# C-ROADS
# „Report on lessons learned“

**6th Web ITS Forum Webinar**

**Integrating C-ITS into road operators’ day-to-day-business**

**5. 11. 2021**

Co-financed by the European Union
Connecting Europe Facility

# TOPICS

**C-ROADS**

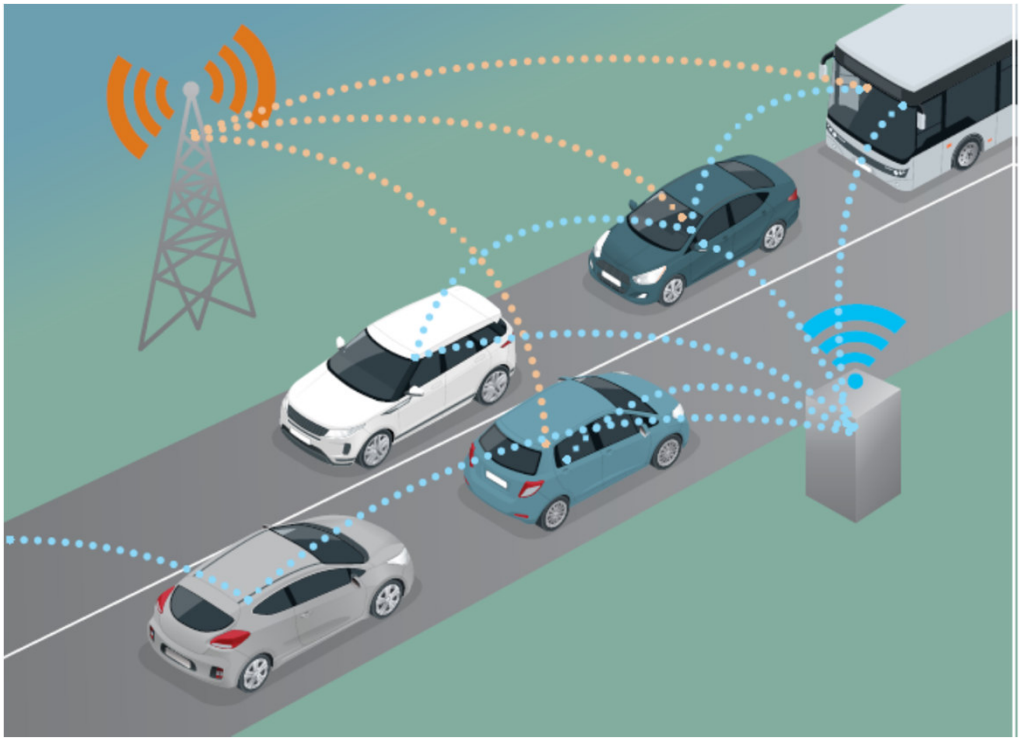
**THE AIM OF THE REPORT**

**APROACH**

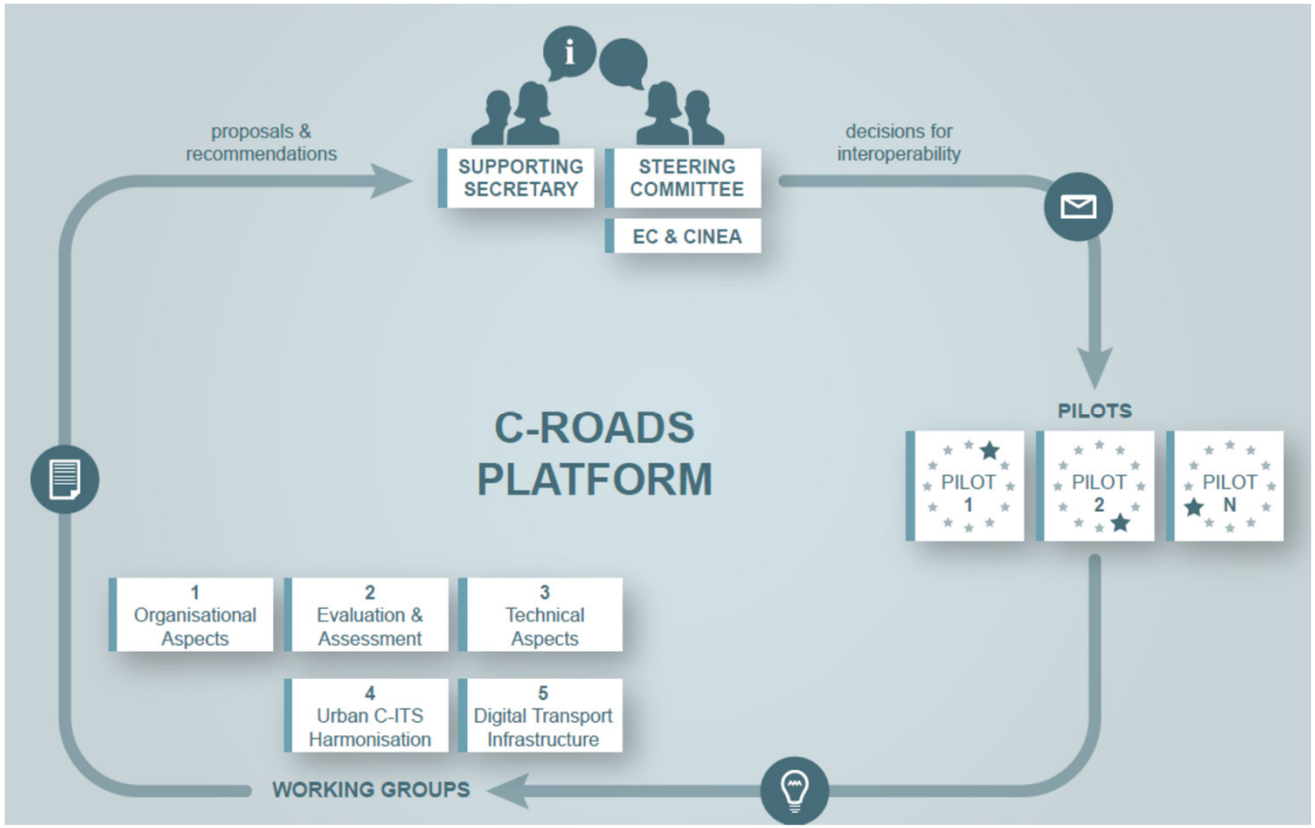
**STRUCTURE**

**OUTCOMES**

**RECOMENDATION**



# C-ROADS


proposals & recommendations
SUPPORTING SECRETARY
STEERING COMMITTEE
EC & CINEA
decisions for interoperability
C-ROADS PLATFORM
PILOTS
PILOT 1
PILOT 2
PILOT N
1 Organisational Aspects
2 Evaluation & Assessment
3 Technical Aspects
4 Urban C-ITS Harmonisation
5 Digital Transport Infrastructure
WORKING GROUPS

Years of work: 5 since platform kick-off
Kilometres covered by ITS-G5: 20,000
Platform members: 18 Core Members + 7 Associated Members
Kilometres equipped with cellular/long-range: +100,000
Number of cities involved: 53
RSUs operational in Europe (fixed & mobile): 2,300
Recipients of C-Roads harmonised communication profile: 50 countries, +480 persons/ institutions
Time invested in cross-tests: +3,000 hours

# THE AIM OF THE REPORT

- To **collect information** about deployment, pilots etc.
- **To create detailed overview** of the findings, experiences and recommendations which were collected from various sources (Survey, workshops etc.)
- **To consolidates the findings and recommendations** from ongoing C-ITS pilots with regard to organizational issues in their widest definition.

