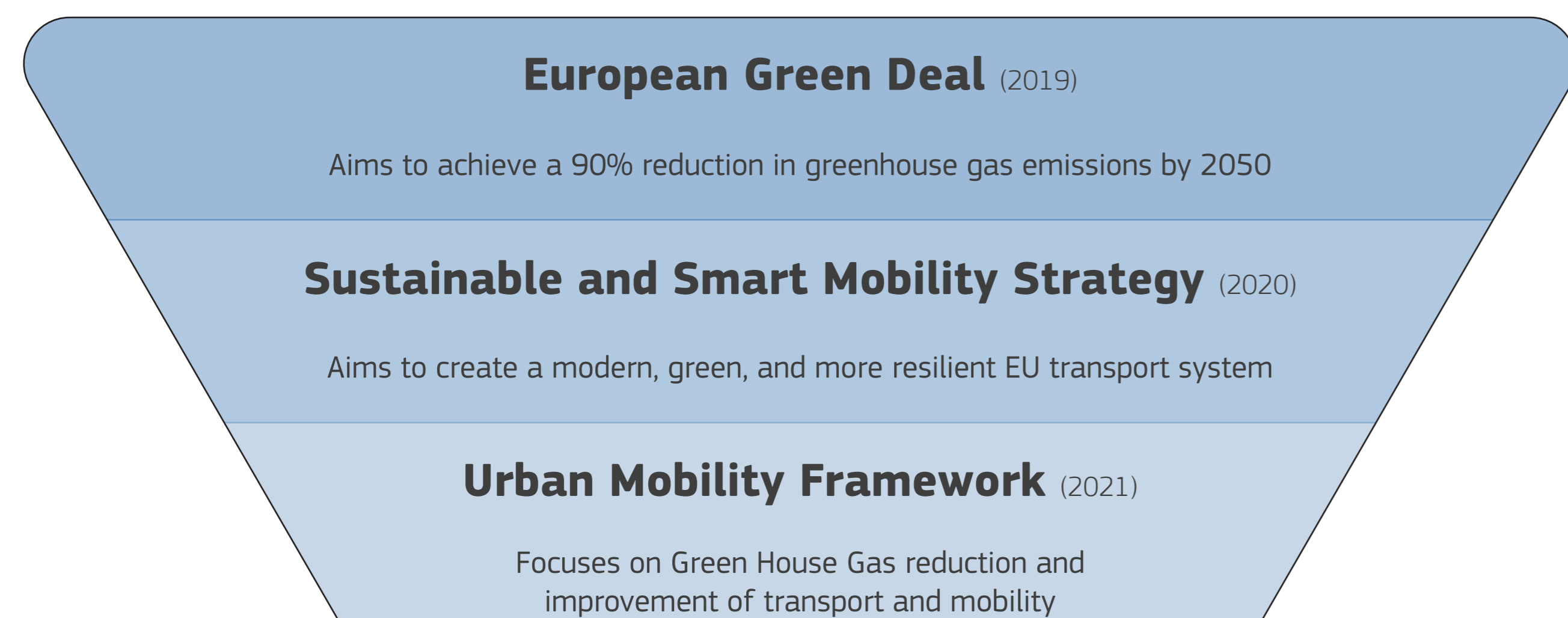


European Commission

Public Transport Innovation: An Assessment and Outlook from European Research and Innovation projects

Policy background



Data

- TRIMIS database of R&I projects:**
- In total around 9 000 projects
 - over 2 000 projects funded by Horizon 2020 Framework Programme – the largest R&I programme in the world (budget of over €80 billion)
 - supplementary data: projects funded by EU Member States
- Identified projects with focus on public transport:**
- H2020 and other projects started since 2014
 - 114 H2020 projects with total budget of €460 million
 - The most active organisations were Spanish, followed by Italian, German and Belgian ones.
 - 49 national projects

Aim of the study

assessing the extent to which challenges, as defined in the new European Urban Mobility Framework, are addressed by recent research and innovation activities in Europe

