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JAMA-CLEPA Business Summit

Venice, 27 & 28 October 2016

European automotive suppliers meet Japanese vehicle manufacturers

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Setting the Scene

Peter Fuss
Senior Advisory Partner Automotive
Ernst & Young

European automotive suppliers meet Japanese vehicle manufacturers

Outlook on the next ten years
Business

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- Raise of the consumers demand
  - Qualitatively: raising demand and incentives for safer, greener, more connected, more comfortable driving
  - Quantitatively: new and emerging markets (China, India, Iran…), replacement of old fleet

- Facilitation of international trade
  - Several important negotiations concluded (TransPacific Partnership) or about to be concluded (EU-Japan FTA, TTIP)
  - Progresses of worldwide harmonization, both within the UN framework and through bilateral agreements

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Outlook on the next ten years
Technologies

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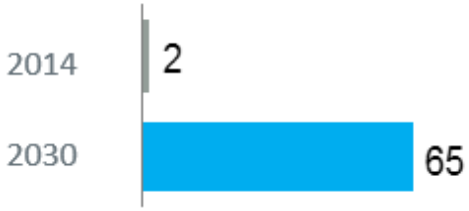
Electrification

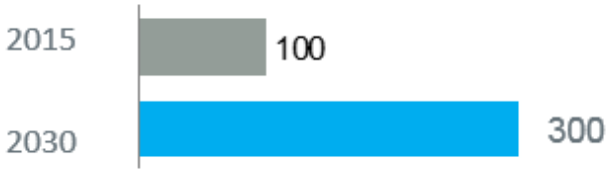
Stronger regulations on CO2 emissions, rising consumer demand, and government incentive programs for electric vehicles will boost electrical powertrain sales

Automated Driving

The technological advances and growth pockets for autonomous vehicles will drive increasing levels of autonomous vehicle features, leading to new market entrants, e.g., Google, and mergers and acquisitions



Market share of electric vehicles (incl. hybrids) / Percent of units produced



Lines of software code per vehicle
Million units

Source: McKinsey study for CLEPA

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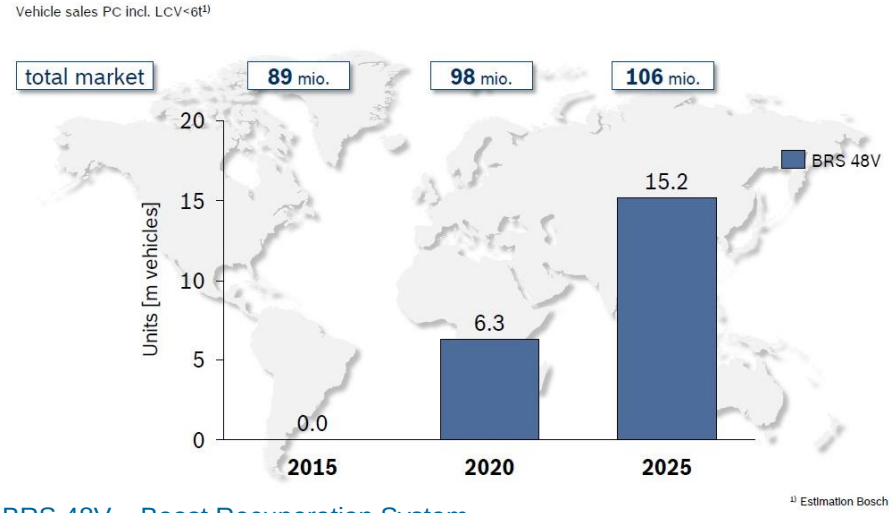
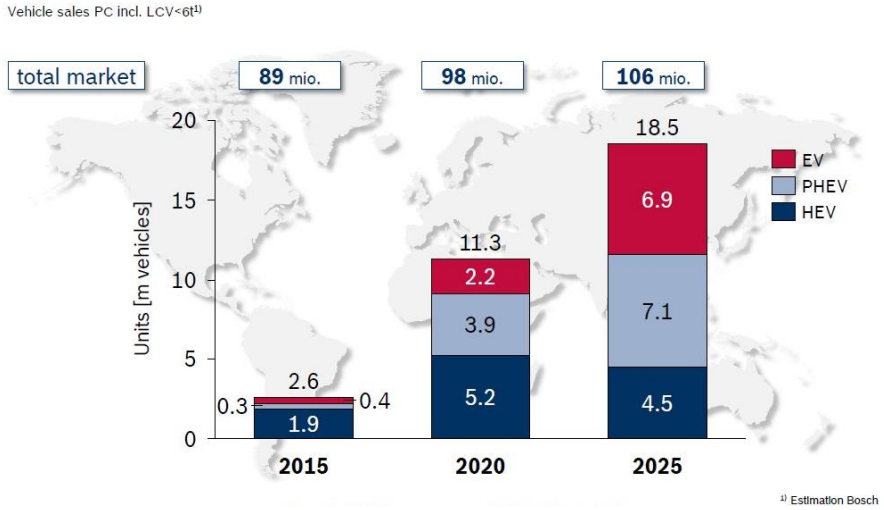
Outlook on the next ten years
Technologies – Electrification