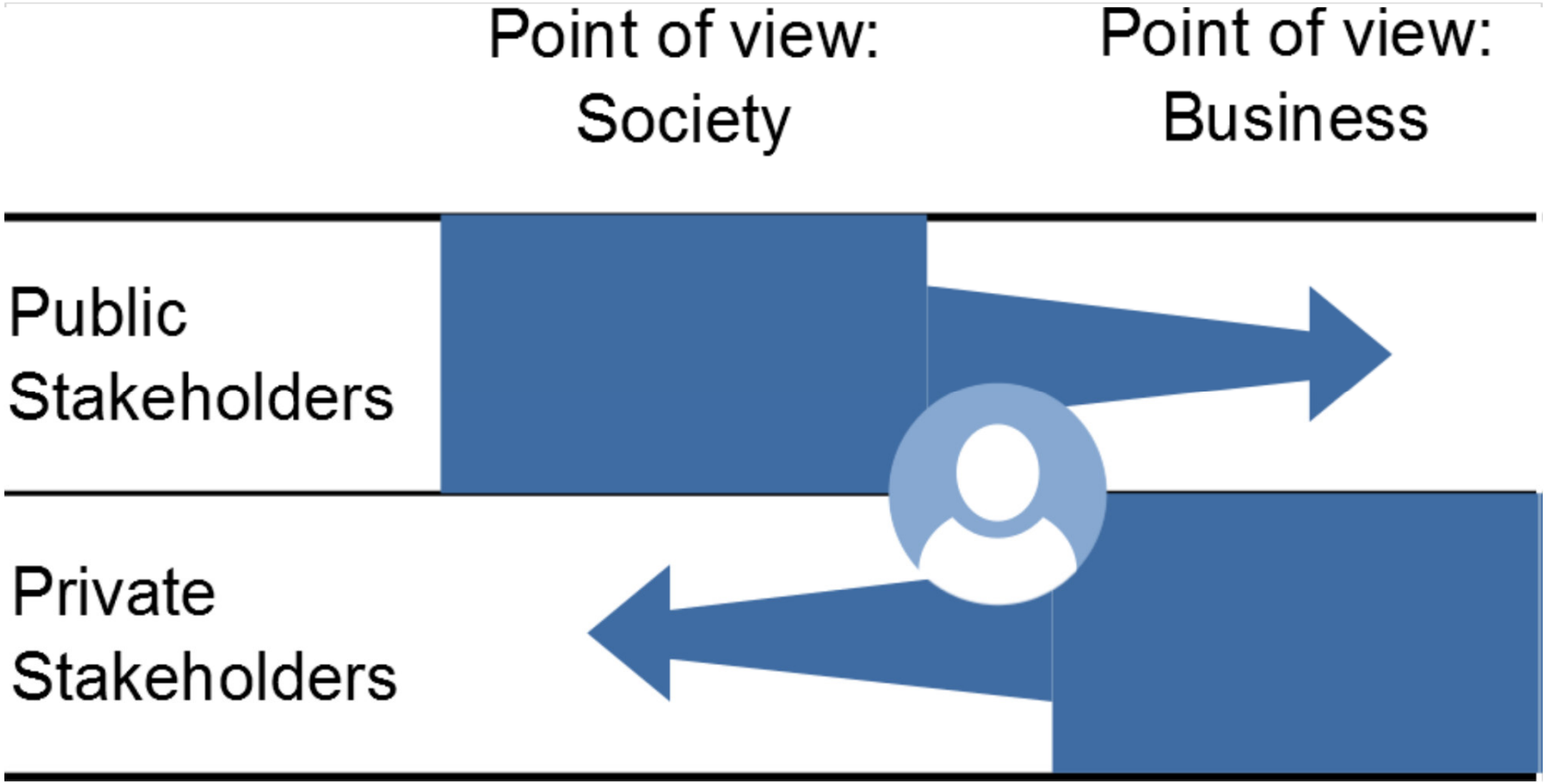
# APROACH

- **SURVEY –** 24 Questions, 40 filled questionaires, 51 stakeholders (31 Road Operators, 13 service providers, + others), 17 EU Member states
- **WORKSHOP –** Brussels, Autumn 2019, +100 participants, in cooperation with EU-EIP and WG3 C-ROADS
- **SERIES OF WEBINARS -** “Data privacy and C-ITS”, +130 interested parties
- **DOCUMENTS/PROJECTS/STUDIES ANALYSES** Ongoing projects, C-ITS Platform etc.