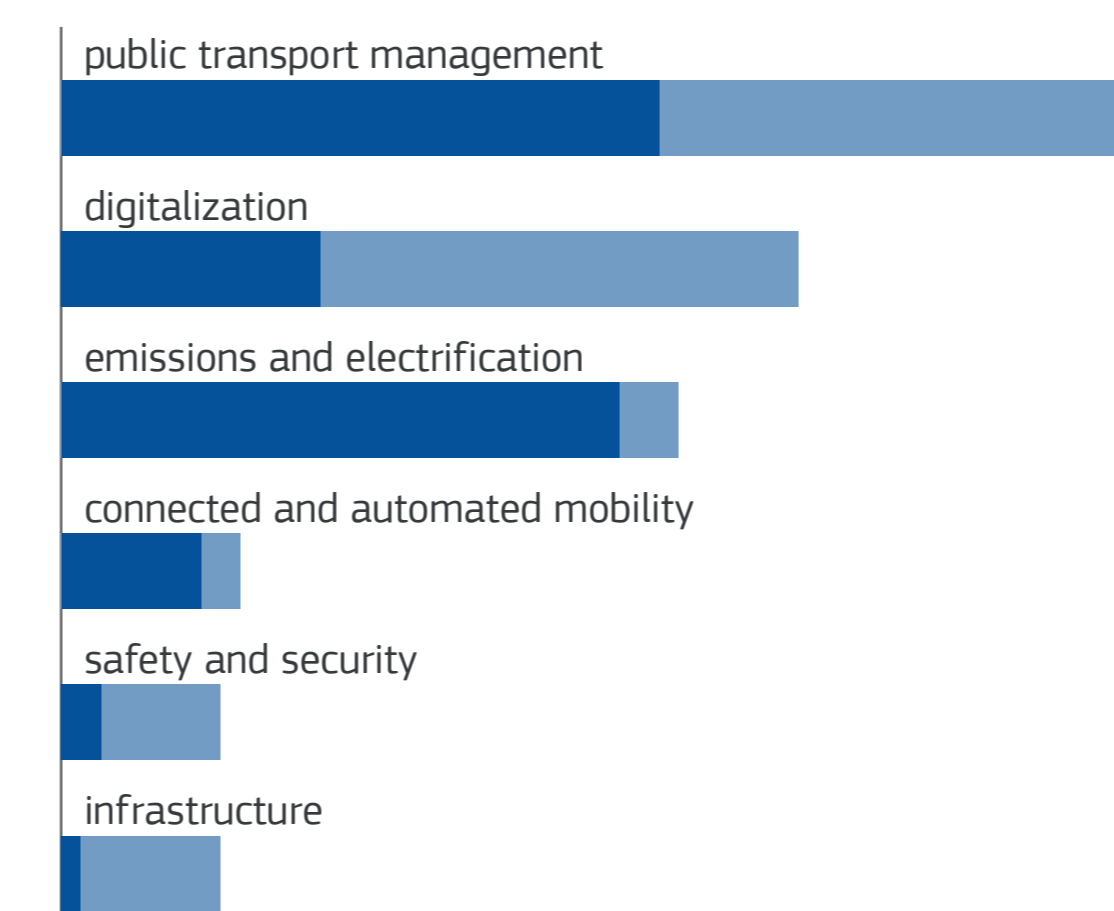
Methods

- Selection of projects:**
- Keyword search in TRIMIS database
 - Manual verification for relevance
- Policy background:**
- Review of relevant EU policy documents
 - Identification of key challenges
- Main trends in the European public transport R&I**
- Main actors and funding sources
 - Identification of main subthemes
- Key achievements of analysed R&I projects**
- in-depth analysis of project outcomes
 - identification of future challenges

