ULaaDS URBAN LOGISTICS AS AN ON-DEMAND SERVICE

ULaaDS (Urban Logistics as an on-Demand Service)

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Senior Project Manager « Sustainable Mobility »

Free Hanseatic City of Bremen

2ZERO · CCAM CONNECTED, COOPERATIVE & AUTOMATED MOBILITY · ERTRAC · European Commission
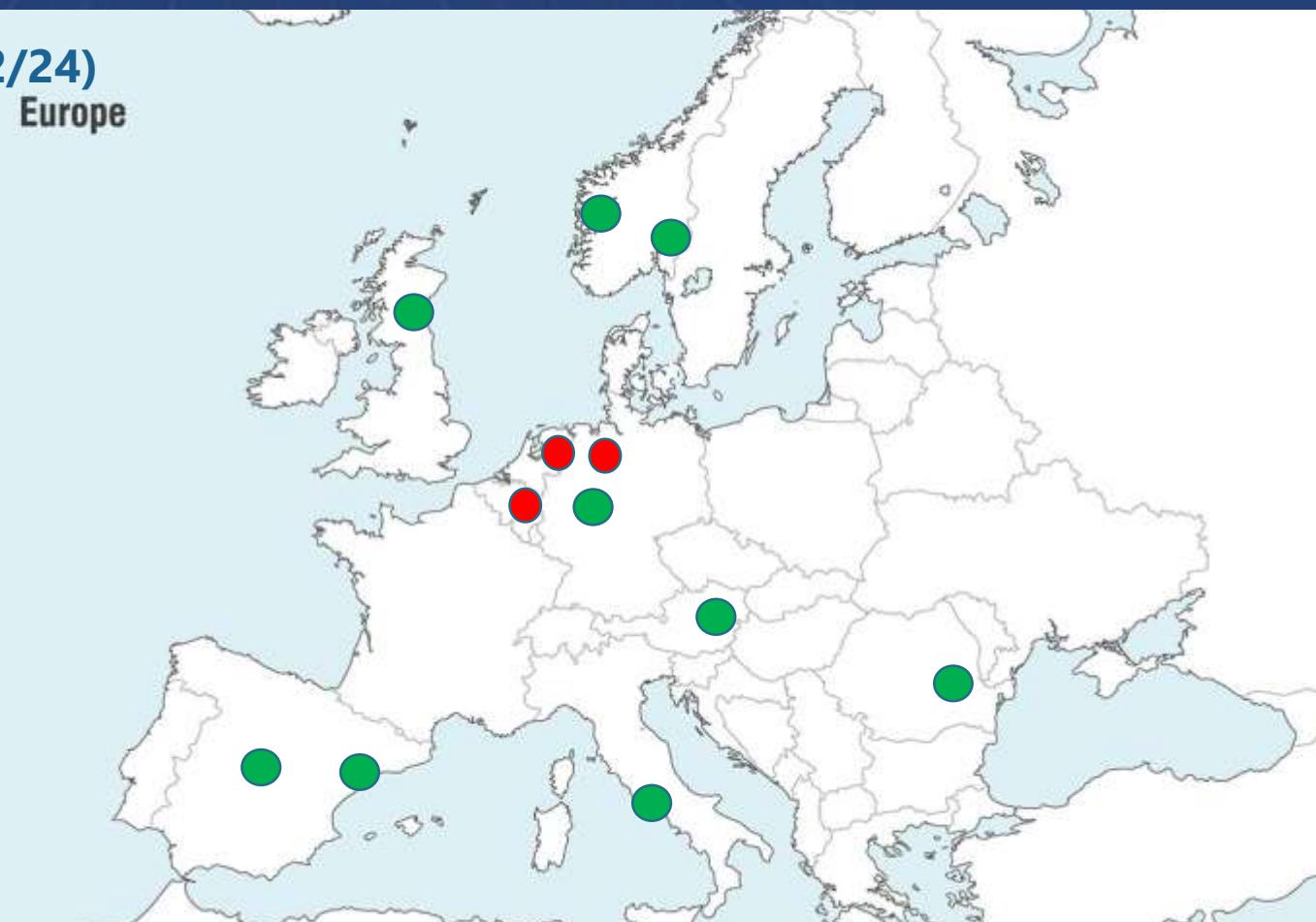
Facts and figures

- Duration: **09/20 – 08/23 = 36 months (+6=02/24)**
- Budget: 3.999.670 €
- Partners: 24 European partners
- **Operators, authorities, research, NGOs**
- **Truly city-led**

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Europe

Challenges

why ULaaDS is important

Challenges

Increasing delivery volumes (e-commerce)

Abbildung 4: Prognostizierte Entwicklung der KEP-Sendungsvolumina bis 2022 (in Mio. Sendungen) (Quellen: KEP-Studie 2017; KE-CONSULT Marktanalyse und Prognose)

