- Public buses transporting goods
- Trams transporting goods
- Couriers as taxi drivers

## Importantly, shared transport solutions don't always require advanced technological solutions

### Dabbawala – case study



#### Dabbawala - definition

**Dabbawala** is a way of delivering lunch boxes in Mumbai based on a system of special codes and using bicycles and trains

#### Reasons, why Dabbawala is popular (130 000 meals delivered daily)

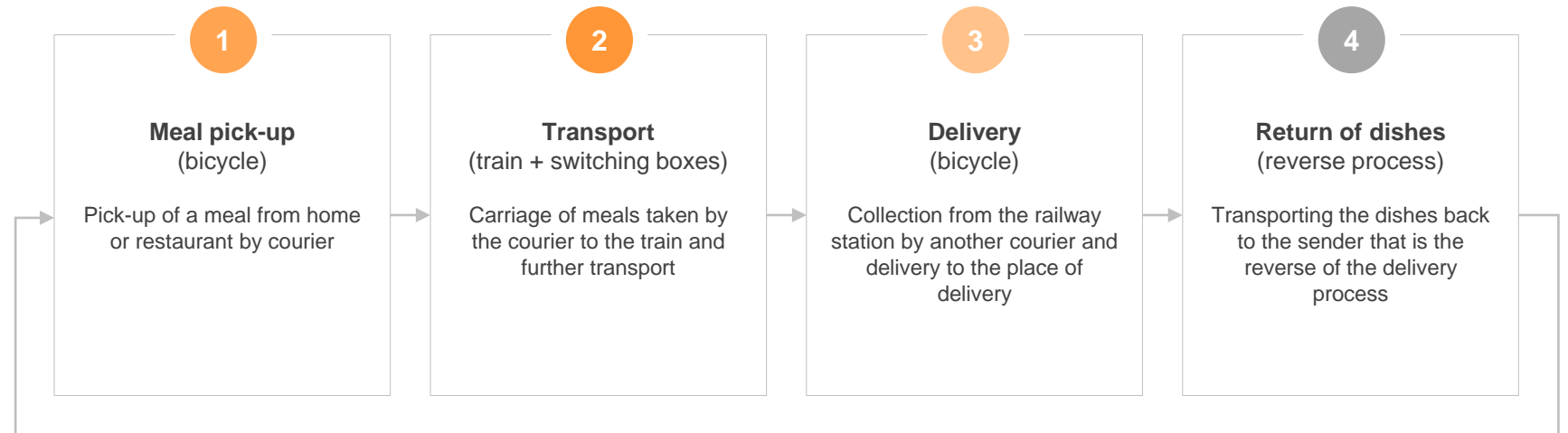


**Poor infrastructure, large population and traffic**



**Only 1 in 6 000 000 lunches are not delivered as planned**

#### Delivery process





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