BRS 48V – Boost Recuperation System



EV – Electric Vehicle, PHEV – Plug-in electric vehicle, HEV

- Growing share of market
- Huge potential due to:
  - Consumers demand and political pressure for greener vehicles
  - Development of infrastructures
  - Technological progress (batteries)
  - Instability of oil price

Outlook on the next ten years
Technologies – Electrification

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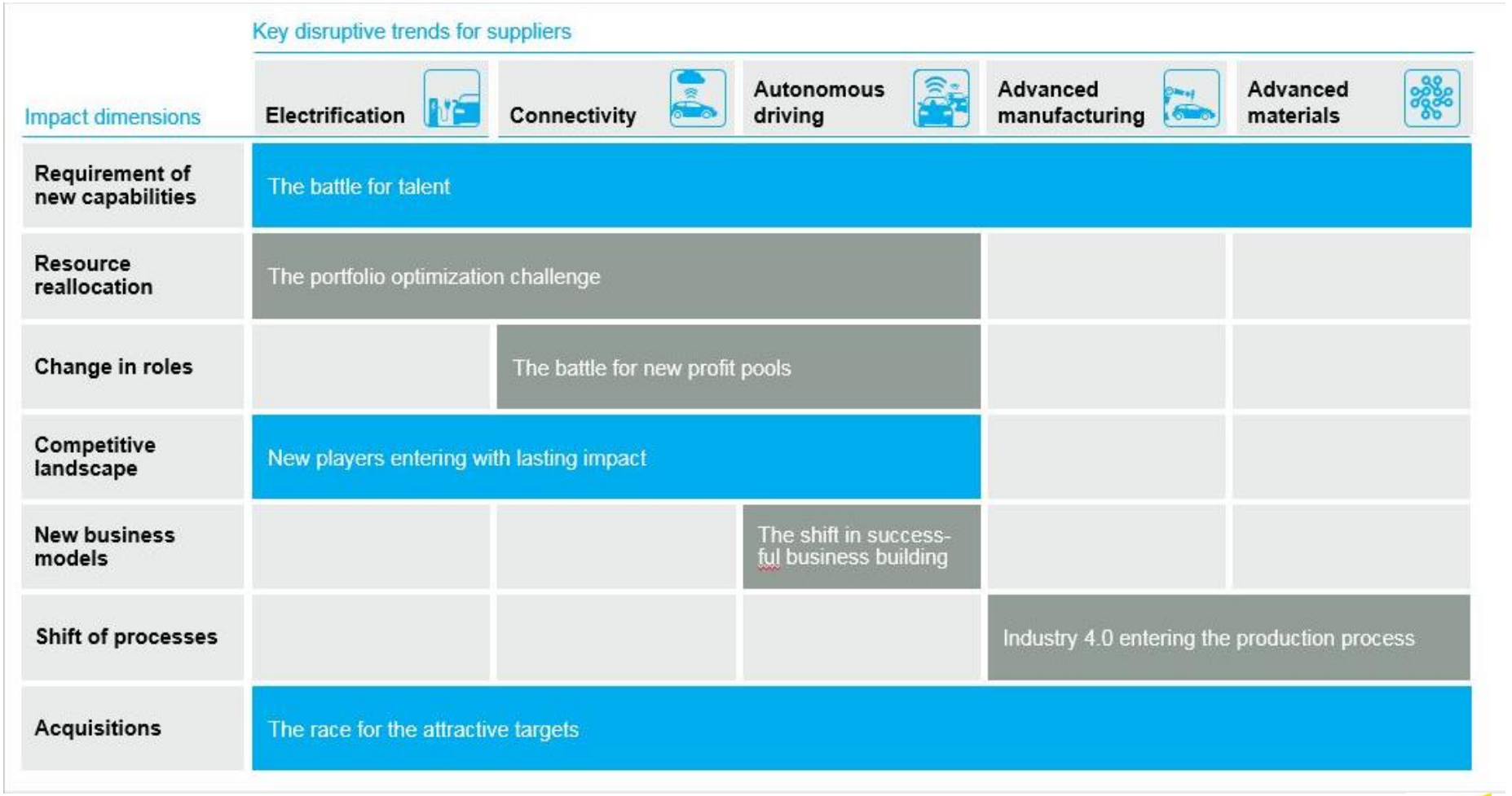