Challenges

Competitive business

Conflicts in transport

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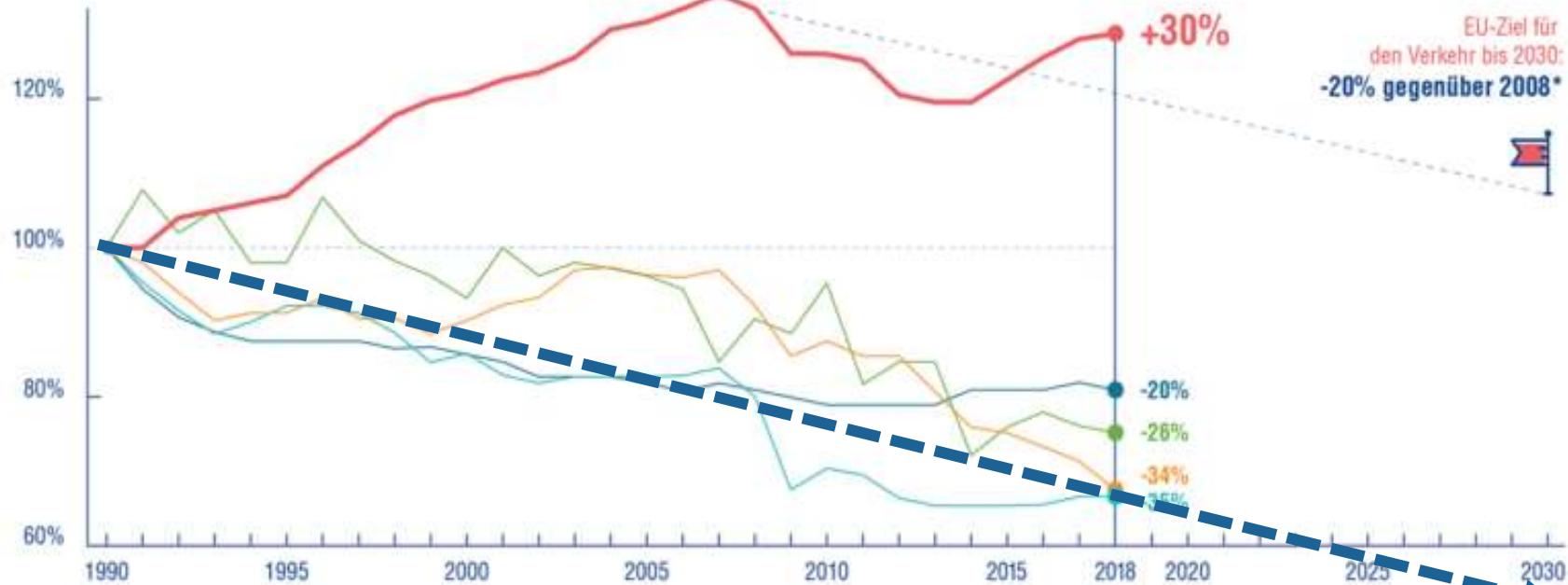
Challenges

Climate Protection

CO$_2$-emission by sector (EU27+UK)
1990 – 2018 (1990=100%)

Verkehr • Land-wirtschaft • Haushalte • Energie-wirtschaft • Industrie

+30%

EU-Ziel für den Verkehr bis 2030: -20% gegenüber 2008*

-20%
-26%
-34%

Quelle: Allianz pro Schiene | 08/2020 | auf Basis von Europäische Umweltagentur (EEA) | Verkehr inklusive internationalem See- und Flugverkehr
Lizenz: Nutzung frei für redaktionelle Zwecke unter Namensnennung

*entspricht +7% gegenüber 1990

Transport:
a special problem

Green Deal „Fit for 55" (-55%)

Challenges

White Paper on transport

2011:
"achieve *essentially* CO2-free *city logistics* in major urban centres by *2030*"

Efficient & Green MOBILITY

14 December 2021

THE NEW EUROPEAN Urban Mobility Framework

Cities are the powerhouse of the modern economy and home to millions of people. Their inhabitants are increasingly facing challenges such as congestion, poor air quality and excessive noise.

We want people and goods to move more sustainably in our cities, to make life easier for the rural and suburban commuters travelling to school or work, and to support cities in their role as essential transport hubs within the single market.

WITH OUR FRAMEWORK WE PROVIDE GUIDANCE FOR LOCAL ACTION AND OFFER CITIES A TOOLBOX FOR SUSTAINABLE MOBILITY:

A stronger public **transport** network

Easier and more attractive options for active mobility such as walking

Efficient zero-emission **urban logistics** and last-mile deliveries

Better management of **mobility flows**, through multimodal hubs and digital solutions

Connect rail with public transport, and provide shared mobility services

Bigger and better **park-and-ride facilities**, equipped with recharging points for zero-emission vehicles

More **multimodal terminals** and freight consolidation centres

More sustainable and well-functioning **passenger transport-on-demand** services such as taxis and PHVs

EUROPE | GENEVA

The European Green Deal: what it means for road transport

12 DEC 2019 · ENVIRONMENT

The European Commission has publish[ed] [the European Green] Deal, setting out its future policy packa[ge] [to make the] climate-neu[tral] continent by 2050.

Efficient zero-emission urban logistics and last-mile deliveries

QUICK FACTS:

- ›70% of the EU population live in cities today, this is projected to reach almost 84% by 2050;
- 23% of the EU's transport greenhouse gas emissions come from urban areas;
- 100 climate-neutral cities by 2030 is our milestone. Sustainable urban mobility is key to achieving it;
- €130-150 bn/year urban and local public transport services contribute to the EU economy;
- 50 bn passengers were carried by buses, trams and metros in EU cities in 2018, saving 100 million car trips every day;
- 38% of road fatalities in the EU occur in urban areas, 70% of deaths are vulnerable road users such as pedestrians and cyclists;
- 6 in 10 people aged over 15 never or seldom exercise or engage in physical activity, such as cycling;
- ›3000 cities from over 50 countries worldwide organise European Mobility Week activities.
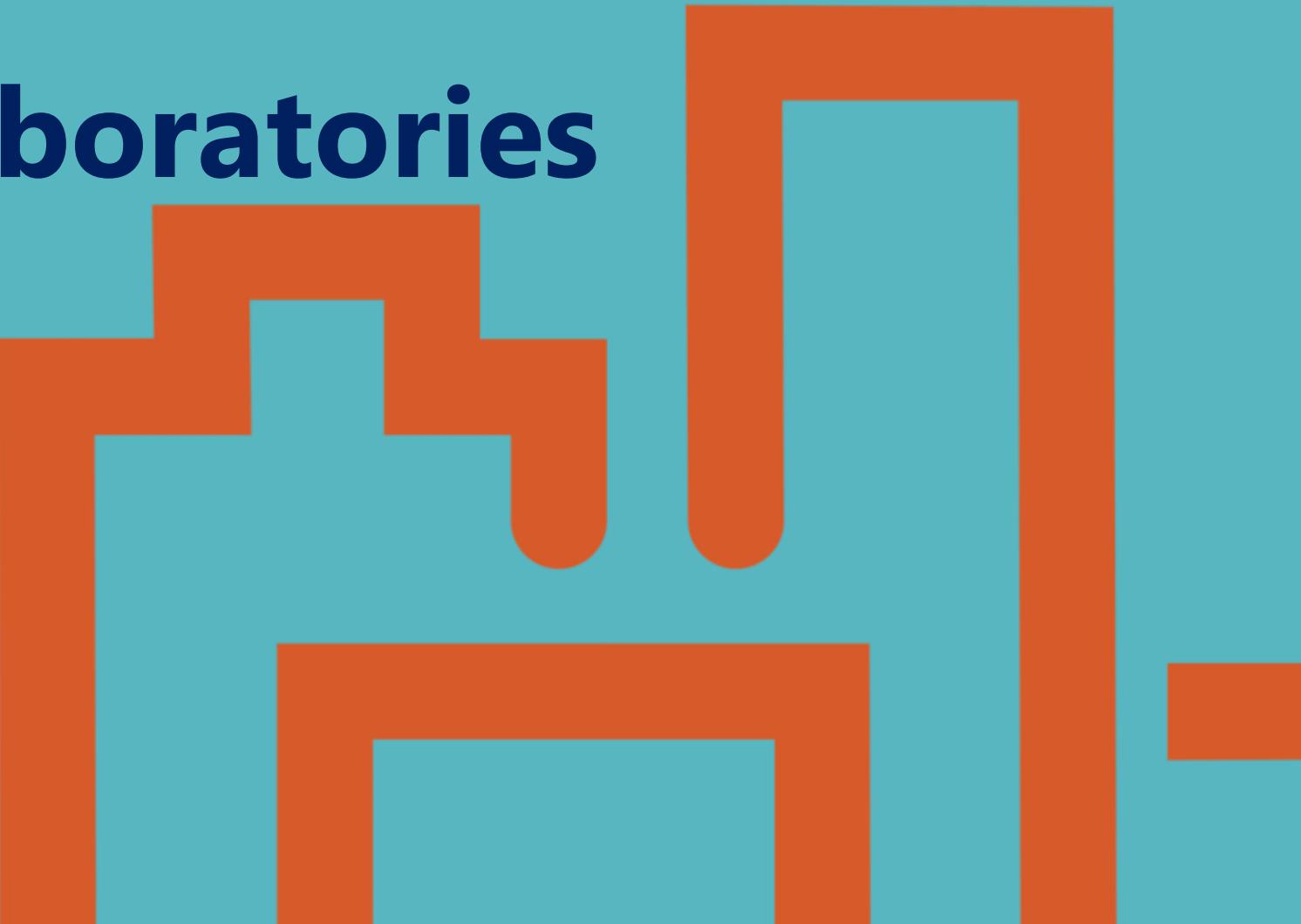
#MobilityStrategy   #EUGreenDeal

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Innovation of urban logistics in cycle friendly cities
Bremen, Groningen, Mechelen

Commercial transport

Communications

competition
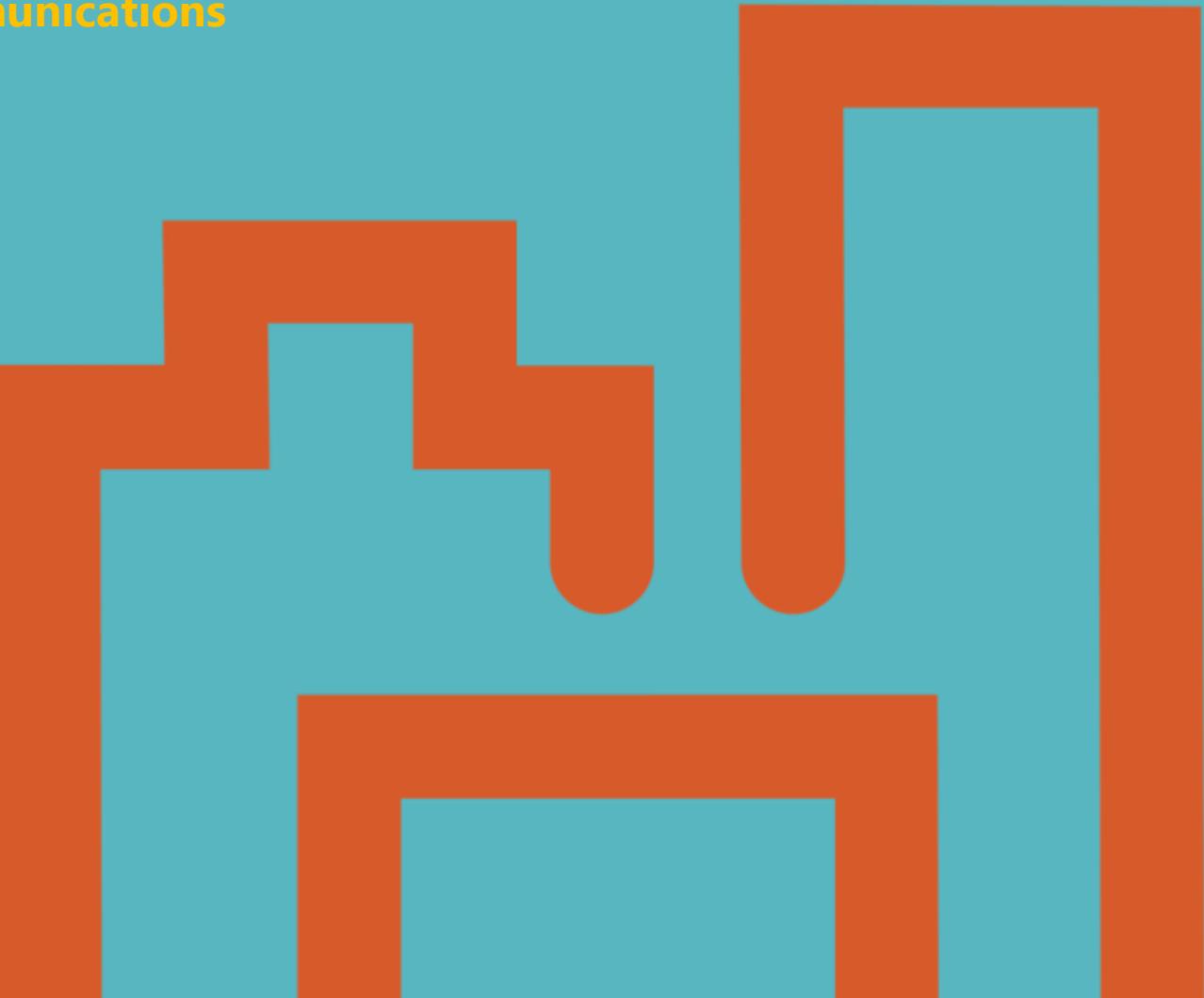
Business cases

Technical innovations

Regulatory framework

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Cargo-bikes and micro-hubs

Cargo-bikes and micro-hubs

# Cargo-bikes and micro-hubs

Micro Hubs

Hardware + Software

HUB contains 9 swap BOXes with pre-sorted cargo.

