Impact Assessment support study for the revision of the Intelligent Transport Systems Directive (2010/40/EU)

Ricardo, TRT & TEPR

3 March 2020

Agenda

- Introduction

- ITS IA support study progress

- Open Public Consultation results

Coffee break

- Policy Options development progress

- Next steps

Study objectives

- **Objective of the study:**

  Support Commission with evidence based analysis to revise the ITS Directive and the related policy framework for intelligent transport systems
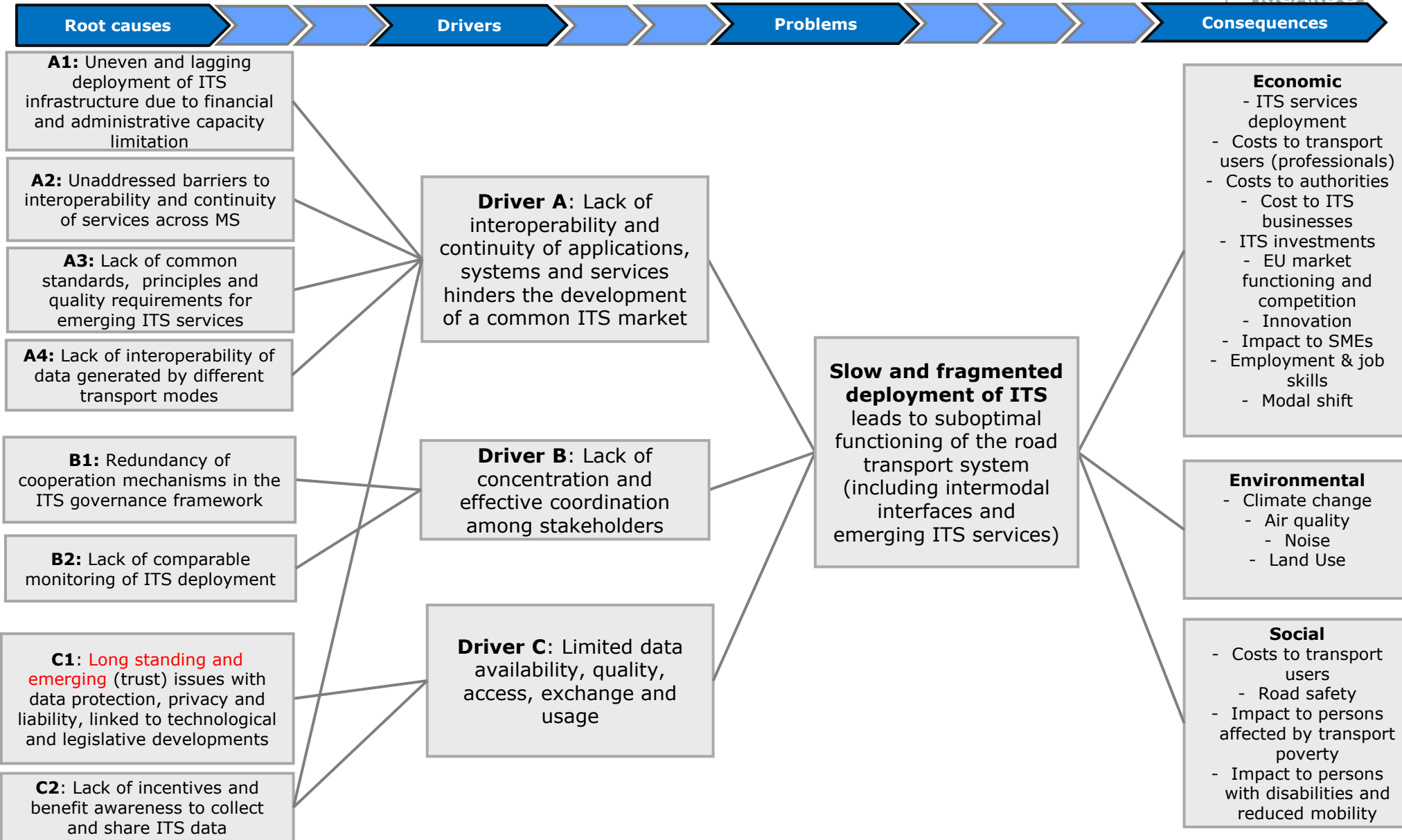
- The general objective of the revision of the ITS Directive is to:

  - **Increase the deployment and operational use of ITS services** across the EU in order to improve the functioning of the road transport systems and enable interfaces between all modes

  - **Reduce the negative external effects** of road transport and benefit all transport users
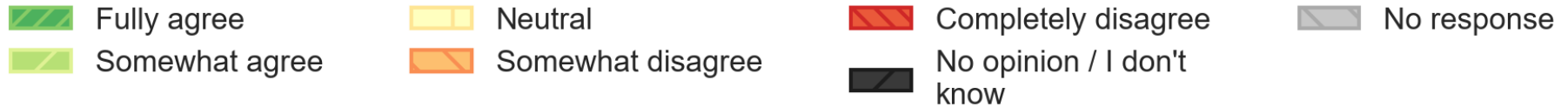
Study timeline

- **Inception phase (Nov-Dec 2020) - complete**
  - Draft problem definition
  - Initial list of measures

- **Analytical phase (Dec-Mar 2021) - closing**
  - Problem definition (updated)
  - Baseline development
  - Coherence with other regulation (draft)
  - Policy measures/options (draft)

- **Assessment of impacts (Mar-May 2021) - initiating**
  - Impact assessment (incl. modelling of options)
  - Comparison of options

- **Stakeholder consultation – ongoing**
  - Inception Impact Assessment (closed) / Open Public Consultation (closed)
  - Survey
  - Interviews
  - Workshops

Problem definition

- Three problem drivers:
  - **Driver A**: Lack of interoperability and continuity of applications, systems and services hinders the development of a common ITS market
  - **Driver B**: Lack of concertation and effective coordination among stakeholders
  - **Driver C**: Unresolved issues related to the availability, quality and sharing of data supporting ITS services

- Targeted action to address those key unresolved issues – issues can be categorised under two broad themes:
  1. The need to tackle potential **shortcomings of the *current* regulatory framework** for ITS
  2. The need to **future-proof the ITS Directive** to maximise the benefits of *emerging* ITS solutions, including in the fields of C-ITS, CCAM and MaaS

Root causes → **Drivers** → **Problems** → **Consequences**

A1: Uneven and lagging deployment of ITS infrastructure due to financial and administrative capacity limitation

A2: Unaddressed barriers to interoperability and continuity of services across MS

A3: Lack of common standards, principles and quality requirements for emerging ITS services

A4: Lack of interoperability of data generated by different transport modes

B1: Redundancy of cooperation mechanisms in the ITS governance framework

B2: Lack of comparable monitoring of ITS deployment

C1: Long standing and emerging (trust) issues with data protection, privacy and liability, linked to technological and legislative developments

C2: Lack of incentives and benefit awareness to collect and share ITS data
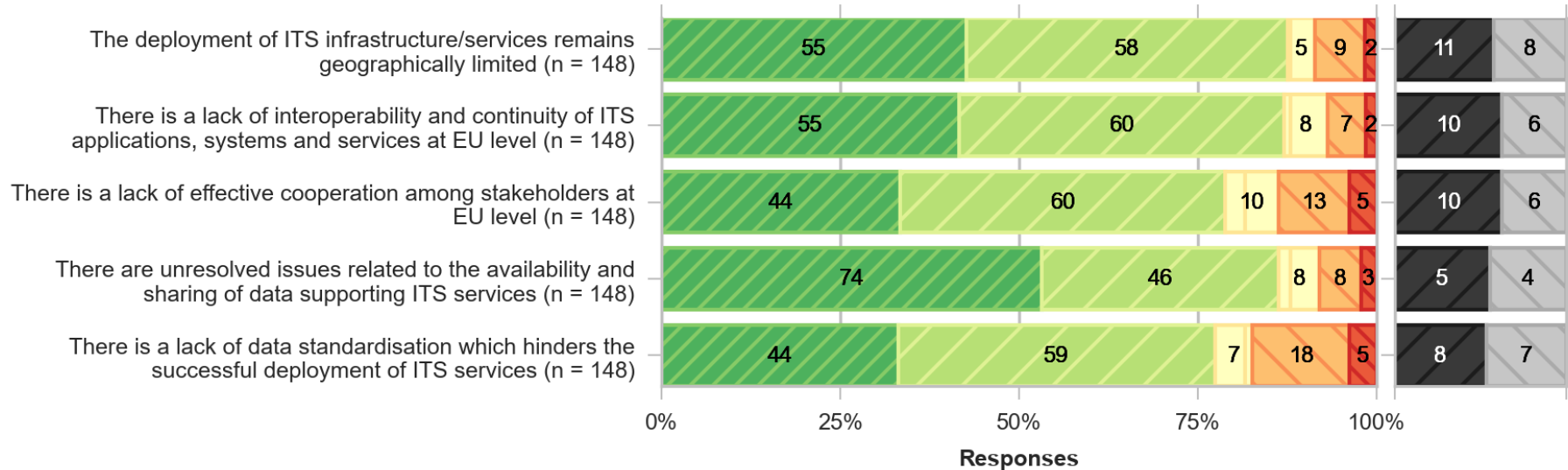
Driver A: Lack of interoperability and continuity of applications, systems and services hinders the development of a common ITS market

Driver B: Lack of concentration and effective coordination among stakeholders

Driver C: Limited data availability, quality, access, exchange and usage

Slow and fragmented deployment of ITS leads to suboptimal functioning of the road transport system (including intermodal interfaces and emerging ITS services)

Economic
- ITS services deployment
- Costs to transport users (professionals)
- Costs to authorities
- Cost to ITS businesses
- ITS investments
- EU market functioning and competition
- Innovation
- Impact to SMEs
- Employment & job skills
- Modal shift

Environmental
- Climate change
- Air quality
- Noise
- Land Use

Social
- Costs to transport users
- Road safety
- Impact to persons affected by transport poverty
- Impact to persons with disabilities and reduced mobility

Problems (Question 11)

11. Please indicate to what extent you agree with the following statements

Legend: Fully agree | Neutral | Completely disagree | No response | Somewhat agree | Somewhat disagree | No opinion / I don't know

Statement	Fully agree	Somewhat agree	Neutral	Somewhat disagree	Completely disagree	No opinion / I don't know	No response
The deployment of ITS infrastructure/services remains geographically limited (n = 148)	55	58	5	9	2	11	8
There is a lack of interoperability and continuity of ITS applications, systems and services at EU level (n = 148)	55	60	8	7	2	10	6
There is a lack of effective cooperation among stakeholders at EU level (n = 148)	44	60	10	13	5	10	6
There are unresolved issues related to the availability and sharing of data supporting ITS services (n = 148)	74	46	8	8	3	5	4
There is a lack of data standardisation which hinders the successful deployment of ITS services (n = 148)	44	59	7	18	5	8	7

Responses (x-axis: 0% – 25% – 50% – 75% – 100%)

- Stakeholders broadly agree with the presented unresolved issues.

