



Cooperative, connected and automated mobility (CCAM)

ECG

19th of May 2017

Eddy HARTOG
Head of Unit Smart Mobility & Living

DG Communication Networks, Content and Technology
European Commission

Cooperative, Connected & Automated Mobility (CCAM)



**improved safety
decarbonisation
traffic efficiency
access to mobility**



**not just a
revolutionary new
technology field, but
also a disruptive
innovation**



**new business
opportunities thanks
to the ICT capability**

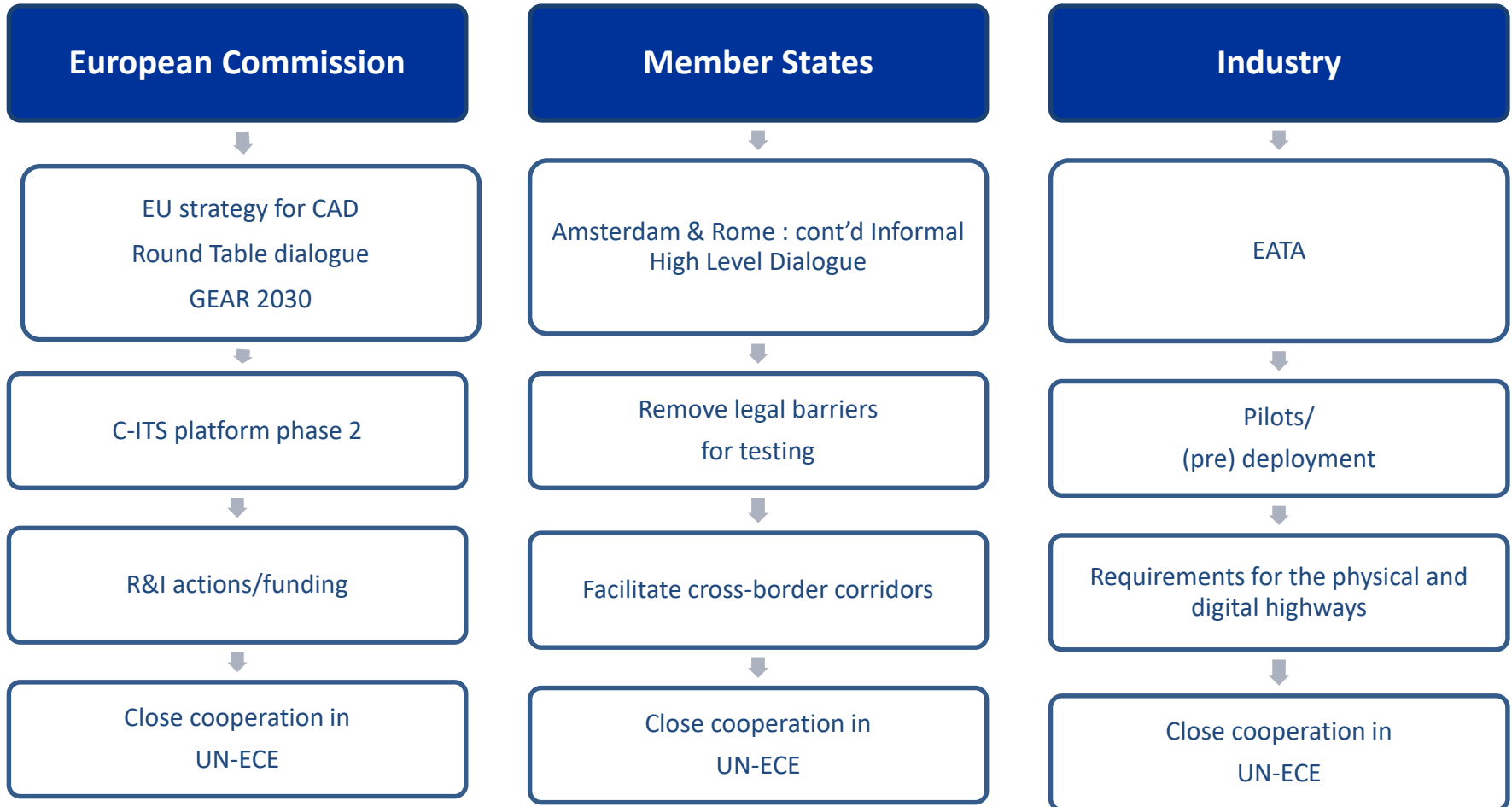




European
Commission



Broader policy context







**Declaration of
Amsterdam**

**Cooperation in the
field of connected
and automated
driving**

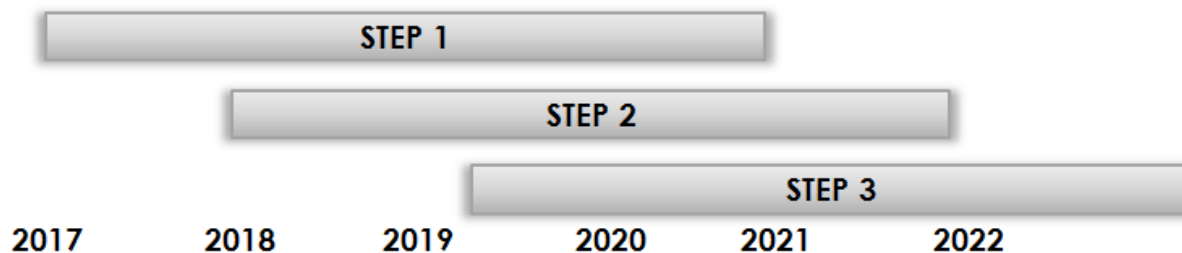
14-15 April 2016



EATA roadmap

	Use cases	Communication Technologies	Sites
STEP 1	<p>Enabling services for</p> <ul style="list-style-type: none"> - Highway chauffeur (L2/3) - High density truck platooning 	<p><u>Pre Deployment:</u></p> <ul style="list-style-type: none"> - hybrid communication : LTE, ITS G5 + LTE V, Mobile Edge Computing applications - Network slicing - LTE Broad casting: GNSS offset, hazards and HD-map updates <p><u>Studies :</u> business models responsibilities, safety concepts, Quality of service, Security and data protection Regulation and standardization</p>	<p>20..40 km <u>tracks</u> DE, FR,NL, ES, BE</p> 
STEP 2	<p>As step 1 + Valet parking</p>	<p><u>Application above technologies and studies</u></p> <ul style="list-style-type: none"> + 5G radio + Evaluation relative localization 	<p>Cross border motorways networks</p> 
STEP 3	<p>As step 2 Automated driving</p>	<p>Deployment</p>	<p>Commercialisation on AD authorized motorways</p>