@warehouse

@City ⬆ raised

@City ⬇ lowered

... app & software platform for track-&-trace, route & asset optimization

SWAP-N-GO in 1 min

one BOX on the MovR

"n" parcels in the BOX

... swap BOX on wheels ...

... quick & easy to load / unload ...

10 x faster parcel loading vs. current industry process

Business Case development Impact analysis

Cargo-bikes Groningen

Cargo-bikes Mechelen

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UPS LEVERT IN MECHELEN MET ELEKTRISCHE CARGOFIETS
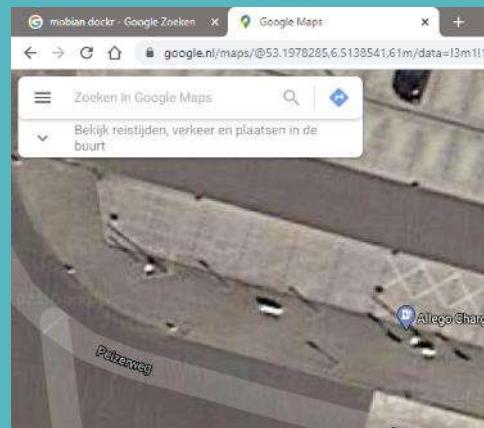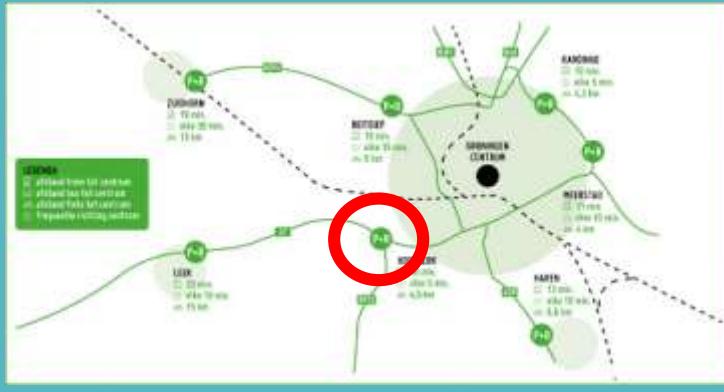
Cargo-bikes Mechelen

Belgian Post Delivery Centre: changing to fully electric delivery in City of Mechelen

Shared logistics @ P&R site

Preparation for permit Parcel Locker

Neutral locker boxes

#H2

Integration on-demand transport
passenger + freight

Technological innovations

Interaction passenger/freight

Organisational aspects

Business case
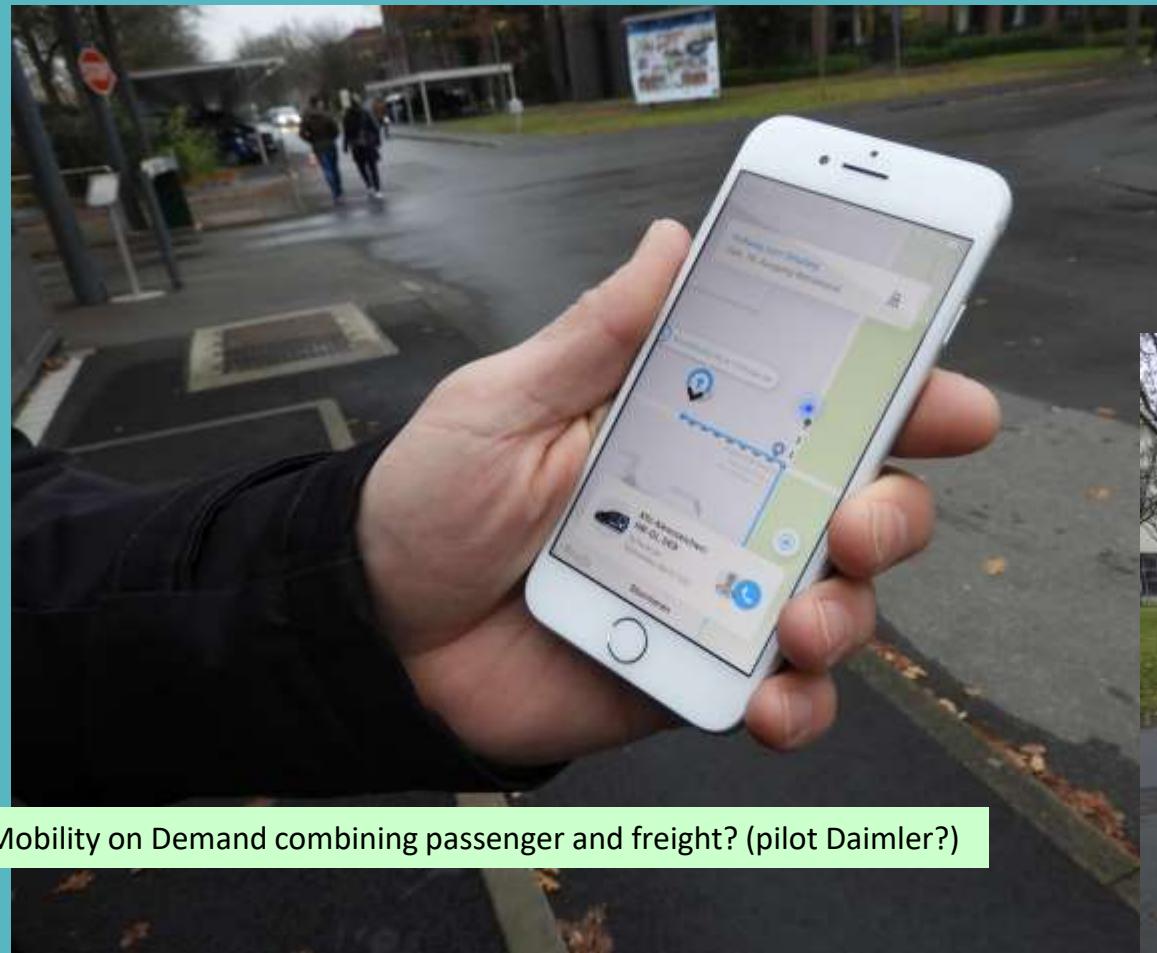
Legal aspects

Regulatory framework

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Integration on-demand transport
passenger + freight

Mobility on Demand combining passenger and freight? (pilot Daimler?)