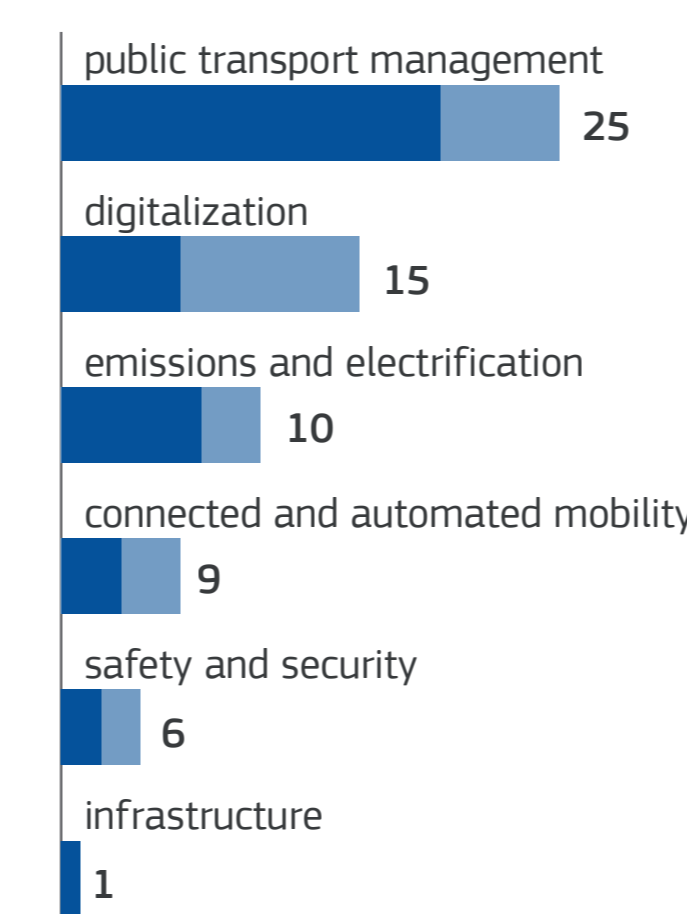
Subthemes

Identified projects in TRIMIS database with and without synergies with another subtheme