- Only three cases where a majority in a stakeholder group *disagreed*: Public transport operators for the third, fourth and fifth statements

Problems:
Q 12. Do you have any comment on these problems or other potential problems that should be considered?

- Public transport operators:
  - Already have: **Interoperability** of mobility data; sufficient **cooperation**
  - Needed: **Level playing field** and **reciprocity** in the sharing of data needed
  - Data reuse: Should be governed by **relevant agreements**; in line with policy objectives

- ITS service providers: Main issues are **interoperability** and **access to data**

- Mobility service providers: **Access to data** needed to be addressed; lack of data standardisation

- Vehicle/equipment manufacturers/suppliers:
  - There should be **no mandate** on choice of technology
  - **Need coherence** with GDPR and ePrivacy legislation

- **Insurance**: Importance of access to in-vehicle data and need for standardised, non-proprietary solutions underlined; similar concerns from **maintenance/repair industry**

- Civil society: **Improved access to data** needed to support services, consumers should remain in **control of their data**

Problems (Question 13)

13. From your point of view, how important is further EU action in these areas?
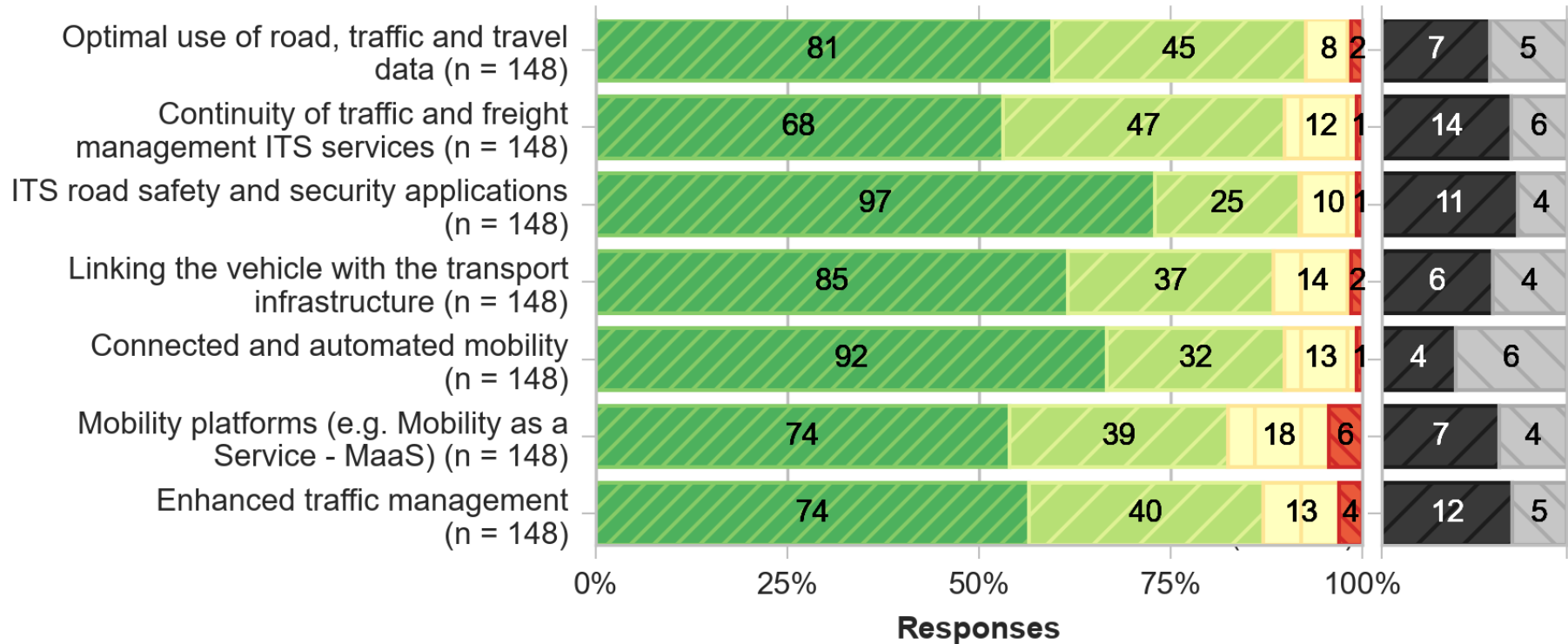
- Stakeholders support further EU action in all areas – there were few differences in the responses between stakeholder category

Objectives

Problem definition	Objective
Overall problem **Slow and fragmented deployment** of ITS leading to suboptimal functioning of the road transport system and multimodal digital mobility services	**General objective** **Increase the deployment** and (inter-)operational use of ITS services across the EU to improve the functioning of a multimodal transport system and enhance interfaces between all modes, and in doing so reduce the negative external effects of road transport
Problem driver A **Lack of interoperability and continuity** of applications, systems and services hinders the development of a common ITS market	**Specific objective 1** **Increase interoperability and cross-border continuity of ITS applications,** systems and services supporting a common ITS market
Problem driver B **Lack of effective coordination** among stakeholders	**Specific objective 2** Establish **effective coordination and monitoring mechanisms** between all ITS stakeholders (including stakeholders relevant in the multimodal context of the Directive)
Problem driver C Unresolved issues related to the **quality, availability, access and usage of data** supporting ITS services	**Specific objective 3** **Solve issues related to the quality, availability, access and usage of data** which supports ITS services

Coherence with other legislation

Crucial to avoid duplication, identify synergies and enhance clarity

1. Account for coherence with relevant legislation that came into effect after the introduction of the ITS Directive (e.g. GDPR, General Safety Regulation)

2. Strategies that have a direct relationship with the ITS regulatory framework:

    1. Fit for 55 Package - emissions ambition (e.g. AFID revision

    2. Data strategy (e.g. Common European mobility data space)

    3. Sustainable and smart mobility strategy (SSMS) e.g. TEN-T revision → adopted on 9th December

3. Identify links to ITS deployment and data issues

Links with other legislation – Existing (1/2)

	Existing initiatives with strongest links with ITS	Links with the ITS Directive and ITS regulatory framework
1	General Data Protection - Regulation (EU) 2016/679	Safeguards on the collection, use and re-use of personal data
2	ePrivacy – Directive 2002/58/EC, as revised by 2009/136/EC (further updates under negotiation)	Protection of privacy in electronic communications
3	Product Liability - Directive 85/374/EEC	Clarifying liability for products (including ITS products).
4	Open data and the re-use of information held by the public sector – Directive (EU) 2019/1024	General rules on transparency and fair competition for data reuse when this is held by the public sector with further obligations for high-value datasets (defined in Annex 1 of the Directive and subject to an Implementing Act under negotiation)
5	Platform to Business and related guidelines – Regulation (EU) 2019/1150	Guidelines on ranking transparency for platforms when they act as online intermediaries
6	Passenger rights - Regulation (EC) No 1371/2007 (recast under negotiation)	Provision of real-time information by rail infrastructure managers and railway undertakings
7	Directive 2007/2/EC establishing an Infrastructure for Spatial Information in the European Community (INSPIRE)	Common implementing rules and harmonised infrastructure to improve the availability, quality, organisation, accessibility and sharing of spatial information

# Links with other legislation – Existing (2/2)

	Existing initiatives with strongest links with ITS	Links with the ITS Directive and ITS regulatory framework
8	eCall - Regulation (EU) 2015/758	Now requires all new cars and vans to be fitted with eCall
9	Type Approval rules	General type approval Regulations include requirements for the non-safety components of ITS
10	General Safety - Regulation (EU) 2019/2144	Introducing ITS solutions (e.g. speed assistance, pedestrian, and cyclist detection) as part of the vehicle type approval requirements. CCAM to follow as implementing act.
11	Roadworthiness - Directive 2014/45/EU	Inclusion of eCalls in roadworthiness tests
12	Electronic Road Tolling - Directive 2004/52/EC	Improving the links between C-ITS and electronic tolling and avoiding interference among applications using radio frequency spectrum
13	Directive 2008/96/EC on road infrastructure safety management	Provisions on the management of road network safety for the trans-European road network
14	European Accessibility Act - Directive (EU) 2019/882	Provision of transport information and electronic ticketing for people with reduced mobility and other impairments

Links with other legislation – Upcoming (1/2)

	Upcoming or under review initiatives with strongest links with ITS	Links with the ITS Directive and ITS regulatory framework
1	Data sharing and ticketing for multimodal transport (SSMS n 37)	Announced initiative on ticketing, including potential regulatory requirements for multimodal digital service providers and potential changes to PSO regulations to support the development of multimodal ticketing services
2	Data Governance Act	Proposed legislation aims to foster the availability of data for use by increasing trust in data intermediaries and by strengthening data-sharing mechanisms across the EU
3	European Data Spaces (including a mobility data space)*	Setting up structures for better sharing of data, with a focus on publicly held data to be used for research and the common good
4	Mobility data space and coordination of NAPs (SSMS n 49)*	Development a common European mobility data space and establish a stronger coordination mechanism for the national access points established under the ITS Directive
5	EDPB guidelines on connected vehicles (expected March 2021)	Guidelines for automotive sector and digital market players dealing with any vehicle-related data in relation to connected vehicles that can be associated to a natural person.
6	Car data sharing (SSMS n 53)	Proposal for a new regulatory framework to open access to car data to mobility services
7	Collaborative logistics initiative (SSMS n 54)	Proposed rules on a trusted environment for corridor data exchange to support collaborative logistics
8	Telematics for rail passenger services – Regulation (EU) 454/2011	Establishing Technical Specification for Interoperability (TSI) published by the European Railway Agency (ERA) for the trans-European railway network
9	Digital Markets Act	Specific duties (e.g. on ranking, ticketing) for very large platforms services
10	Artificial intelligence – ethical and legal requirements	Risk-based legislation that will aim to foster innovation but limit bias and increase trust
11	Cybersecurity - Directive (EU) 2016/1148	Proposed strengthening (NIS 2.0) of existing cybersecurity rules to limit vulnerabilities based on risk assessments