Importance of dialogue and partnership with member states, C-ROADS and regions

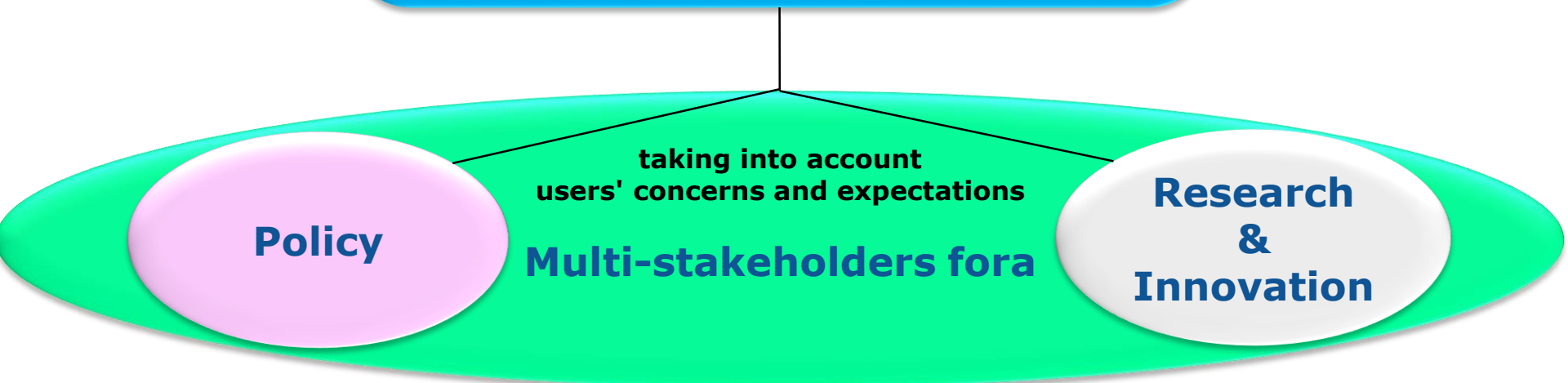




Commission architecture



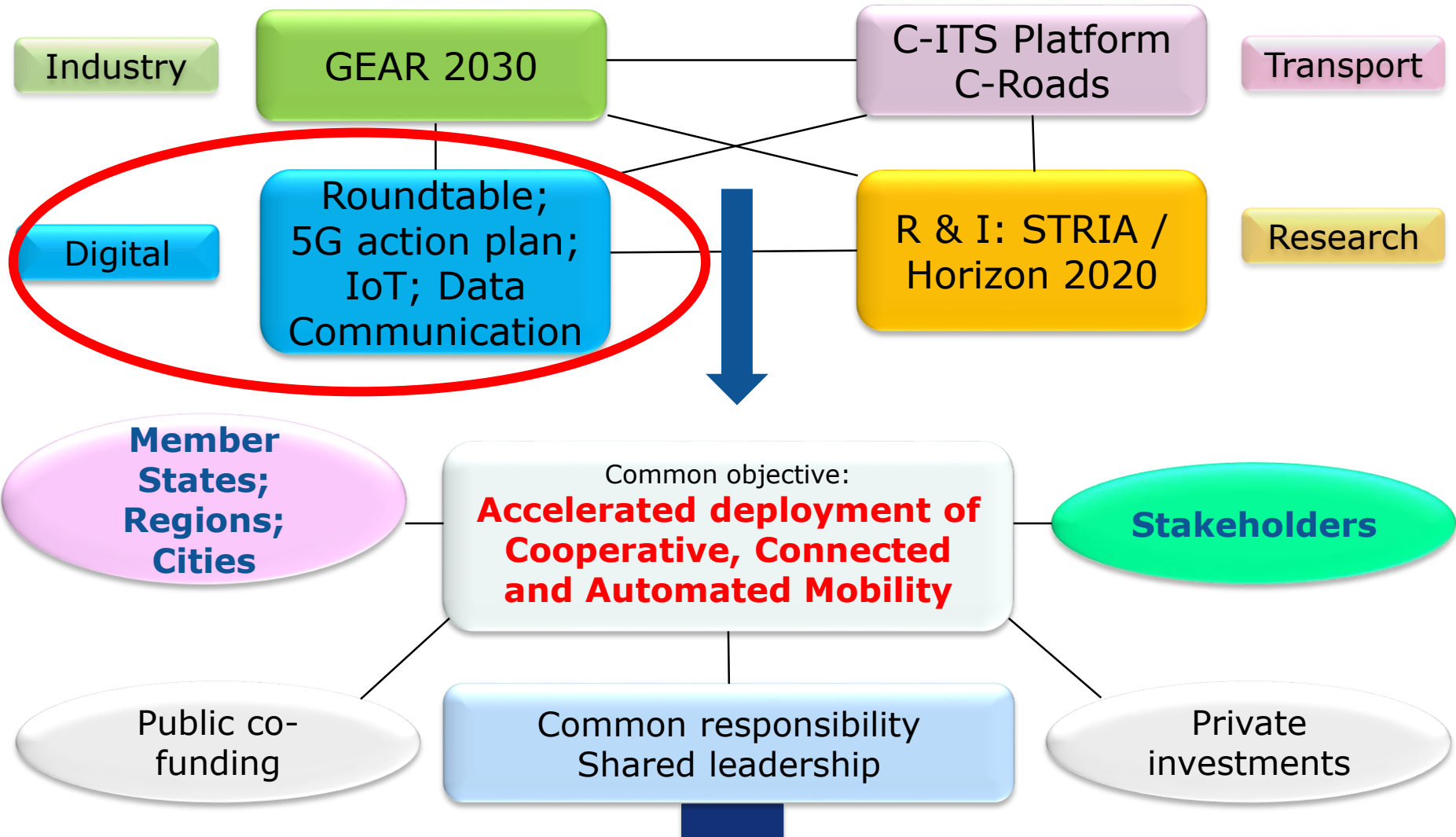
**The Commission
is acting as a catalyst
in promoting CCAM**