Barriers:
- **Organisational**
- **Practical**
- **Legal**
- **...**
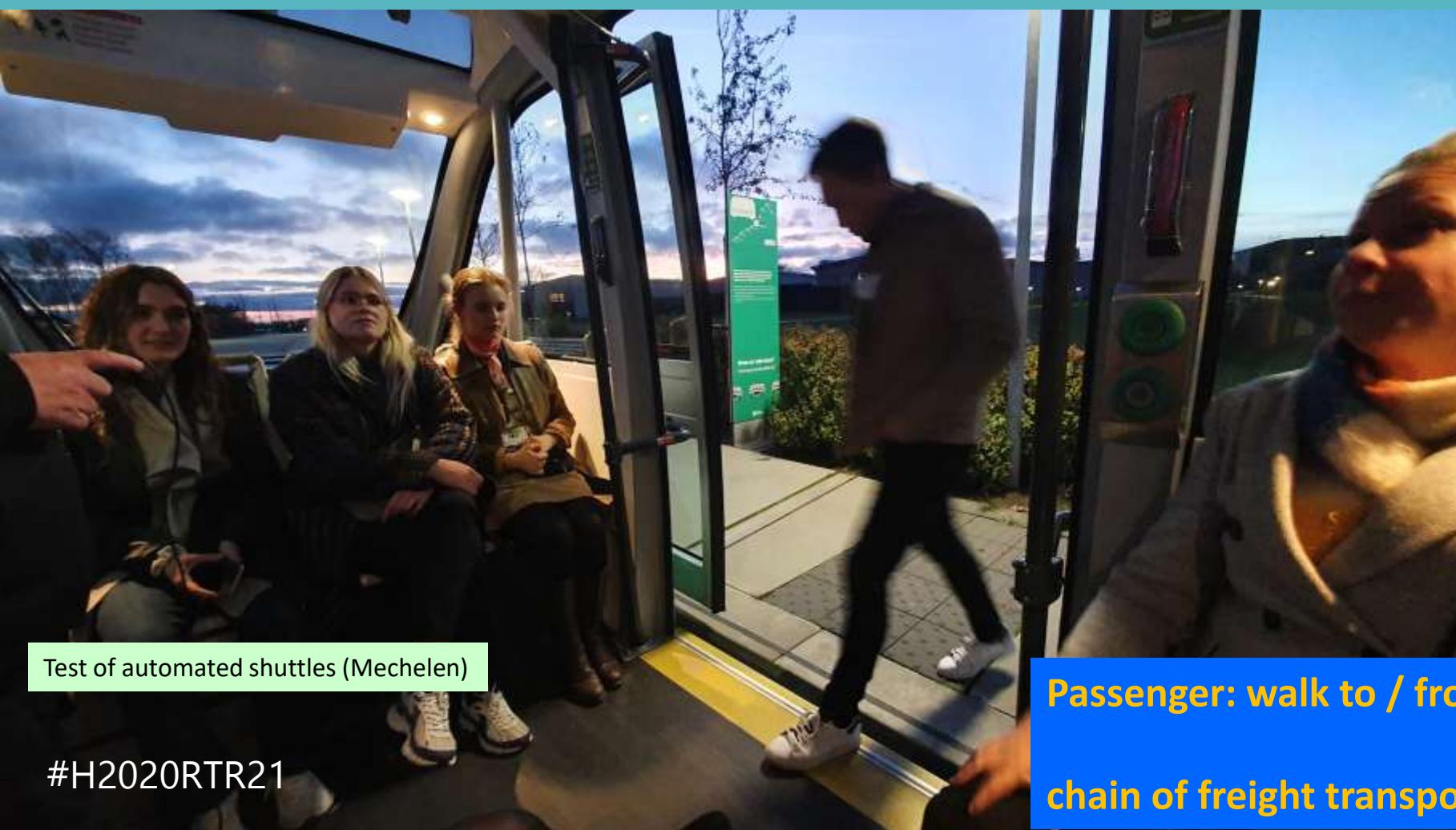
Integration on-demand transport
passenger + freight

Test of automated shuttles (Mechelen)

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Integration on-demand passenger + freight

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Passenger: walk to / from stop chain of freight transport?