Source: McKinsey study for CLEPA

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Outlook on the next ten years
Technologies – Electrification

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Level of disruptiveness of major automotive trends on suppliers by component group

Low Medium High

Component groups	Key disruptive trends: Electrification	Connectivity	Autonomous driving	Advanced manufacturing	Advanced materials
Interior		2	4	6	8
Exterior				7	
Chassis					
Powertrain	1				
E&E		3	5		

Examples

1 Complete change of powertrain from mechanical clutch to gearless e-engines

2 Large screens for the interaction between user and car

3 New onboard architecture and cloud connectivity required

4 Complete change of interior design possible, e.g., turning seats

5 Computer will control all electric compo-nents of the car

6 3-D printing of complex new design elements

7 From classical punching and welding to backing and gluing

8 Lightweight materials, e.g., carbon will change shape of the car as well as composition and setup of chassis

Source: McKinsey stduy for CLEPA

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Outlook on the next ten years
Technologies – Connected & Automated Driving

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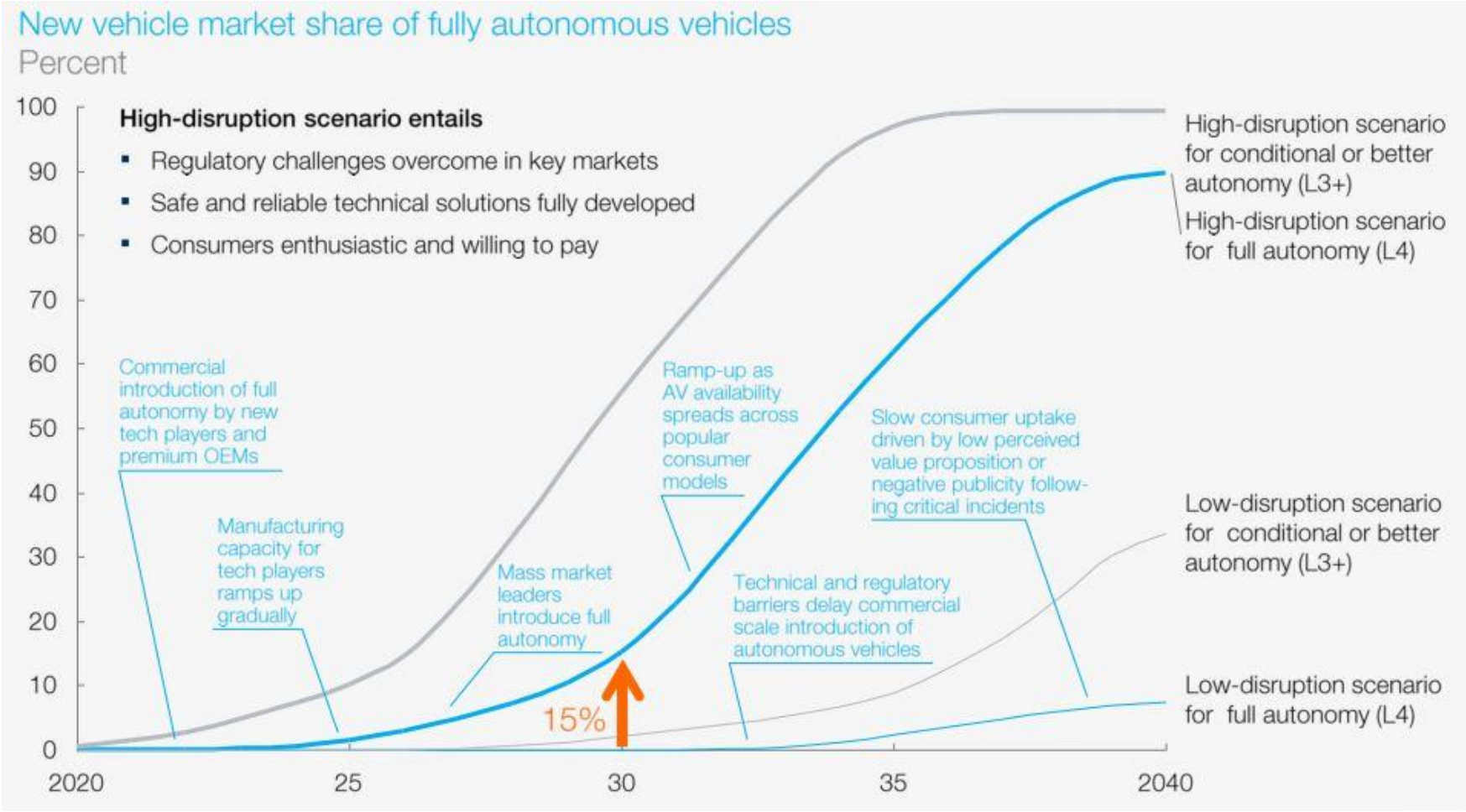