Links with other legislation – Deployment (2/2)

	Upcoming or under review initiatives with strongest links with ITS	Links with the ITS Directive and ITS regulatory framework
12	Revision of the Directive on deployment of alternative fuels infrastructure (AFID) – Directive 2014/94/EU	Roll out plan and incentives for alternative fuels infrastructure will have implications on the information available and accessible on charging infrastructure
13	Revision of the Regulation setting CO_2 emission performance standards for new passenger cars and for new light commercial vehicles – regulation (EU) 2019/631	Introducing new standards that will limit emissions from passenger vehicles
14	Revision of the Regulation on the trans-European transport network (TEN-T) – Regulation 1315/2013	Potential for digitalisation requirements on TEN-T infrastructure -
15	Changes to the legal framework for eCall (SSMS n 75)	Adapting the eCall legal framework to new telecommunication technologies; considering the extension of eCall to powered two wheelers, trucks, buses and agricultural tractors
16	Radio Spectrum Policy Programme (RSPP)	Identifying the needs for spectrum coordination at EU level and establishing policy priorities in case of conflicts
17	Creation of an agency for road transport (SSMS n 40)	Assessing the need for an agency or other body to support safe, smart and sustainable road transport operations
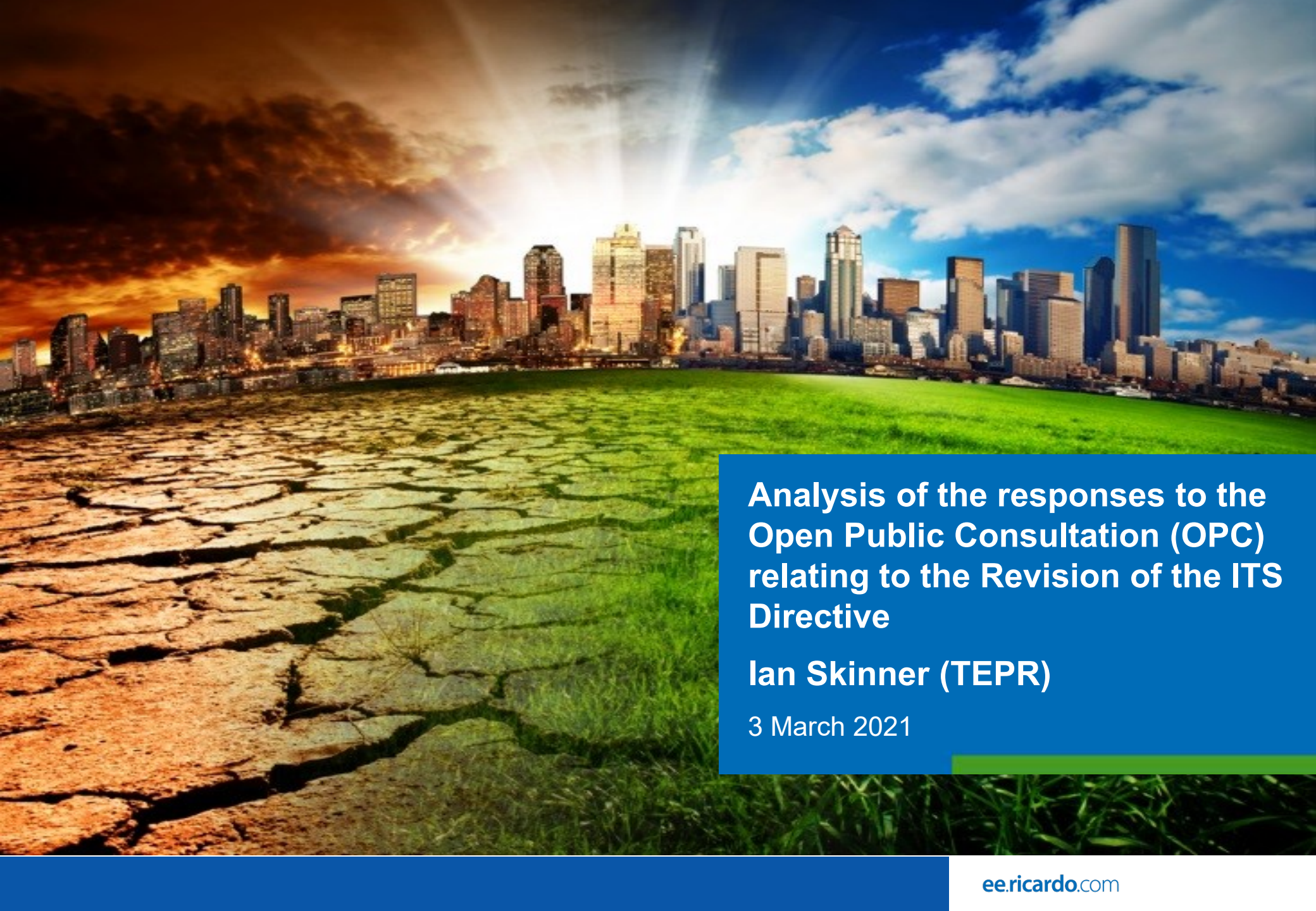
Analysis of the responses to the Open Public Consultation (OPC) relating to the Revision of the ITS Directive

Ian Skinner (TEPR)

3 March 2021

The Open Public Consultation (OPC)

- Consultation live between 3 November 2020 and 2 February 2021

- Asked for views on:
  - Citizen's experience with ITS
  - Questions on:
    - Relevance and added value of EU action
    - Problems
    - Priority areas
    - Possible measures
    - Impacts
    - Relevance of other action at the European level
- Consisted of 20 questions overall

- Presentation focuses on:
  - Selected quantitative and qualitative results

Overview of responses to the OPC

Stakeholder categories
- Public Authorities 15%
- Citizens 8%
- Industry - (Public) transport operators 8%
- Industry - ITS service providers 7%
- Industry - Mobility service providers
- Industry - Other 20%
- Industry - Vehicle and equipment manufacturers/ suppliers 13%
- Other 21%

Country of origin
- Austria 5%
- Belgium 26%
- Czechia 3%
- Finland 5%
- France 14%
- Germany 20%
- Italy 4%
- Netherlands 3%
- Poland 3%
- Spain 3%
- Sweden 7%

OPC: Responses

The aim of the following summary is to provide and indication of the responses received.

Where a sector is mentioned, the response should not be taken as being necessarily representative of the views of that sector.
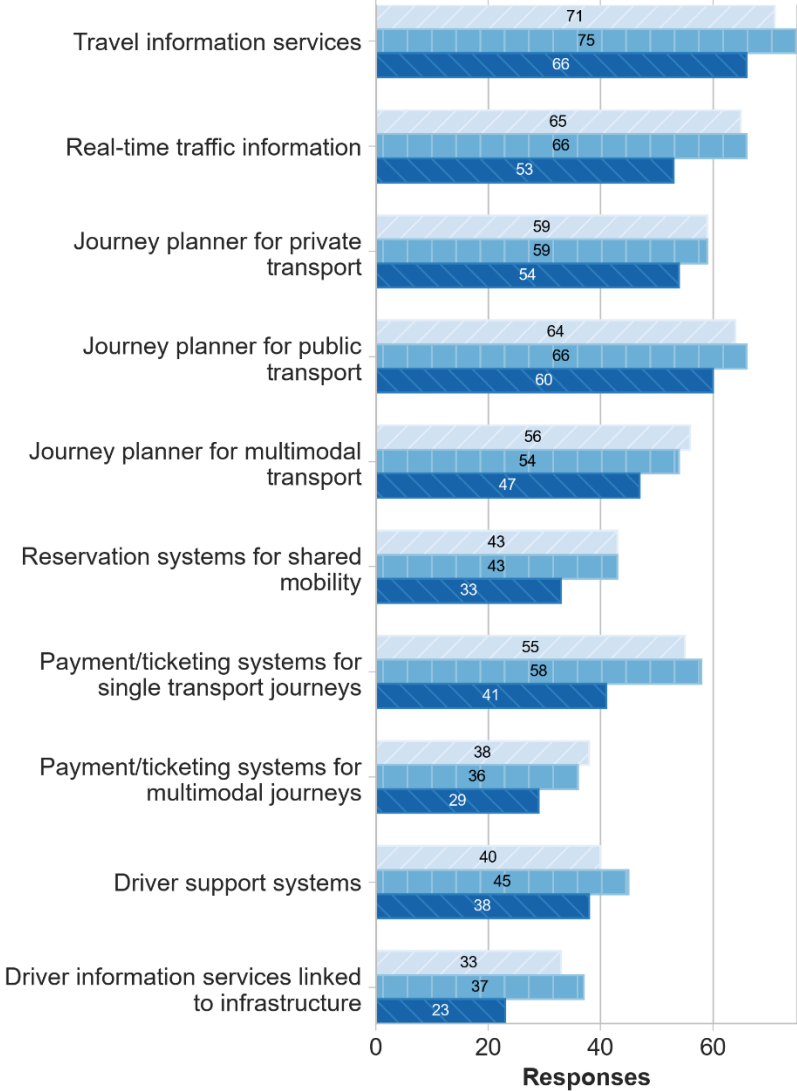
Citizen's experience with ITS:
Q2. Do you use intelligent transport systems in the following environments?