Private micro-logistics

Cargo-bike sharing

Grocery shopping

Transport kids to kindergarten

DYI market

Technical aspects

Family excursion

Acceptance / Business case

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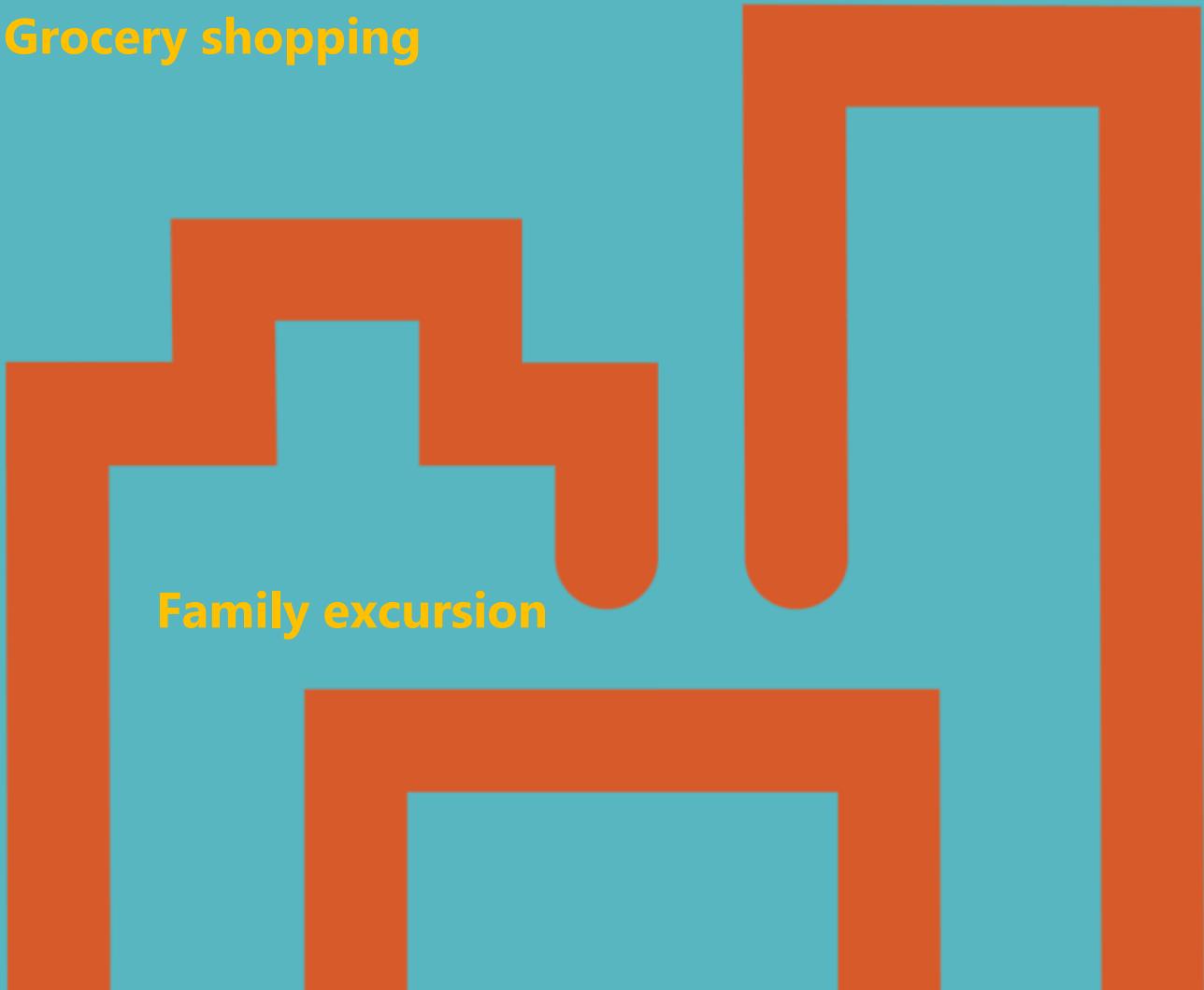