Source: McKinsey study for CLEPA

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Outlook on the next ten years
Technologies – Connected & Automated Driving

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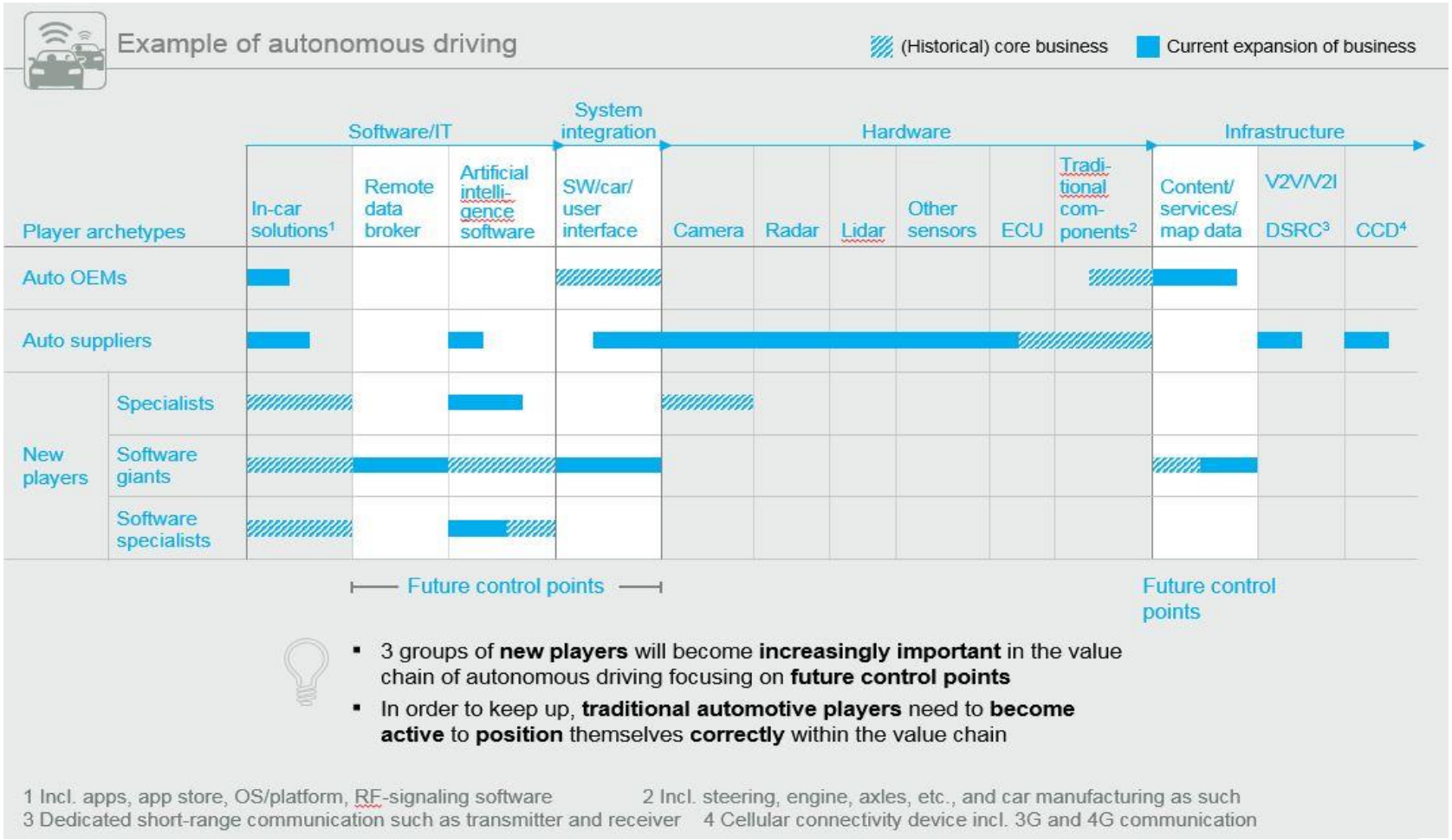