- Respondents: 148

- Most common services used are: travel information services, RTTI and journey planner for public transport

- Least used are: in-car driver support information services, payment/ticketing for multimodal journeys and driver support systems

Legend: In your own city | In your own country | In another EU country

2. In which environments do you use the following services?

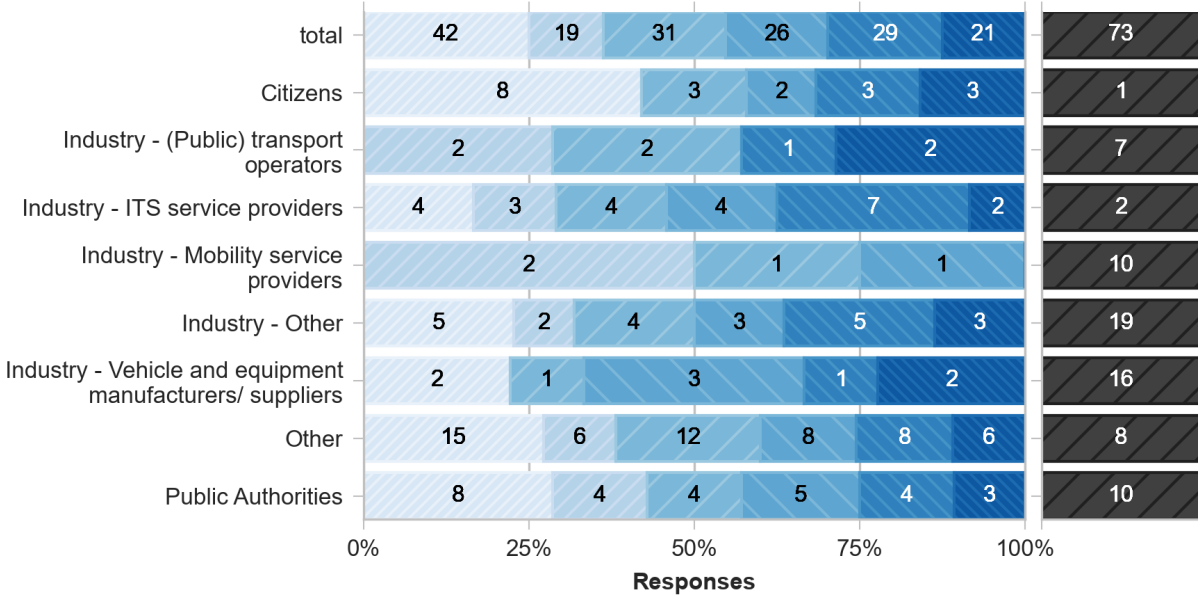| Service	In your own city	In your own country	In another EU country
Travel information services	71	75	66
Real-time traffic information	65	66	53
Journey planner for private transport	59	59	54
Journey planner for public transport	64	66	60
Journey planner for multimodal transport	56	54	47
Reservation systems for shared mobility	43	43	33
Payment/ticketing systems for single transport journeys	55	58	41
Payment/ticketing systems for multimodal journeys	38	36	29
Driver support systems	40	45	38
Driver information services linked to infrastructure	33	37	23

Responses

Citizen's experience with ITS:
Q5. In case you have difficulties using intelligent transport systems, what are the main underlying reasons?

Legend:
- I do not know which systems are available in a given situation
- I have concern about the security of the systems
- I have concerns about privacy and re-use of my personal data when using the systems
- The systems are not easy to use/access
- The systems offer limited added value
- Other (please specify)
- No response

5. In case you have difficulties using intelligent transport systems, what are the main underlying reasons?

| Category	Do not know	Security	Privacy	Not easy	Limited value	Other	No response
total	42	19	31	26	29	21	73
Citizens	8		3	2	3	3	1
Industry - (Public) transport operators	2		2	1		2	7
Industry - ITS service providers	4	3	4	4	7	2	2
Industry - Mobility service providers	2			1		1	10
Industry - Other	5	2	4	3	5	3	19
Industry - Vehicle and equipment manufacturers/ suppliers	2	1	3	1		2	16
Other	15	6	12	8	8	6	8
Public Authorities	8	4	4	5	4	3	10

- Main difficulty faced by users: They do not know which systems are available in a given situation (particularly relevant for citizens)
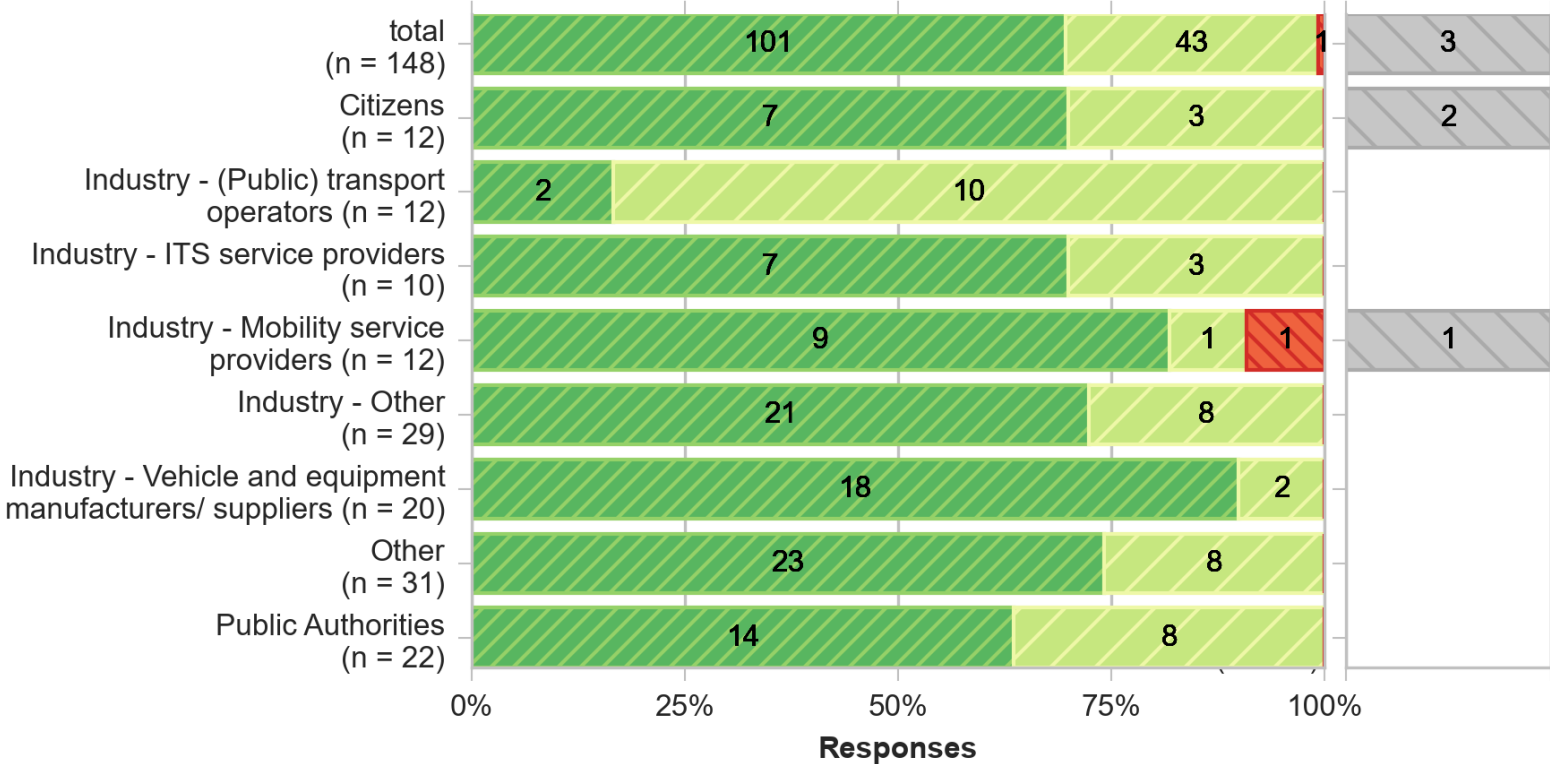
Citizen's experience with ITS:
Q7. Do you have any general comment on using intelligent transport systems that you would like to share?

- **Public transport operators**: ITS should support use of public transport and ITS solutions should not be imposed from above

- **Insurers:** Access to data (including in-vehicle data) should be fair and transparent, and be technology-neutral

- **Civil society:** Competing ITS solutions and lack of interoperability were barriers to citizen's use of ITS and to fully exploiting its benefits

- **Various respondents** noted that ITS was only one of many measures needed to support sustainable mobility

- **Various respondents** called for more interoperability and standardisation.

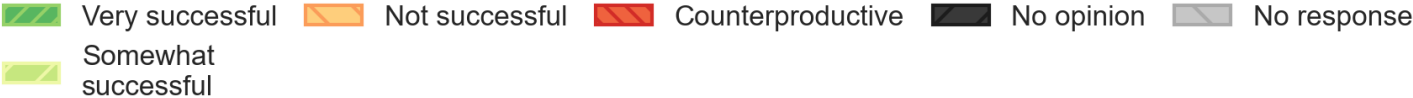# Relevance and added value of EU action (Question 8)
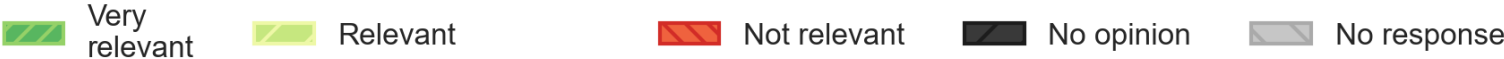
8. In your view, how relevant is a policy on intelligent transport systems at EU level as established by the ITS Directive to support the uptake of these systems?