# STRUCTURE

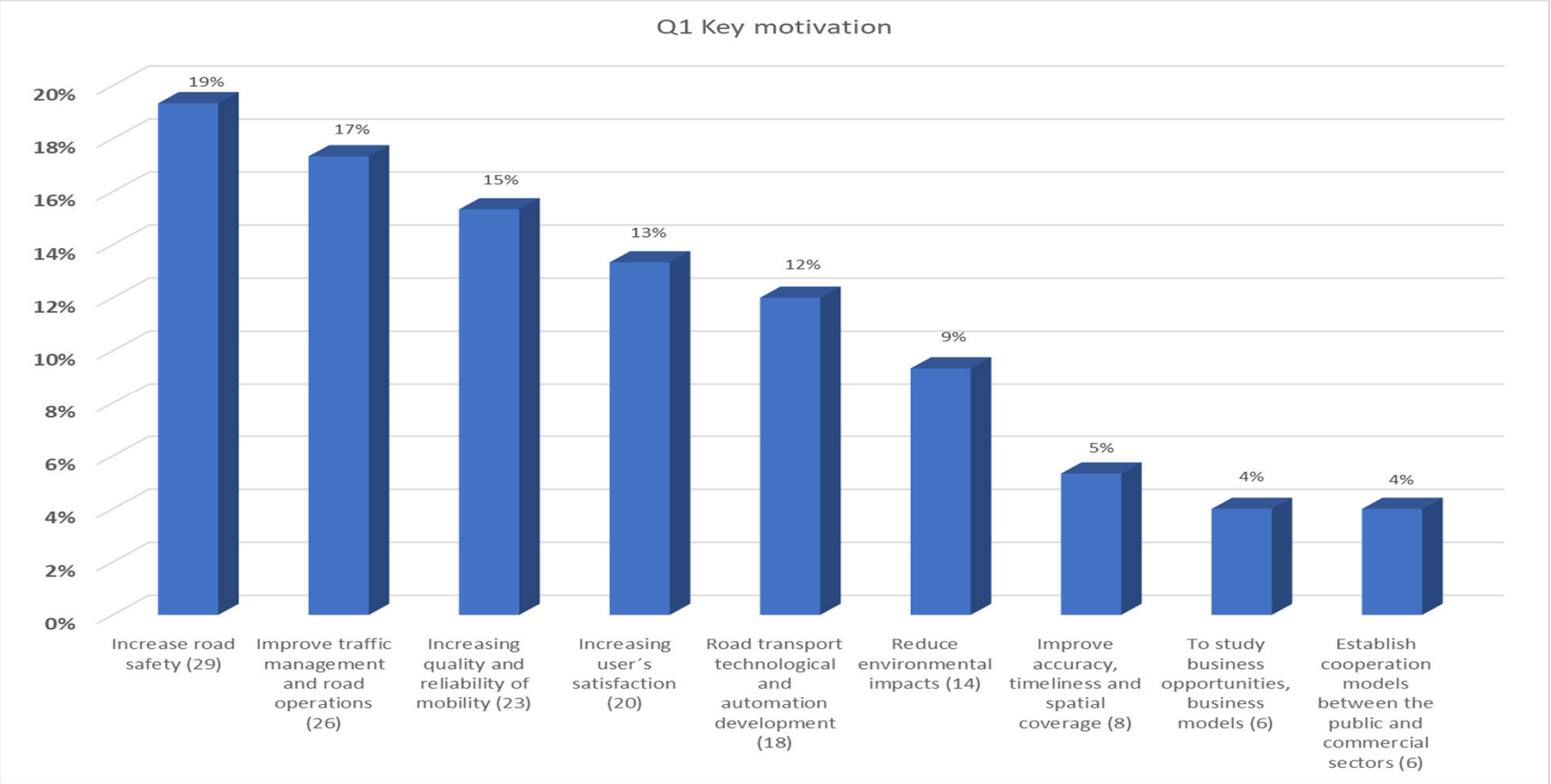
- ✓**POLICY AND STRATEGY EVOLUTION FOR A HARMONISED C-ITS DEPLOYMENT IN EUROPE**
- ✓**C-ITS ECOSYSTEM AND DEPLOYMENT BUSINESS MODELS**
- ✓**C-ITS OPERATIONAL ASPECTS**
- ✓ **CONCLUSIONS AND RECOMMENDATION**