**Aiming at putting Europe in the frontline
of deploying CCAM technologies**



Commission architecture



Stakeholder consultations

C-ITS Strategy

C-Roads

CEF projects

Letter of Intent

Industry

GEAR 2030

C-ITS Platform

Transport

Industry Alliance

Roundtable; 5G action plan; IoT; Data communication

R & I: STRIA / Horizon 2020

Research

Digital

5G Action Plan

R&I Projects

Member States; Regions; Cities

5G Automotive Association

Accelerated deployment of Cooperative, Connected

Stakeholders

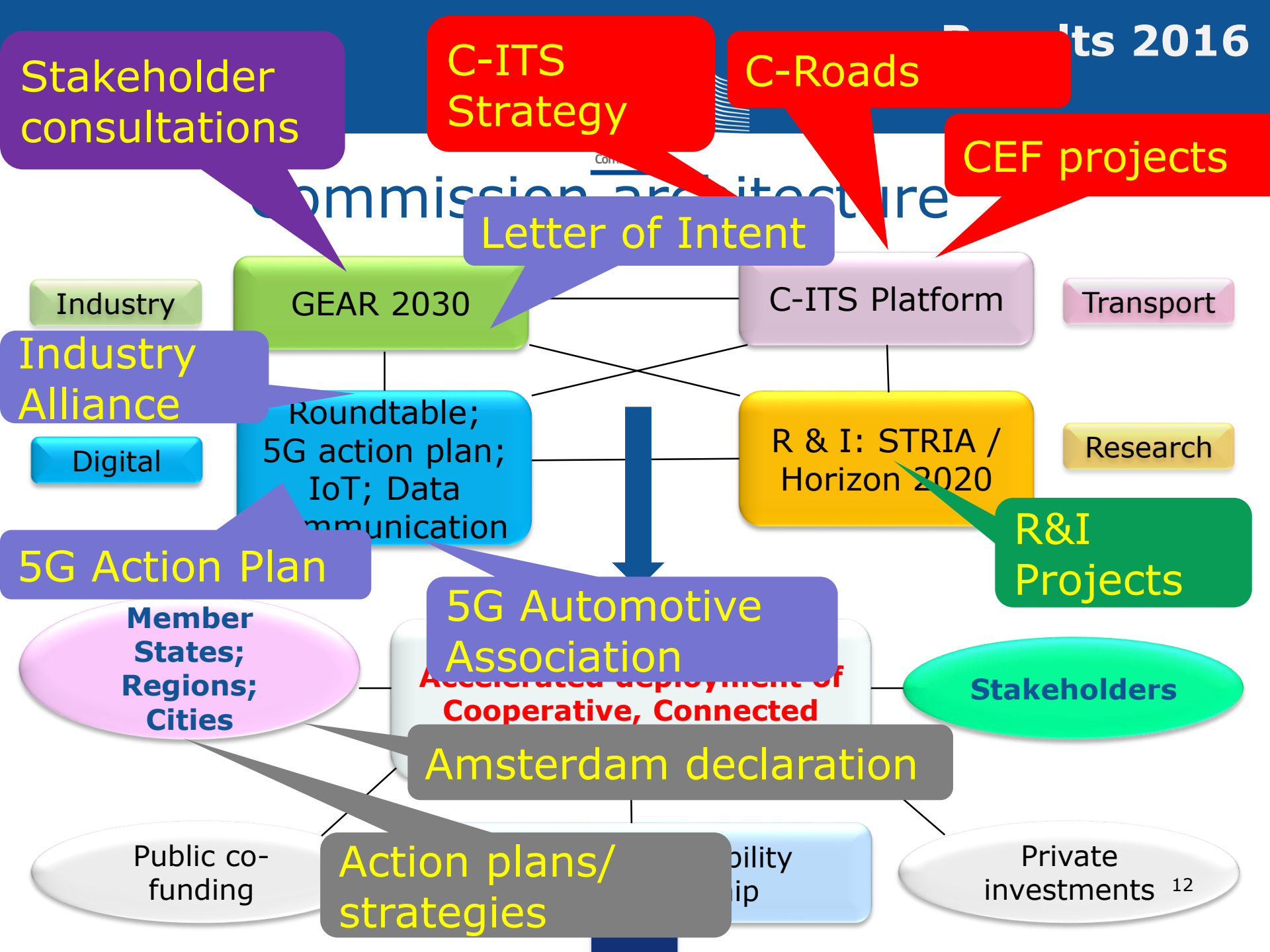
Amsterdam declaration

Public co-funding

Action plans/ strategies

Ability ip

Private investments 12



Report from MS & Industry

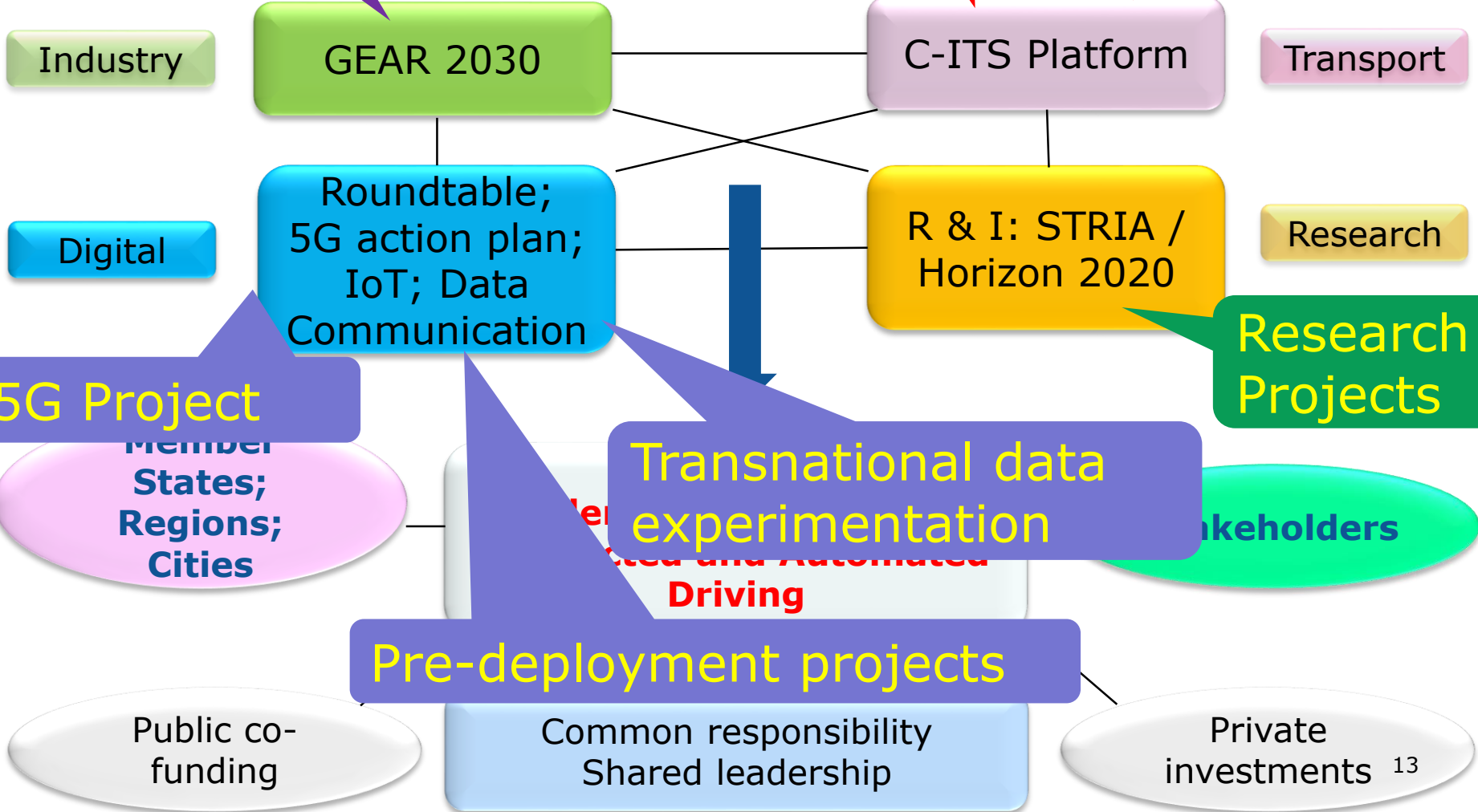
Implementing acts?