Legend: Very relevant | Relevant | Not relevant | No opinion | No response

Category	Very relevant	Relevant	Not relevant	No response
total (n = 148)	101	43	1	3
Citizens (n = 12)	7	3		2
Industry - (Public) transport operators (n = 12)	2	10		
Industry - ITS service providers (n = 10)	7	3		
Industry - Mobility service providers (n = 12)	9	1	1	1
Industry - Other (n = 29)	21	8		
Industry - Vehicle and equipment manufacturers/ suppliers (n = 20)	18	2		
Other (n = 31)	23	8		
Public Authorities (n = 22)	14	8		

- Belief that policy at the EU level (such as ITS Directive) is relevant

Relevance and added value of EU action (Question 9)

Legend: Very successful | Somewhat successful | Not successful | Counterproductive | No opinion | No response

9. In your view, how successful has the policy on intelligent transport systems at EU level as established by the ITS Directive been to support the uptake of these systems?
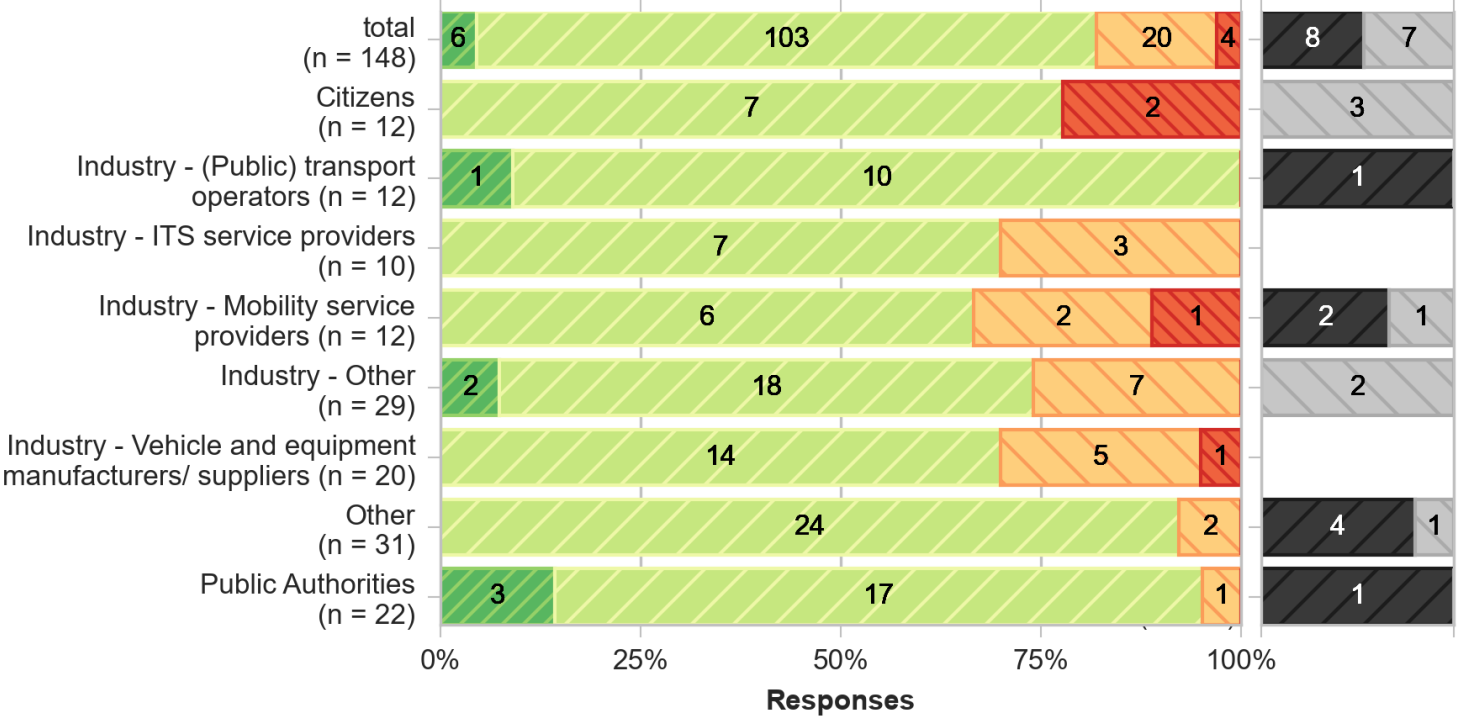
Category	Very successful	Somewhat successful	Not successful	Counterproductive	No opinion	No response
total (n = 148)	6	103	20	4	8	7
Citizens (n = 12)		7		2		3
Industry - (Public) transport operators (n = 12)	1	10			1	
Industry - ITS service providers (n = 10)		7	3			
Industry - Mobility service providers (n = 12)		6	2	1	2	1
Industry - Other (n = 29)	2	18	7			2
Industry - Vehicle and equipment manufacturers/ suppliers (n = 20)		14	5	1		
Other (n = 31)		24	2		4	1
Public Authorities (n = 22)	3	17	1		1	

- Broad consensus that EU policy to date has been somewhat successful, reinforcing view that EU policy is relevant (although indications that changes need to be made)

Relevance and added value of EU action:
Q10. In your view, what is the EU-added value of the ITS Directive in comparison with what could be achieved at Member States national and/or regional level activities?

- Public transport operators:
  - Need to respect **subsidiarity** (local solutions should address local needs)
  - ITS Directive **should support sustainable modes** (in line with Green Deal)
  - ITS Directive should **draw inspiration** from the French *Loi d'Orientation des Mobilités*

- Others:
  - Directive supported **harmonisation**, **standardisation** and **interoperability**; had led to more **collaboration and cooperation**

- **Data sharing**:
  - Various respondents (e.g. insurers, manufacturers/suppliers) called for access to (different types of) data to be **improved**
  - Consumer organisations underlined the importance of **protecting consumers** and giving them **freedom of choice** re the sharing of their data
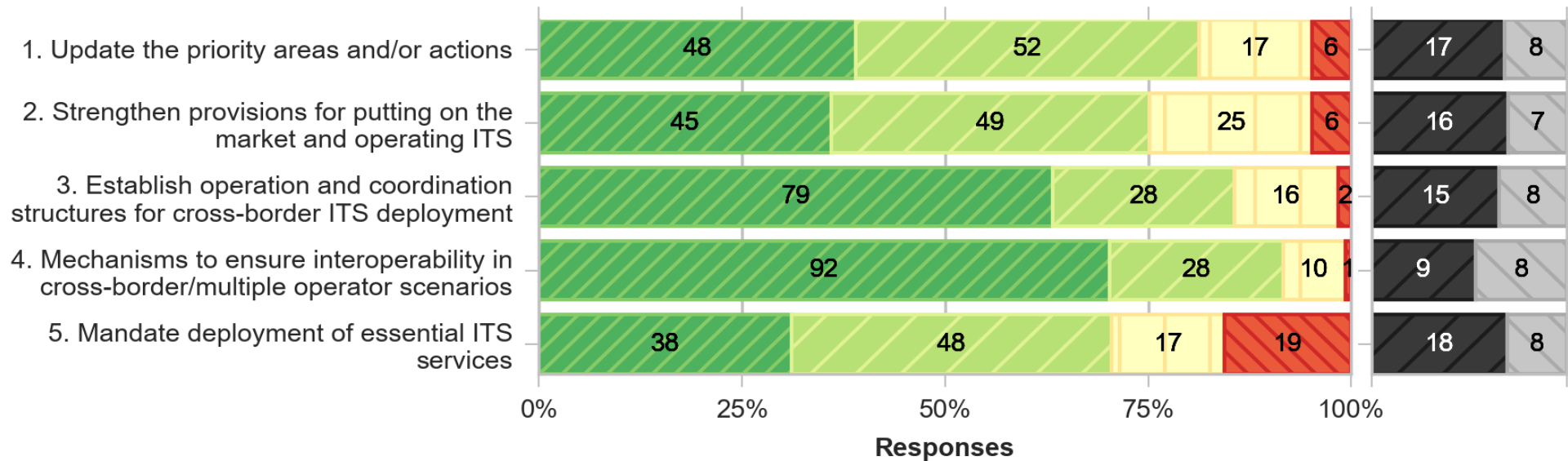
Priority areas:
Q15. Please elaborate on your answer to the previous question. Do you consider that any priority areas for ITS should be changed, removed or added?

- Public transport operators:
  - Revision of Directive should **support public transport** and **modal shift**
  - Guarantee authority's **right to organise mobility** on its territory

- Various aspects of **data sharing** mentioned by ITS / Mobility Service Providers, vehicle/equipment manufacturers/suppliers

- Various vehicle/equipment manufacturers/suppliers also mentioned the importance of various actions to support **C-ITS**

- **Insurance** and **maintenance/repair industries** mentioned access to in-vehicle data, and the importance of consumers having control of their data

- Other respondents underlined:
  - Importance of addressing liability in multi-modal journeys
  - Importance of providing access to data to facilitate MaaS
  - Need to better align objectives of ITS with wider mobility policy objectives

Possible measures (Question 16 – interoperability)

Legend:
- Very important
- Somewhat important
- Neutral
- Not important
- No opinion / I don't know
- No response

16.1. How important is it to include the following measures in a possible revision with regard to the specific objective: increase interoperability and cross-border continuity of ITS applications
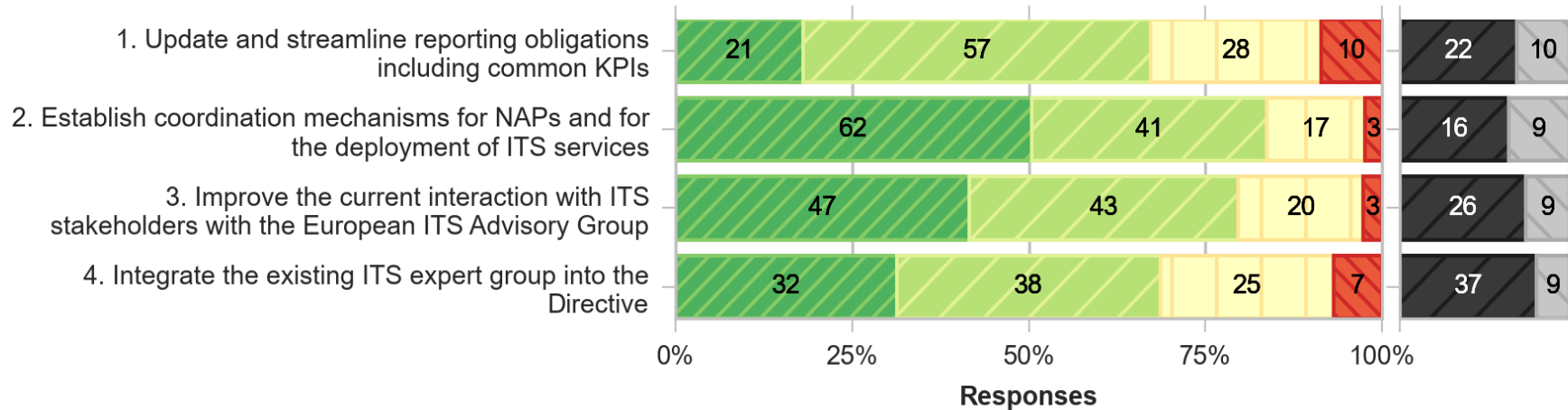