# OUTCOMES

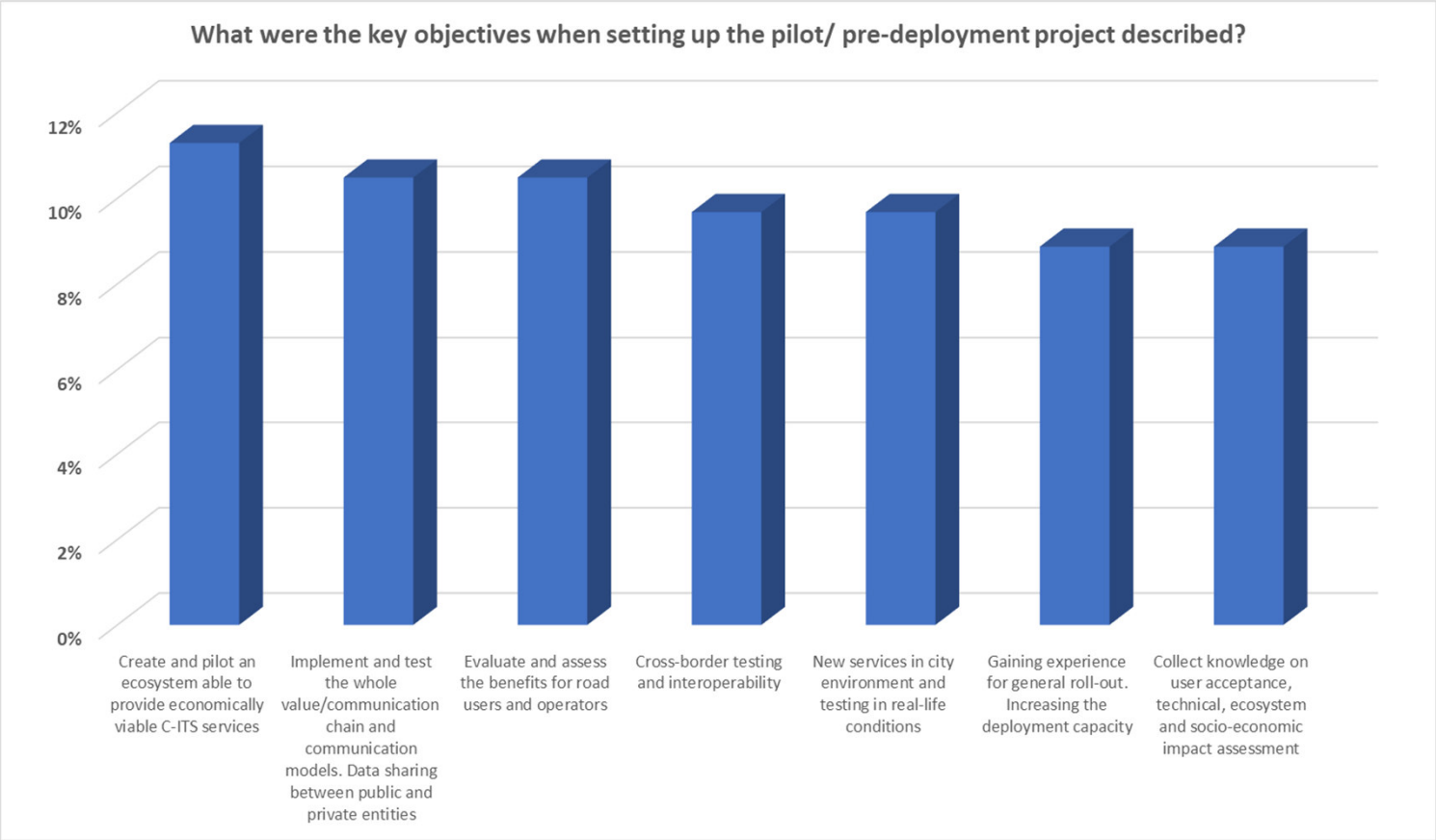



Source: C-ITS Platform

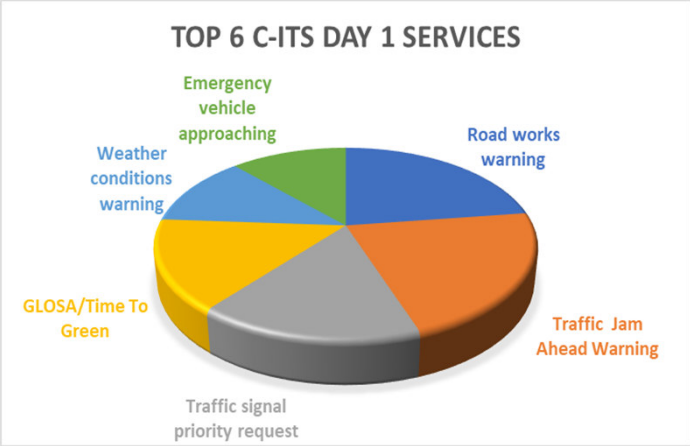
# OUTCOMES

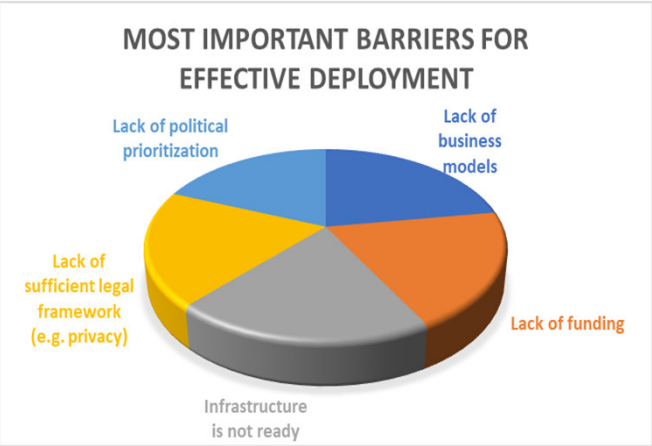

Q1 Key motivation
20%
18%
16%
14%
12%
10%
8%
6%
4%
2%
0%
19%
17%
15%
13%
12%
9%
5%
4%
4%
Increase road safety (29)
Improve traffic management and road operations (26)
Increasing quality and reliability of mobility (23)
Increasing user´s satisfaction (20)
Road transport technological and automation development (18)
Reduce environmental impacts (14)
Improve accuracy, timeliness and spatial coverage (8)
To study business opportunities, business models (6)
Establish cooperation models between the public and commercial sectors (6)