CEF projects



Plans 2017

Commission architecture





ITS Works

Arc Atlantique 2

Ursa Major 2

Next ITS 2

MedTIS 2

Crocodile 2

Crocodile 2 Hungary

Crocodile 2 Croatia

ITS deployment PL

ITS deployment SI

ITPs in DE and AT

ITPs in RO

ITPs in Flanders

ITPs in ES

EU ITS Platform

C-Roads Platform

I_HeERO

eCall AT

C-ITS Pilots

C-Roads AT

SCOOP@F

C-Roads FR

NordicWay

C-Roads CZ

Timely

C-Roads SI

AUTO C-ITS

C-Roads BE

SOLRED

C-Roads DE

CITRUS

InterCor

Total CEF funding for ITS: 318,449,472 EUR
Including 71,293,517 for C-ITS

Total investments for ITS: 731,570,742 EUR
Including 129,338,280 for C-ITS

Truck platooning as a use case

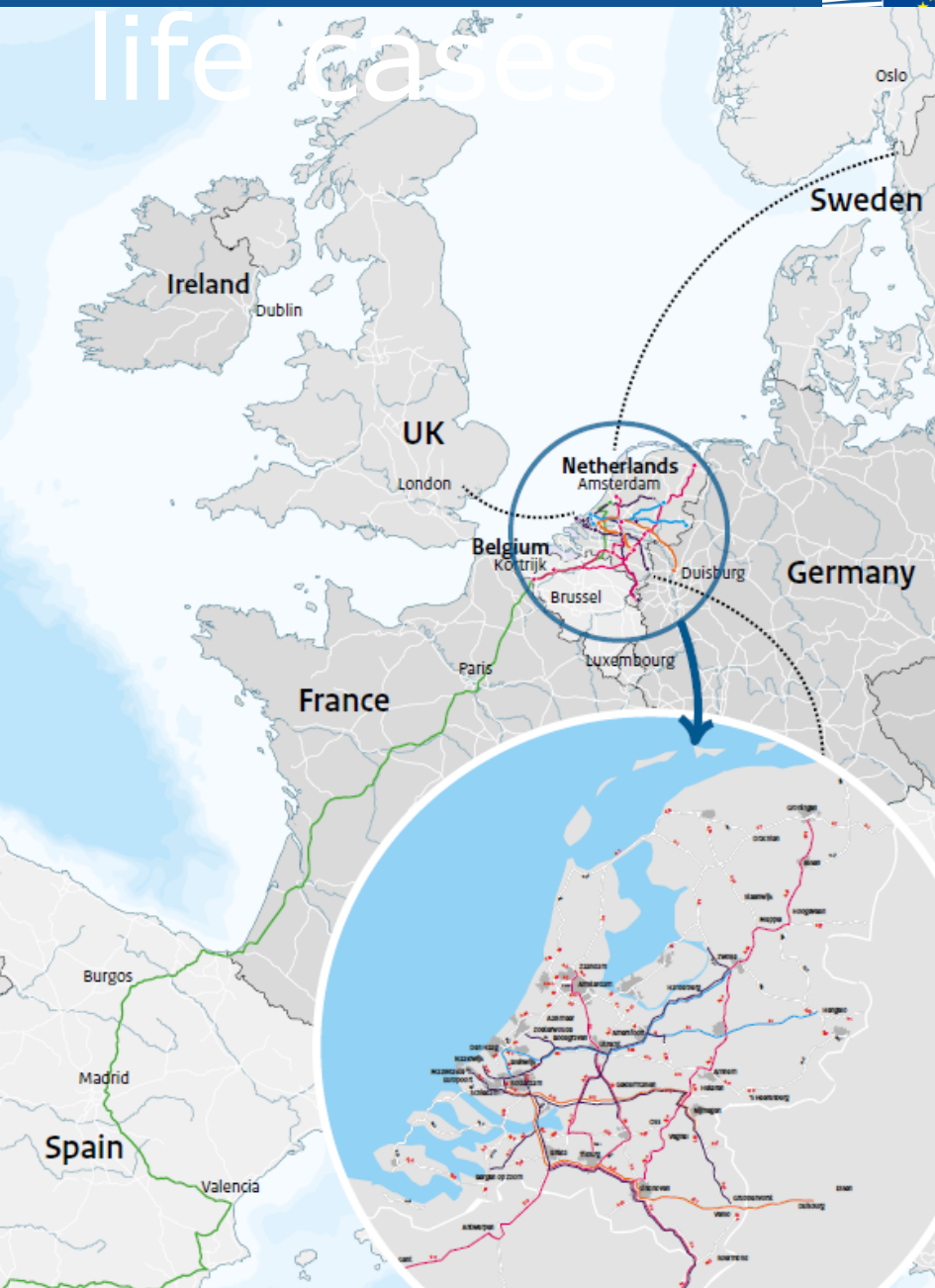


an Truck platooning ge



Cross Border testing: real

life cases



European Truck Platooning real life cases 2018-2019

CLUSTER: RETAIL

Corridor	Shipper	Carrier	OEM
Geldermalsen – Zaandam: N327-A15-A2-A10-N516	Ahold	Peter Appel	DAF
Tilburg – Zuid Limburg: N261- A65-A58-A2	Ahold	Peter Appel	DAF
Nieuwegein – Waalwijk – Tilburg: A27-A59-N261	Ahold	Peter Appel	DAF
Tilburg – regio Kortrijk België: N261-A65-A58-A16-W19-A34-A17-N323	Ahold	Peter Appel	DAF
Veghel – Heerlen: A50-A2	Jumbo	Jumbo transport	Scania
Heteren – Gent: A50-A15-A27-E19-E17	Varies	Tielbeke	DAF
Heteren – Groningen: A50-A28	Varies	Tielbeke	Scania/ Mercedes



CLUSTER: FOOD

Corridor	Shipper	Carrier	OEM
Rotterdam – Duisburg: A16-A58-A67	Unilever	Kuehne + Nagel	Iveco