Measure	Very important	Somewhat important	Neutral	Not important	No opinion / I don't know	No response
1. Update the priority areas and/or actions	48	52	17	6	17	8
2. Strengthen provisions for putting on the market and operating ITS	45	49	25	6	16	7
3. Establish operation and coordination structures for cross-border ITS deployment	79	28	16	2	15	8
4. Mechanisms to ensure interoperability in cross-border/multiple operator scenarios	92	28	10	1	9	8
5. Mandate deployment of essential ITS services	38	48	17	19	18	8

Responses

- All measures widely supported (a couple at 75% or slightly less)
  - Most supported: "establish mechanisms to ensure interoperability of ITS services…"
  - Least: "Mandate deployment of essential ITS services…"
  - Public transport operators most ambivalent (points 2 and 3) and negative (point 5)

Possible measures (Question 16 – coordination and monitoring)

16.2. How important is it to include the following measures in a possible revision with regard to the specific objective: establish effective coordination and monitoring mechanisms between all ITS stakeholders
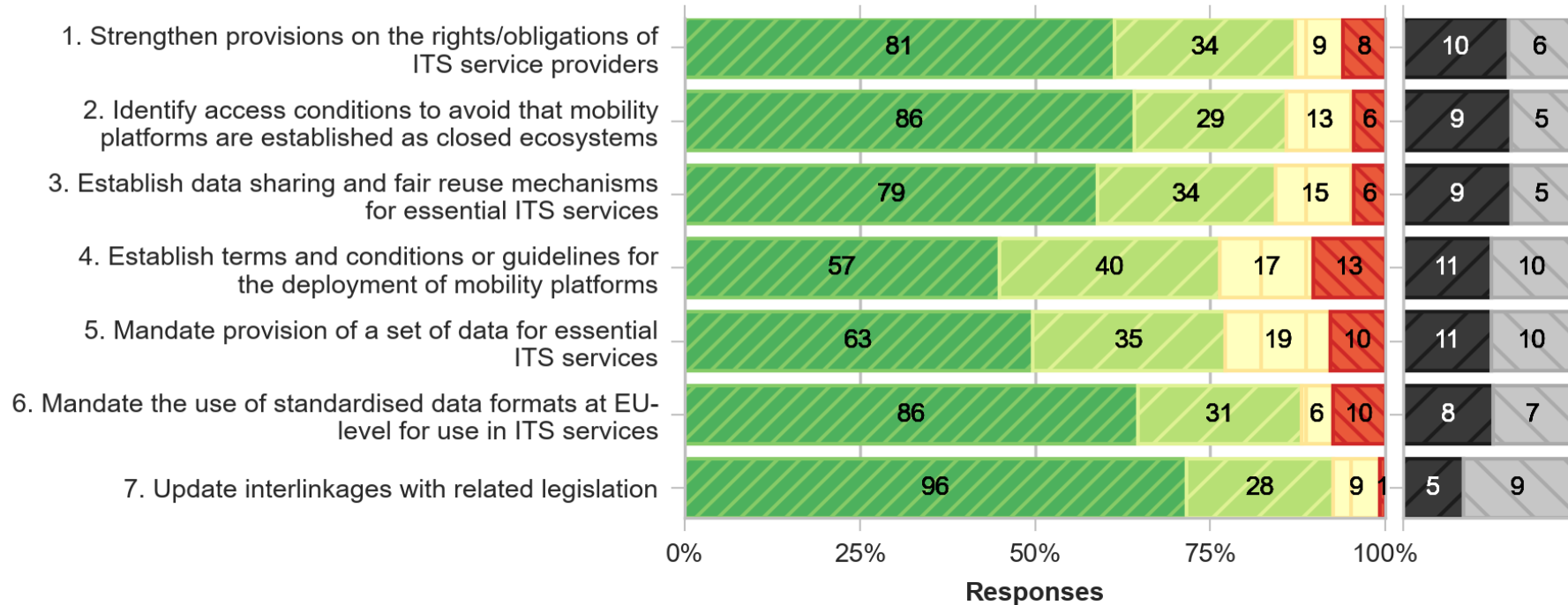
Legend: Very important, Somewhat important, Neutral, Not important, No opinion / I don't know, No response

Measure	Very important	Somewhat important	Neutral	Not important	No opinion / don't know	No response
1. Update and streamline reporting obligations including common KPIs	21	57	28	10	22	10
2. Establish coordination mechanisms for NAPs and for the deployment of ITS services	62	41	17	3	16	9
3. Improve the current interaction with ITS stakeholders with the European ITS Advisory Group	47	43	20	3	26	9
4. Integrate the existing ITS expert group into the Directive	32	38	25	7	37	9

Responses

- All measures widely supported (a couple at less than 75%)
  - Most supported: "establish coordination mechanisms for National Access Points…"
  - Least: "Update and streamline reporting obligations…"
  - Mobility service providers ambivalent re points 1 and 2; ITS service providers ambivalent re point 4

Possible measures (Question 16 – data availability and sharing)

Legend:
- Very important (dark green, hatched)
- Somewhat important (light green, hatched)
- Neutral (pale yellow)
- Not important (red, hatched)
- No opinion / I don't know (black, hatched)
- No response (grey, hatched)

16.3. How important is it to include the following measures in a possible revision with regard to the specific objective: solve issues related to the availability and sharing of data which supports ITS services

Measure	Very important	Somewhat important	Neutral	Not important	No opinion / I don't know	No response
1. Strengthen provisions on the rights/obligations of ITS service providers	81	34	9	8	10	6
2. Identify access conditions to avoid that mobility platforms are established as closed ecosystems	86	29	13	6	9	5
3. Establish data sharing and fair reuse mechanisms for essential ITS services	79	34	15	6	9	5
4. Establish terms and conditions or guidelines for the deployment of mobility platforms	57	40	17	13	11	10
5. Mandate provision of a set of data for essential ITS services	63	35	19	10	11	10
6. Mandate the use of standardised data formats at EU-level for use in ITS services	86	31	6	10	8	7
7. Update interlinkages with related legislation	96	28	9	1	5	9

- All measures widely supported (at least 75%)
  - Most supported: "Update interlinkages with related legislation
  - Public transport operators most ambivalent (points 3 and 4) and negative (point 5)
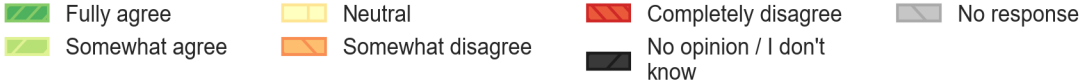
Possible measures:
Q 17. Do you have any comment on these measures or other potential measures to consider?

- Public transport operators:
  - Importance of ITS (including MaaS) supporting **wider public policy goals**
  - Importance of there being **reciprocity** in data sharing
  - **Engagement with MaaS** (data sharing, integration of services) should be voluntary

- Common themes in other responses:
  - Importance of a **balanced approach** between supporting standardisation, harmonisation and data sharing to support the market, without mandating or obliging (industry or the public sector)
  - Need for **coherence** with other legislation and initiatives
  - Need to clarify what was meant be **'essential services'**
  - Ensuring **quality of data**
  - Accessing in-vehicle data: Use of **extended vehicle concept**; importance of **technology-neutrality**
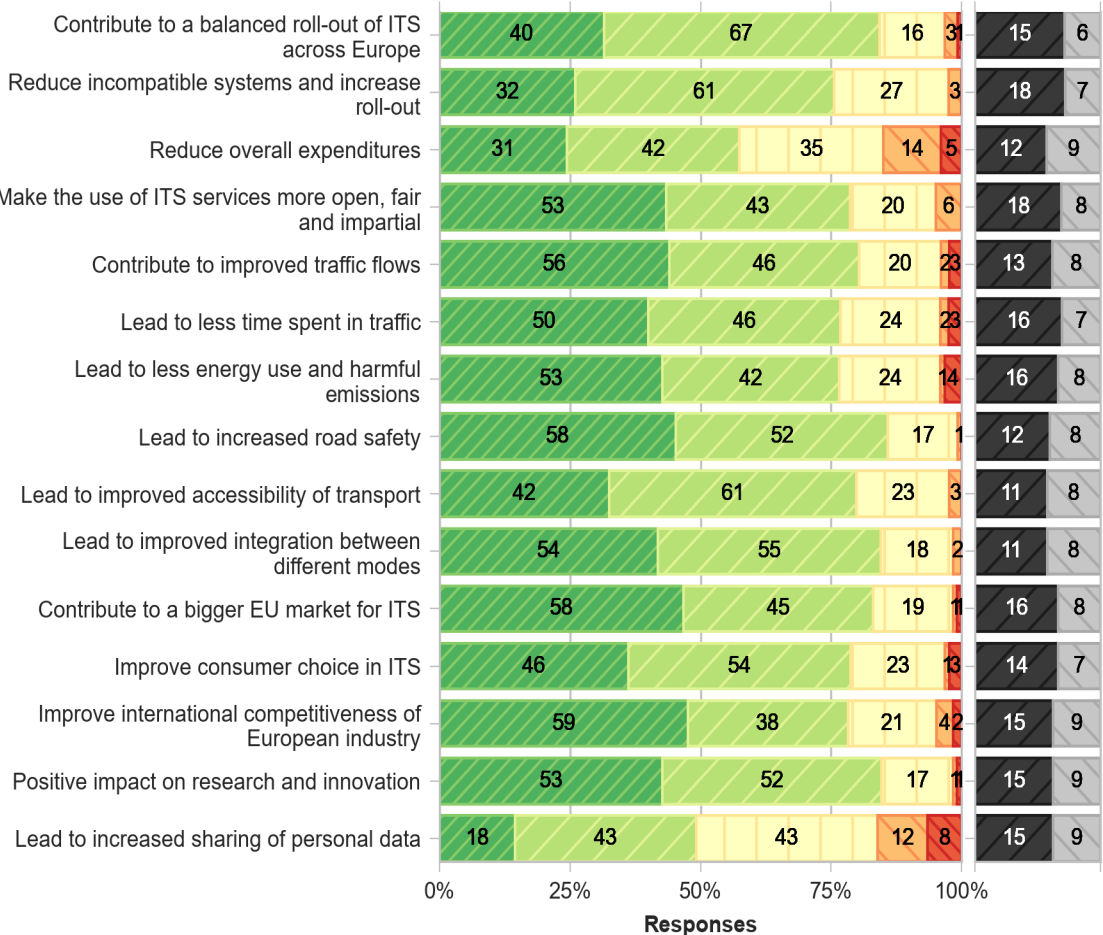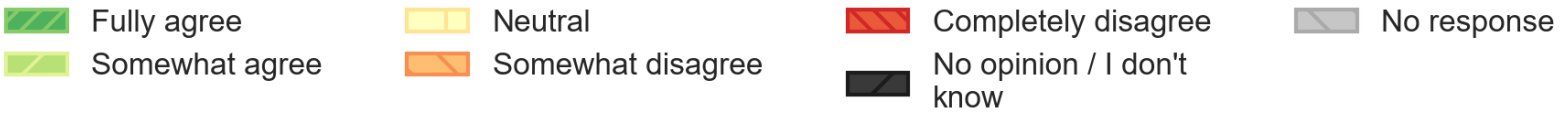
Impacts (Question 18)