European projects

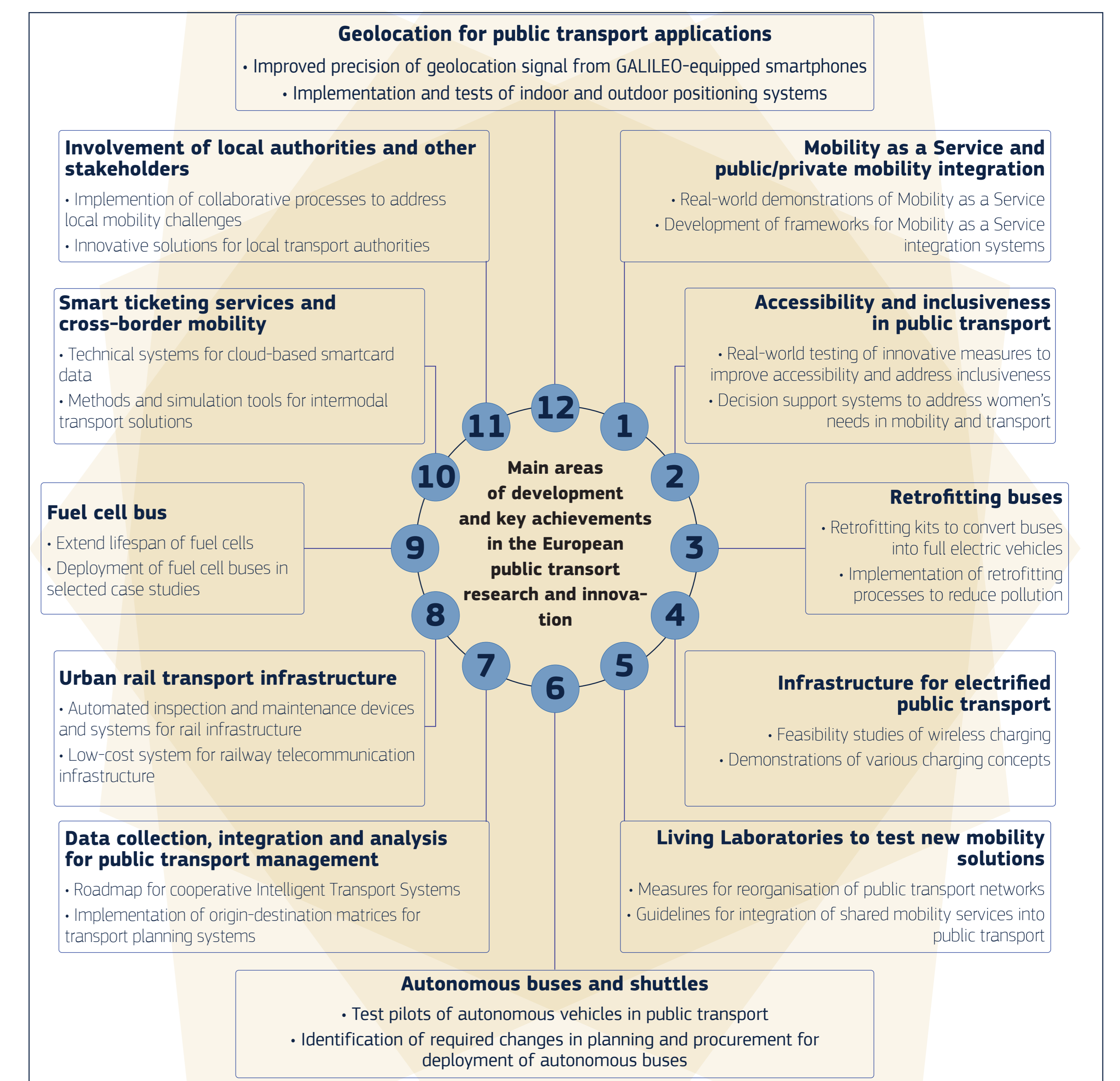


National projects

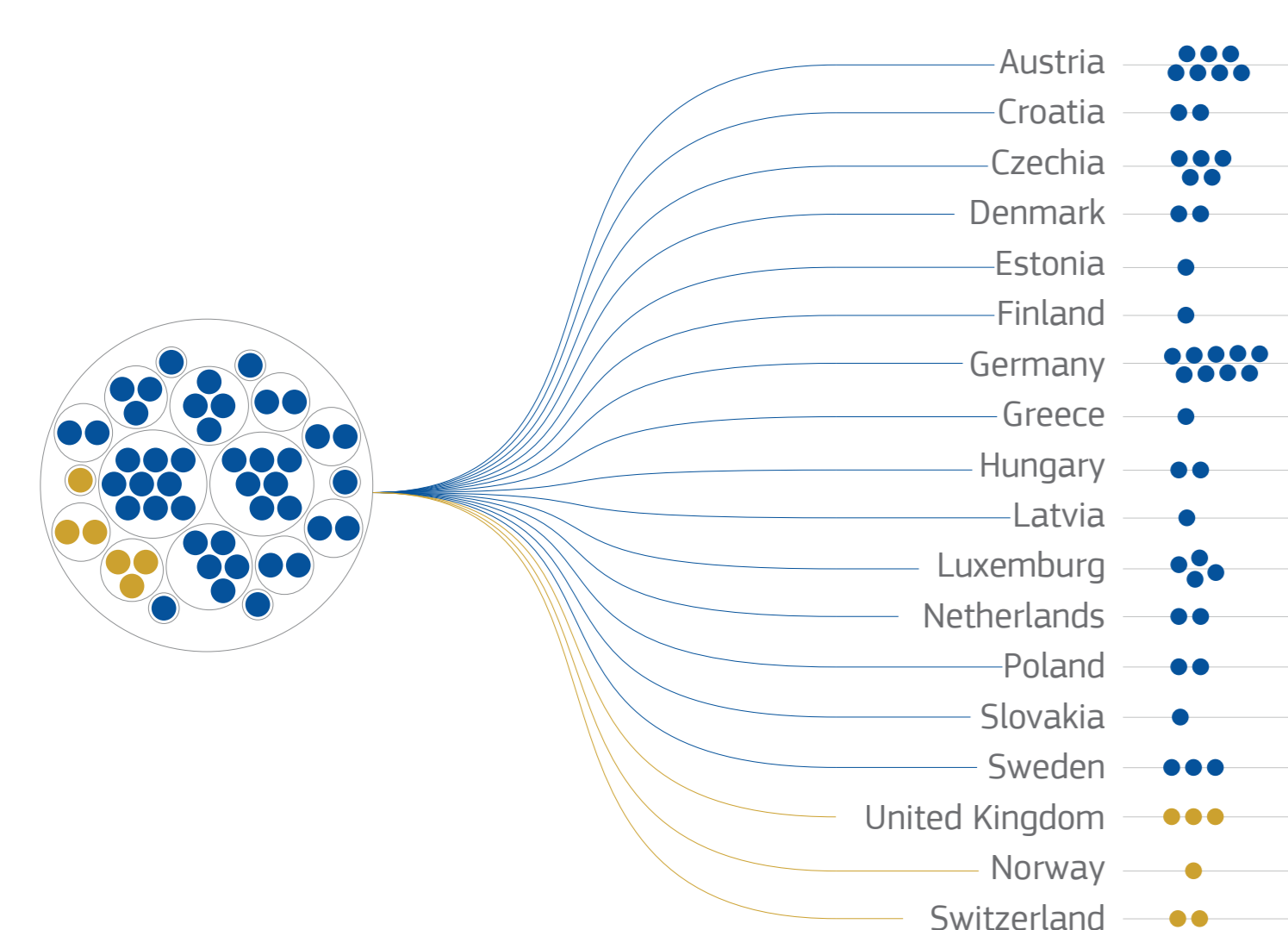


- Main research and innovation effort in line with the main objectives of the new EU Urban Mobility Framework
- European and national projects follow similar pattern
- Main focus of research and innovation on management followed by digitalization and emissions