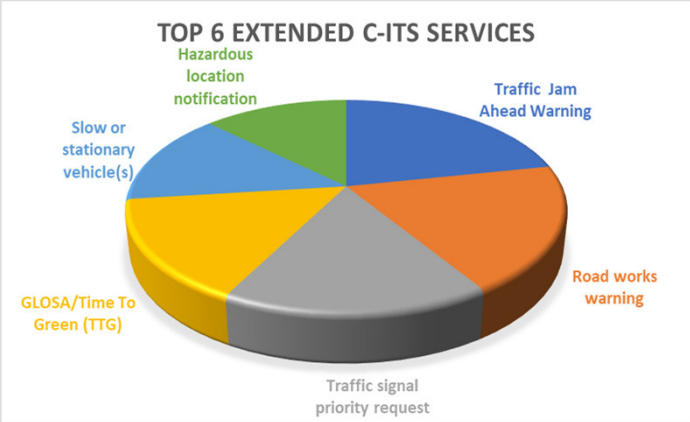
# OUTCOMES

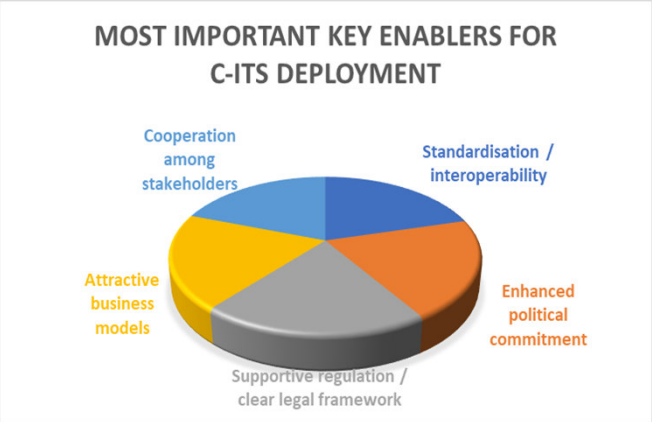

What were the key objectives when setting up the pilot/ pre-deployment project described?
12%
10%
8%
6%
4%
2%
0%
Create and pilot an ecosystem able to provide economically viable C-ITS services
Implement and test the whole value/communication chain and communication models. Data sharing between public and private entities
Evaluate and assess the benefits for road users and operators
Cross-border testing and interoperability
New services in city environment and testing in real-life conditions
Gaining experience for general roll-out. Increasing the deployment capacity
Collect knowledge on user acceptance, technical, ecosystem and socio-economic impact assessment

# OUTCOMES


TOP 6 C-ITS DAY 1 SERVICES
Emergency vehicle approaching
Road works warning
Weather conditions warning
GLOSA/Time To Green
Traffic Jam Ahead Warning
Traffic signal priority request


MOST IMPORTANT BARRIERS FOR EFFECTIVE DEPLOYMENT
Lack of political prioritization
Lack of business models
Lack of sufficient legal framework (e.g. privacy)
Lack of funding
Infrastructure is not ready


TOP 6 EXTENDED C-ITS SERVICES
Hazardous location notification
Traffic Jam Ahead Warning
Slow or stationary vehicle(s)
Road works warning
GLOSA/Time To Green (TTG)
Traffic signal priority request


MOST IMPORTANT KEY ENABLERS FOR C-ITS DEPLOYMENT
Cooperation among stakeholders
Standardisation / interoperability
Attractive business models
Enhanced political commitment
Supportive regulation / clear legal framework

# RECOMMENDATIONS

- **Ensured continued European cooperation** and Cooperation among all stakeholders
- To establish **attractive and sufficient business models**
- To prepare a **C-ITS Operations strategic document on European level**
- Prepare **strategic plans**, including a multiyear budget for investments and maintenance on member states level
- To work on **sufficient legal framework**

# RECOMMENDATIONS

- Prepare and **operate test fields, test beds** and make them available to third parties
- Concentrate on **standards development**, testing and evaluation
- **Monitoring and validation of quality**, compliance assessment
- **Unification of HMI**
- Resources **allocate for new employees** – training, practice, experts skills

# Thank you for your attention!

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