- Stakeholders broadly agree with the potential impacts presented in the inception impact assessment

- Least support for:
  - 'it will lead to increased sharing of personal data'
  - 'it will reduce the overall expenditures of citizens and transport operators'
  - No particular difference in response by stakeholder category

Legend:
- Fully agree
- Somewhat agree
- Neutral
- Somewhat disagree
- Completely disagree
- No opinion / I don't know
- No response

18. To what extent do you agree with the following statements on the likely impacts as outlined in the Inception Impact Assessment?

Statement	Fully agree	Somewhat agree	Neutral	Somewhat disagree	Completely disagree	No opinion / I don't know	No response
Contribute to a balanced roll-out of ITS across Europe	40	67	16	3	1	15	6
Reduce incompatible systems and increase roll-out	32	61	27	3		18	7
Reduce overall expenditures	31	42	35	14	5	12	9
Make the use of ITS services more open, fair and impartial	53	43	20	6		18	8
Contribute to improved traffic flows	56	46	20	2	3	13	8
Lead to less time spent in traffic	50	46	24	2	3	16	7
Lead to less energy use and harmful emissions	53	42	24	1	4	16	8
Lead to increased road safety	58	52	17	1		12	8
Lead to improved accessibility of transport	42	61	23	3		11	8
Lead to improved integration between different modes	54	55	18	2		11	8
Contribute to a bigger EU market for ITS	58	45	19	1		16	8
Improve consumer choice in ITS	46	54	23	1	3	14	7
Improve international competitiveness of European industry	59	38	21	4	2	15	9
Positive impact on research and innovation	53	52	17	1		15	9
Lead to increased sharing of personal data	18	43	43	12	8	15	9

Responses (0% – 100%)

Relevance of other action at European level

20. To what extent do you agree with the following statements: The objectives of the revision could be better accomplished through...

Legend: Fully agree, Somewhat agree, Neutral, Somewhat disagree, Completely disagree, No opinion / I don't know, No response

Statement	Fully agree	Somewhat agree	Neutral	Somewhat disagree	Completely disagree	No opinion / I don't know	No response
Non-legislative tools based on guidance or recommendations by the Commission (n = 148)	18	28	26	42	20	7	7
Increased funding opportunities from European Union programmes (n = 148)	45	50	28	8	3	6	8
Increased coordination and harmonization with other (non-EU) areas of the world (n = 148)	21	39	41	28	2	10	7

Responses

- Significant number of stakeholders agree that the objectives of the revision could be better accomplished through other means.
  - Even so, more respondents disagreed that non-legislative tools were as appropriate
  - Public transport operators were most in agreement (for points 1 and 2).
- However, seems to go directly against earlier results, particularly:
  - Q8 (relevance of EU level policy) and Q13 (areas in which further EU action is required)
  - Could be that many respondents have understood these measures to be complementary to the EU legislation, rather than instead of EU legislation.

Relevance of other action at European level

As a result of the apparent contradiction on the previous slide, we are going to have a poll…

Questions:

1. Non-legislative tools based on guidance and recommendations are a better tool to achieve the objectives than the revision of the Directive (yes/no)

2. Increased funding opportunities are a better tool to achieve the objectives than the revision of the Directive (yes/no)

3. Increased coordination and harmonisation with other (non-EU) areas of the world are a better tool to achieve the objectives than the revision of the Directive (yes/no)

Policy Options for the Revision of the ITS Directive

Giannis Giannelos (Ricardo)

3 March 2021

Policy Options

- **Overview of Policy Options**

  1. PO 1 – Light touch
  2. PO 2 – Strengthened coordination
  3. PO 3 – Mandating basic data collection
  4. PO 4 – Mandating data collection & service provision

Current selection is not a conclusive set of policy options but an analytical tool for the impact assessment study purposes - to be finalised

Policy Options

Policy Option	SO1 - Increase interoperability and cross-border continuity	SO2 - Establish effective coordination and monitoring	SO 3 - Quality, availability, access and usage of data
PO 1 – Light touch	Update priority areas and actions and include a new standardisation mandate	Streamline reporting o the implementaiton of the Directive and Delegated Acts Update the MS reporting guidelines. Continuation of NAP & C-ITS coordination in a soft form	Updated references to relevant legislation
PO 2 - Strengthened coordination	Same as PO 1	Mandatory reporting template and KPIs for MS reporting. Further improve and streamline the interaction with ITS stakeholders, in particular for the implementation of the Directive and the preparation of Delegated Acts Embed C-ITS coordination in legislation	PO1 + Update/expand principles for deployment of ITS services (e.g. on accessibility of the information, data privacy and transparency of the ranking of services)
PO 3 – Mandating basic data collection	PO 2 + Expand the scope of application of the priority areas to include deployment and mandate availability & quality level of basic data for essential services	PO 2 + embed NAP coordination in legislation	Same as PO 2
PO 4 – Mandating data collection & service provision	PO 3 + Define priority areas for further mandating data/services and allowing their mandate	Same as PO 3	Same as PO 3

Policy Option components – Scope / priority areas

No	Policy measure	Policy Options				
		Baseline	PO 1 – Light touch	PO 2 – Strengthened coordination	PO 3 – Mandating basic data collection	Policy option 4 – Mandating data collection & service provision
1	Adjust the scope of the Directive to explicitly include multimodal digital mobility services	✓	✓	✓	✓	✓
2	Update the content of the priority areas - **multimodal digital mobility services**		✓	✓	✓	✓
3	Update the content of the priority areas - **enhanced traffic/mobility management**		✓	✓	✓	✓
4	Update the content of the priority areas - **cooperative, connected, and automated mobility**		✓	✓	✓	✓
5	Expand to scope of application of the priority areas from "standards and specifications" to include **deployment (mandating data and/or services)**				✓	✓
6	Extension of validity of Article 8 to include **new standardisation requirements**		✓	✓	✓	✓

Policy Option components – Standards and principles

No	Policy measure	Policy Options				
		Baseline	PO 1 – Light touch	PO 2 – Strengthened coordination	PO 3 – Mandating basic data collection	Policy option 4 – Mandating data collection & service provision
7	Revision of **specification for RTTI** – extended geographical scope, new data types (UVAR, recharging/refuelling locations, historical traffic data, road/traffic rules)	✓	✓	✓	✓	✓
8	**Requirements for access to in-vehicle generated data** for road operation (asset and traffic management) services – discoverability, non-discriminatory access			✓	✓	✓
9	**Standards for in-vehicle generated data** for road operation (asset and traffic management) services				✓	✓
10	**Specifications for C-ITS** (Day 1, Day 1,5 and Day 2 services) – provisions for ITS components, security requirements	✓	✓	✓	✓	✓
17	Update the **principles for specifications and deployment of ITS services** - accessibility of the information, data privacy and transparency of the ranking of services etc.			✓	✓	✓

Policy Option components – Mandates

No	Policy measure	Policy Options				
		Baseline	PO 1 – Light touch	PO 2 – Strengthened coordination	PO 3 – Mandating basic data collection	Policy option 4 – Mandating data collection & service provision
11	Mandate availability of **static RTTI data** types				✓	✓
12	Mandate availability of **dynamic RTTI data types** required for automated mobility					✓
13	**Extend the geographical scope** of the data mandates to cover the whole transport network					✓
14	Introduce (limited) **data quality standards** for a selection of critical data that will be applied to mandated data				✓	✓
15	Introduce (extensive) data quality standards applied to **all critical data** necessary for essential services					✓
16	Mandate the deployment of a set of **essential ITS services** in all Member States				✓	✓

Policy Option components – Governance / reporting

No	Policy measure	Policy Options				
		Baseline	PO 1 – Light touch	PO 2 – Strengthened coordination	PO 3 – Mandating basic data collection	Policy option 4 – Mandating data collection & service provision
18	Setting-up of **governance** and the facilitation of national & EU wide operational **co-ordination of NAPs**	✓	✓	✓	✓	✓
19	Introduce **legal provisions** on relation to governance and the facilitation of national & EU wide operational **co-ordination of NAPs**				✓	✓
20	Implement the European **C-ITS Trust model**		✓	✓	✓	✓
21	Introduce **legal provisions** on the European **C-ITS Trust model**.			✓	✓	✓
22	Further improve and **streamline the interaction** with ITS stakeholders.		✓	✓	✓	✓
23	Reporting: update and streamline **reporting obligations**		✓	✓	✓	✓
24	Reporting: mandate reporting based on **common format & KPIs**			✓	✓	✓