Rotterdam – Veghel	Unilever	Keuhne + Nagel	Iveco



CLUSTER: GREENPORT (flowers)

Corridor	Shipper	Carrier	OEM
Aalsmeer – Bleiswijk – Burgos – Madrid – Valencia – Malaga: NL: A4-A20-A16 BE: E19-E17 F: A1-A10-A63 ES: AP8-AP1-A3-A62-A23-A4	Royal Flora Holland	Getru	DAF



CLUSTER: CONTAINER TRANSPORT

Corridor	Shipper	Carrier	OEM
Schiedam – Grubbenvorst: A4-A15-A50-A73	BVB Substrates	BVB Logistics	DAF
Maasvlakte – Waalhaven: N15-A15	Commodity trade Rotterdam	H.N.Post en Zonen	Mercedes
Barneveld – Maasvlakte: A1-A28-A27-A15	Varies	De Jong-Grauss Transport	DAF
Maasvlakte – Barendrecht: N15-A15	Hillfresh van den Heuvel, Greenery	Kamps Transport	DAF
Maasvlakte – Grubbenvorst: N15-A15-A73	Frankort en Koning	Kamps Transport	DAF
Maasvlakte – Kampen: A15-A4-A20-A12-A28	Maersk Line	Overbeek	Scania
Maasdijk – Maasvlakte vv: A20-A4-A15-N15	Nature's Pride	Post-Kogeko	Scania
Maasvlakte – Geldermalsen: N15-A15	Consumer goods	De Rijke Trucking	DAF
Maasvlakte – Kerkrade: A15-A16-A58-A2-E314	Varies	J.Starmans Transporten	Mercedes/DAF
Europoort – Utrecht: A15-A4-A20-A12	Greif	Van der Wal Transport	Mercedes



CLUSTER: NIGHT DISTRIBUTION

Corridor	Shipper	Carrier	OEM
Rotterdam – Den Haag – Hengelo vv: A13/A4-A12-A28-A1-A35	DHL Parcel	DHL Parcel	Mercedes
Zwolle – Utrecht vv: A28-App-App-A1	DHL Parcel Express	Overbeek Transport	Mercedes



Let's put the pieces together...



eddy.hartog@ec.europa.eu