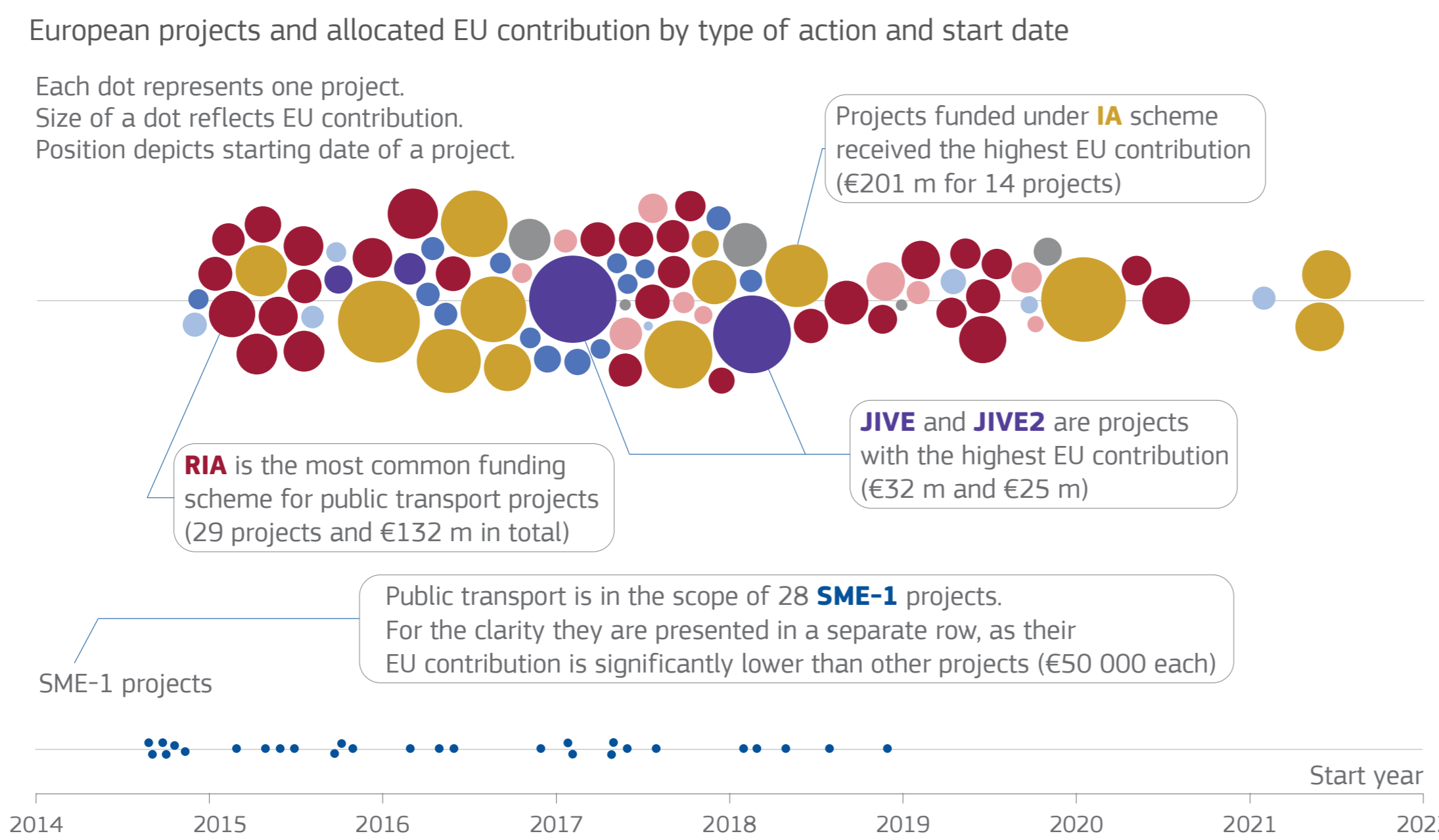
Main achievements of European public transport R&I projects



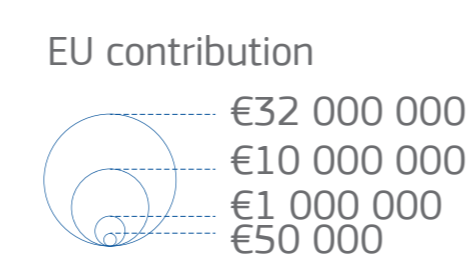
National projects on public transport included in TRIMIS



Most public transport projects are funded under RIA scheme while IA scheme contributes the most



- Type of action**
- RIA Research and Innovation Action
 - IA Innovation Action
 - Shift2Rail
 - CSA Coordination and Support Actions
 - FCH2 Fuel Cells and Hydrogen Joint Undertaking 2
 - SME-2 Small and Medium-sized Enterprises Instrument 2
 - Other



Research needs and policy implications

The following areas should be reflected in future research and innovation initiatives:

- Ensuring inclusive, safe, affordable and sustainable public transport for all, with a special focus on the needs of women, children, teenagers, the elderly, and people with disabilities.
- Placing passengers at the core of public transport planning, keeping accessibility in mind and aligning with passenger demand.
- Standardising the seamless integration of new and shared mobility services, including micro-mobility, carpooling or real-world demonstrations of Mobility as a Service solutions.
- Continuing progress in the collection, storage, and analysis of public transport data and the use of emerging digital tools for the benefit of public transport.
- Public transport should enhance integration between cities and their suburbs and surrounding areas.
- Expanding electrification and testing automated and connected buses under different environmental, infrastructure, and social conditions to provide guidance for local authorities for their efficient implementation.



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TRIMIS: Transport Research and Innovation Monitoring and Information System
Marcin Stępnik, Ilias Cheimariotis and Konstantinos Gkoumas
European Commission, Joint Research Centre (JRC)