Policy Option components – Coherence

No	Policy measure	Policy Options				
		Baseline	PO 1 – Light touch	PO 2 – Strengthened coordination	PO 3 – Mandating basic data collection	Policy option 4 – Mandating data collection & service provision
25	Align/embed the ITS Directive within the **Mobility Data Space**		✓	✓	✓	✓
26	Align the provisions of the ITS Directive with those contained in the **GDPR** legislation**.**		✓	✓	✓	✓
27	Align the provisions of the ITS Directive with those contained in **ePrivacy** legislation		✓	✓	✓	✓
28	Harmonise the provisions of the ITS Directive with those contained in **EU law on passenger rights**		✓	✓	✓	✓
29	Ensure coherence between the ITS Directive and the upcoming EU framework for **in-vehicle data architecture**		✓	✓	✓	✓
30	Address the linkages between the ITS Directive and **TEN-T and Rail Freight Corridor legislation**		✓	✓	✓	✓

Policy Options - Preference and drawbacks

Policy Option	SO1 - Increase interoperability and cross-border continuity	SO2 - Establish effective coordination and monitoring	SO 3 - Quality, availability, access and usage of data
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PO 4 – Mandating data collection & service provision	PO 3 + Define priority areas for further mandating data/services and allowing their mandate	Same as PO 3	Same as PO 3

Next steps - Assessment of impacts

- Quantitative approach will draw input from desk research and stakeholders (interviews/surveys) to asses policy measure impacts on the **level of deployment** of ITS solutions **by service bundle** and associated infrastructure

| No.	Service bundle	ITS service type
1a	**Information and booking services for travellers**	• Multimodal travel information service (including linking between modes) • Multimodal travel information and booking/re-selling service (MaaS)
1b	**Information and booking services for drivers**	• Travel information service / Road traffic information & navigation services • Real-time traffic information service • Parking (and pricing) information • Re-charging/re-fuelling location and pricing information • Intermodal interfaces
2	**Travel management services**	• (Enhanced) Traffic network and incident management systems • Mobility management services
3	**Road safety and security applications (excluding C-ITS)**	• Road safety-related minimum universal traffic information service • Safe and secure truck parking location information system • Safe and secure truck parking location reservation system • eCall (current scope)
4	**Vehicle-to-vehicle (V2V) safety focused C-ITS**	• C-ITS safety-based V2V services (e.g. Emergency electronic brake light & Hazardous location notification)
5	**Vehicle-to-Infrastructure (V2I) C-ITS services**	• C-ITS V2I motorway focused applications (e.g. Shockwave damping, In-vehicle speed limits & Weather conditions) • C-ITS V2I urban only applications (e.g. GLOSA & Signal violation)
6	**Future C-ITS services**	• C-ITS cooperative perception services (day 2) and automation support services (day 3) – e.g. platooning

Next steps - Assessment of impacts

- ITS services deployment serve as **inputs to the ASTRA/TRUST** models:
  - i.e. transport fuel consumption, emissions, road safety, average speed, (modal shift)

Key output indicators by Member State and at EU level:

- **Transport activity** (including modal shares, passenger-kilometres per year and per inhabitant, etc.), **final energy demand**, **GHG emissions** and **pollutant emissions** for passenger/freight transport, for all relevant transport modes and for urban interurban dimensions

- **Total road vehicle stock** for passenger/freight transport by category (car, bus, LDV, HDV);

- **Fuel costs;**

- **External costs of transport by type** (congestion computed as variation of urban travel time for car and buses, accident, climate change, air pollution);

Estimated with RICARDO's Excel-based tool: **cost of ITS deployment** (hard infrastructure, vehicle and data-related infrastructure)

Next steps - Assessment of impacts
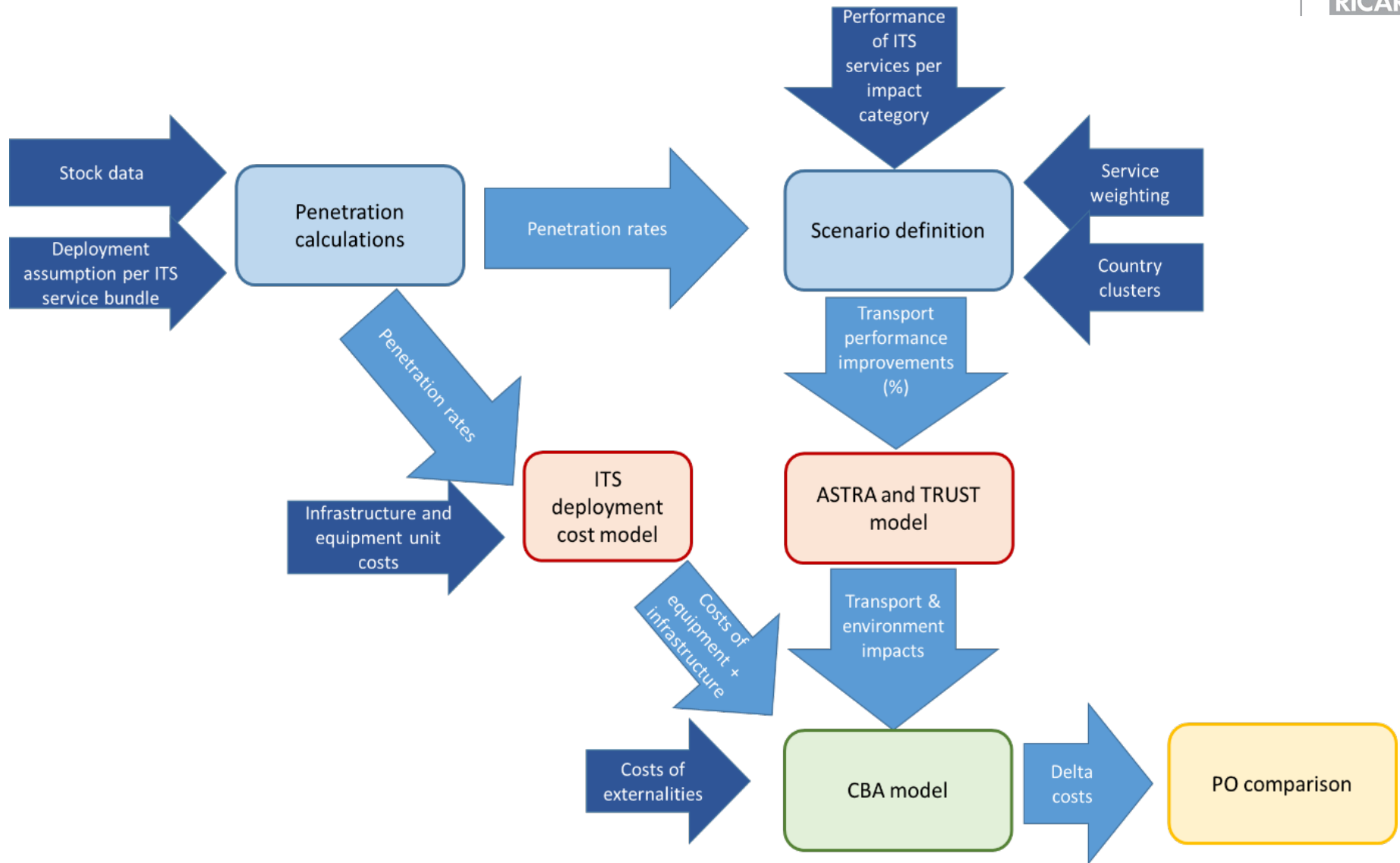
Next steps - Modelling output of ASTRA / TRUST transport models

Key output indicators by Member State and at EU level:

- **Transport activity** (including modal shares, passenger-kilometres per year and per inhabitant, etc.), **final energy demand**, **GHG emissions** and **pollutant emissions** for passenger/freight transport, for all relevant transport modes and for urban interurban dimensions

- **Total road vehicle stock** for passenger/freight transport by category (car, bus, LDV, HDV);

- **Fuel costs**

- **External costs of transport by type** (congestion computed as variation of urban travel time for car and buses, accident, climate change, air pollution);

Estimated with RICARDO's Excel-based tool: **cost of ITS deployment** (hard infrastructure, vehicle and data-related infrastructure)

Next steps - List of impacts to be analysed

Economic

- **Impacts on the deployment of intelligent transport systems and the associated infrastructure**
- **Costs to transport services users (professionals)**
- **Costs to authorities (and standardisation bodies)**
- **Costs for ITS businesses (and vehicle manufacturers, where involved)**
- **Cost of investment in ITS infrastructure**
- Functioning of the internal market and competition
- Impact on innovation
- Impact on SMEs
- **Impacts on employment**

Social

- **Costs to road/service users/consumers and households**
- **Road safety**
- Impact to persons affected by transport poverty
- Impact on persons with disabilities and those with reduced mobility

Environmental

- **Greenhouse gas emission reductions (quantitative)**
- **Air pollutants emission reduction (quantitative)**
- Land use (brown field/greenfield development);
- **Noise**

In bold those intended/expected to be fully quantified

Next steps - Opportunities for involvement

- **Survey**
  - Launched – 15 February
  - Closing – 22 March
  - https://survey.alchemer.eu/s3/90315608/Survey-Impact-Assessment-on-the-revision-of-the-Directive-on-Intelligent-Transport-Systems-2010-40-EU

- **Interviews**
  - Approached stakeholders mid February
  - Interviews within March

- **Written inputs**
  - Open to receive data inputs or other supporting material
  - ITS_Directive_IA@ricardo.com

- **Workshops – open participation**

1. Introduce timeline and objectives of the study, discussion on definition of main problems, drivers, relevant root causes **(December)**

2. Present and discuss emerging final policy options (measures and packages) – and their potential impact on deployment rate **(today)**

3. Presentation of draft final results **(May)**