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Cargo-bike sharing
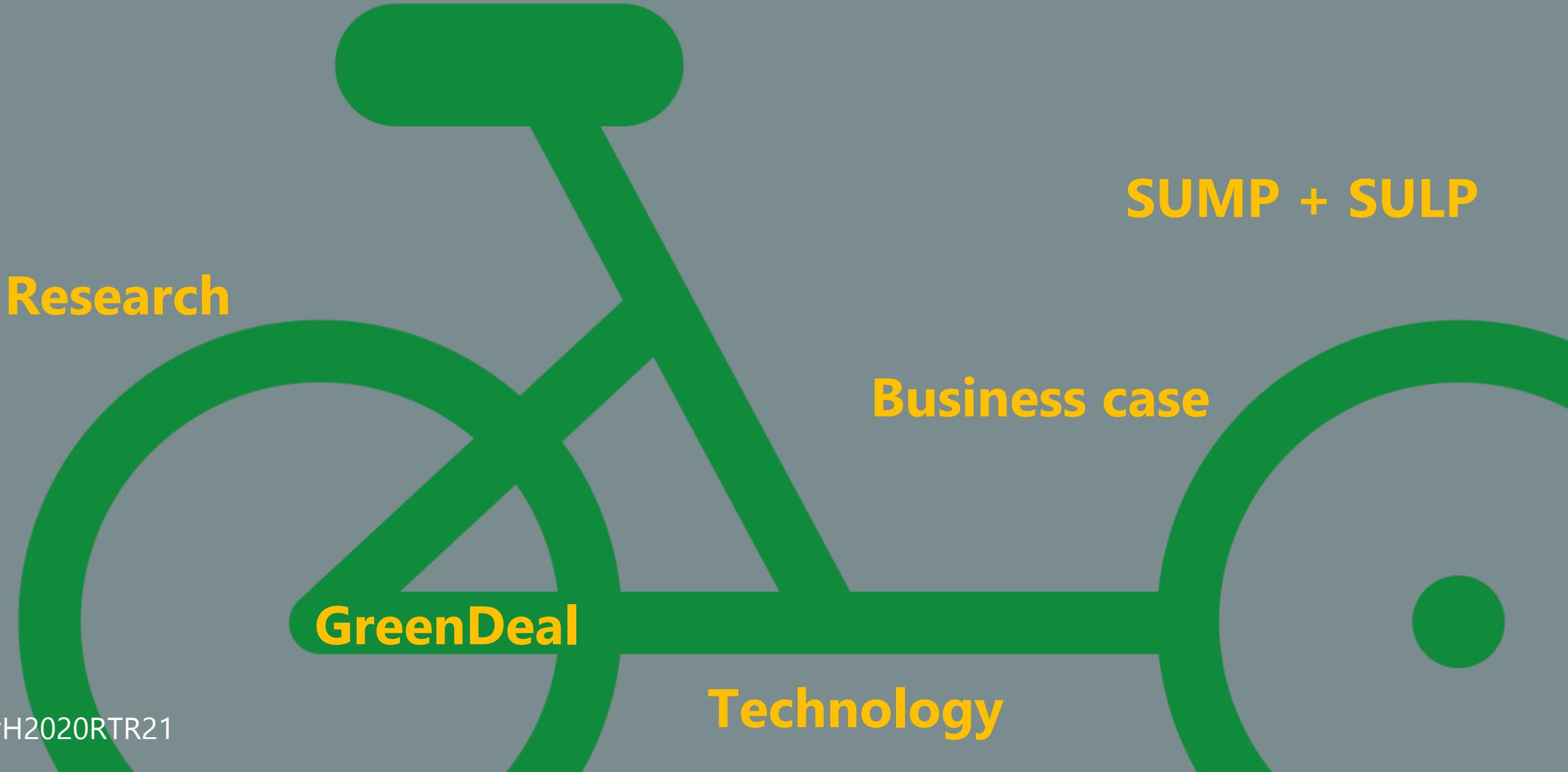
Business case
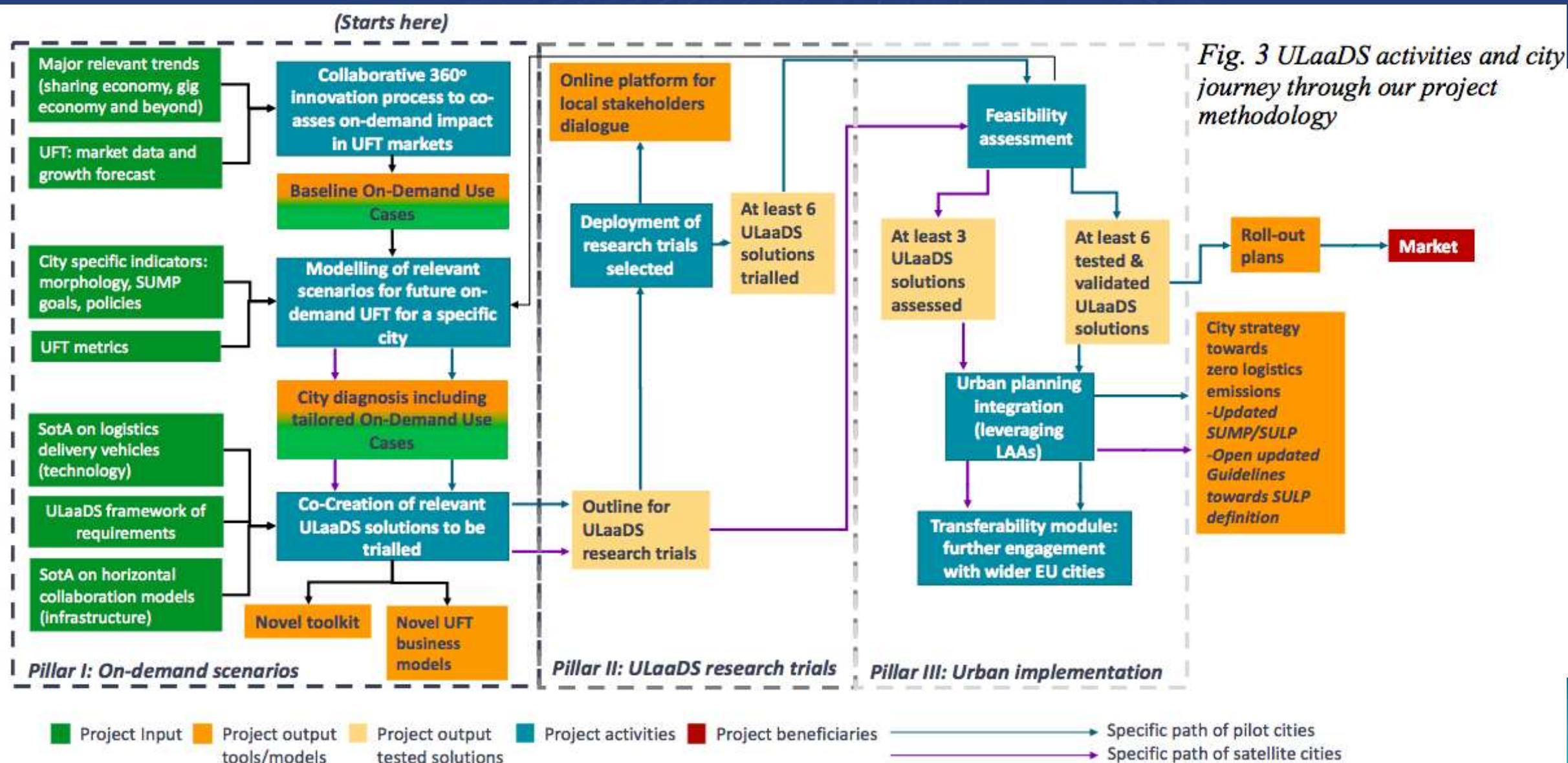
Impact analysis
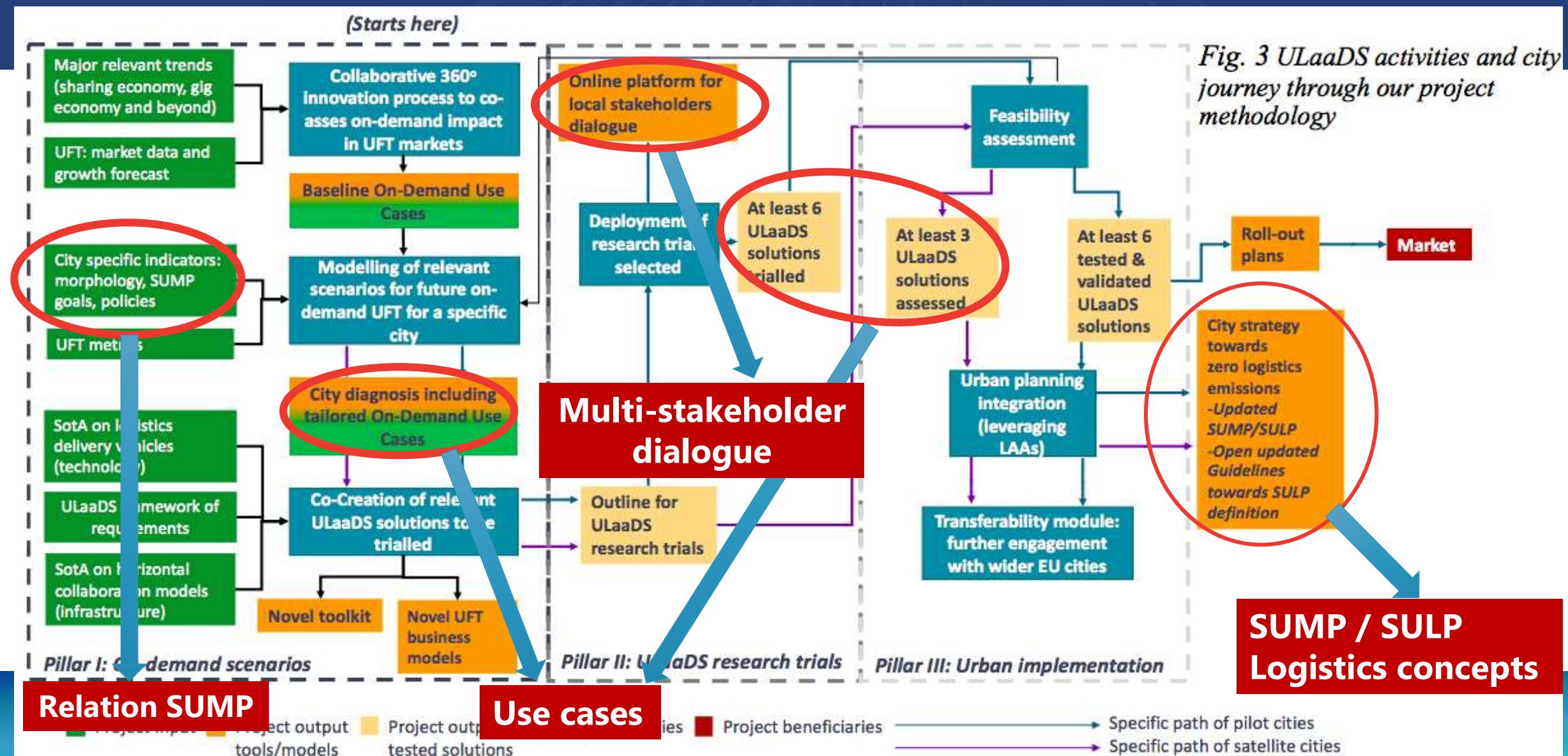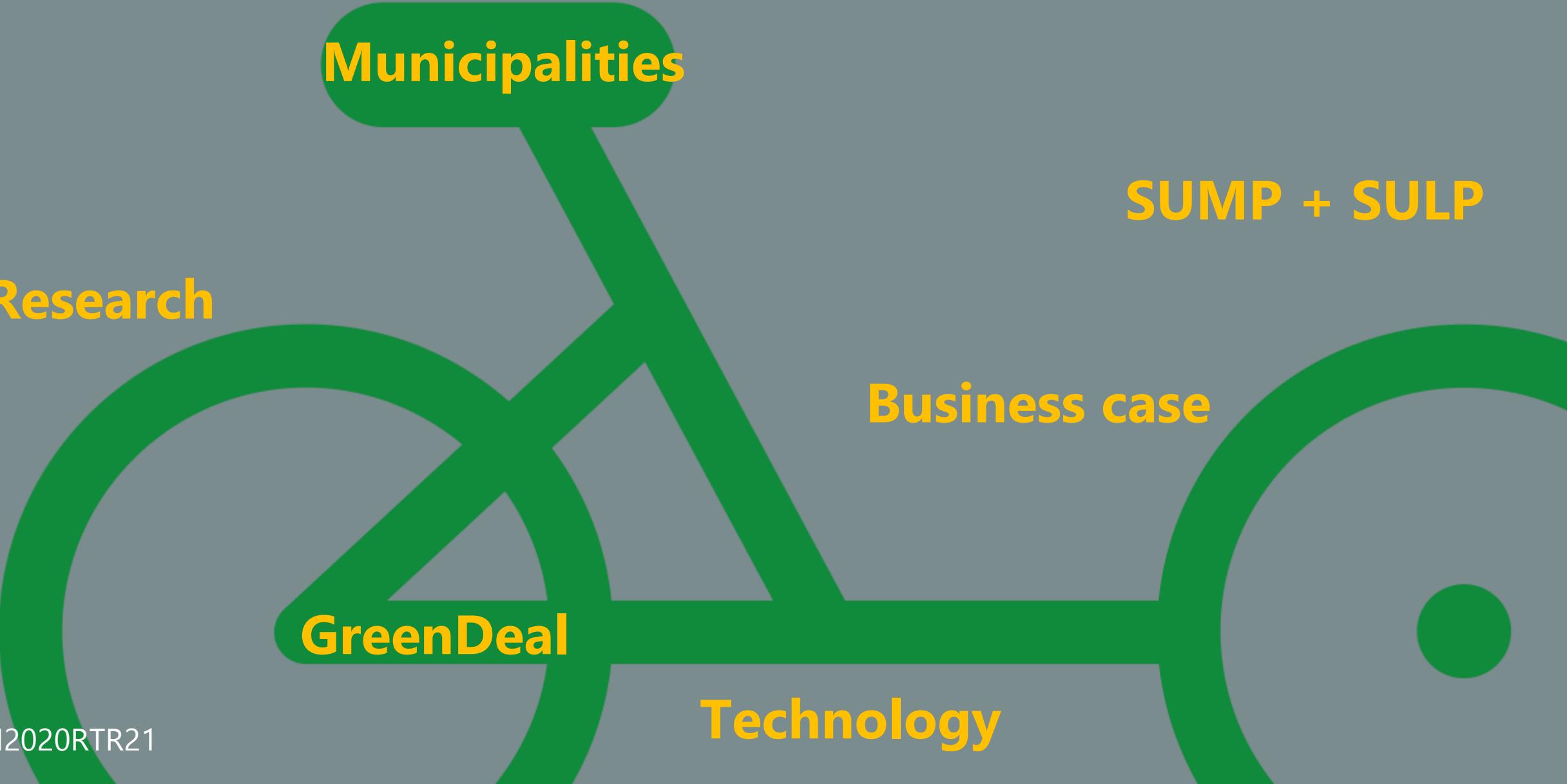
Overall concept and approach

Fig. 3 ULaaDS activities and city journey through our project methodology

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Thank you

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www.ULaaDS.eu