Source: McKinsey study for CLEPA

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Technologies – Connected & Automated Driving

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EU Regulatory Framework
Priorities in the European Union

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Post 2020 CO2 emissions targets for Europe	Type approval & Market surveillance	Real driving emissions for light-duty vehicles
Improving internal combustion engine efficiency and increasing electrification are crucial	Efforts to ensure the independence of technical services are crucial	Lead-time consideration in order to not impair the current vehicle production is crucial
Both alternative powertrains and ICE technologies running on low-carbon fuels must have a long-term future; technology neutrality is central	Free competition of the technical services and their capabilities and effectiveness should be secured	For NOx, cold start in RDE-LDV step 1 should be integrated as long as the requirements do not exceed an equivalent transfer from test-cycle to real-world
Setting of new targets needs to be done in a transparent manner	Market surveillance financing should not be connected to type-approval fees	For particles number, measurements technology and decisions are both recent.
We have to rely on the known NEDC test cycle and a Tank to Wheel basis	Validity of type-approval certificate should not be limited to 5 years	Remaining lead-time should not be affected by other regulatory developments

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EU Regulatory Framework
Type Approval

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History	Objectives
1970: First European Directive	Mutual recognition of 28 EU Type Approval Authorities certificates
2007: First Framework Directive	Free choice of the Technical Services for testing
Since 2010: Recast (independence and quality of testing, effetiveness of the market surveillance, greater European oversight)	70 different legislative acts needed for the whole vehicle approval, of which 60 are UN Regulations
Since 2015: Political pressure with a risk of heavy bureaucratic burdens and excessive measures without real benefits	Right to put on the market, sell, entry into service of any vehicle, component or “separate technical unit” bearing a valid approval
End 2016: Parliament’s first opinion	Free and single EU market of goods and services
Likely more than 1 year before compromise	Ex-ante and Ex-post verifications

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EU Regulatory Framework
General Safety Regulation

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Periodic 3-years evaluation by the European Commission

Active Safety Measures

Lane Keep Assistance extension to M1, N1 – Monitoring Driver Drowsiness & Distraction – Intelligent Speed Adaptation – Emergency Braking Display – Alcohol Interlock Interface – Tyre Pressire Monitoring – Reversing Detection – Automatic Emergency Braking System extension to M1, N1

Passive Safety Measures

Frontal Crash Full Width – Side Impact elimination of exemptions – Pole Impact – Rear Crash – Safety Belt Reminder – Frontal Crash for vehicles up to 3,5t – Frontal Crash Small Overlap – Side Crash Far-Side Occupants – A-Pillar and Windscreen Head Impact

Truck & Bus Specific Measures

Frontal End Blind Spot Detection – Truck Lateral Protection elimination of exemptions – Fire Safety for CNG Buses – Fire Suppression for Buses – Direct Vision

Other Measures

Crash Event Data Recorder (only M1, N1)

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Global Technical Harmonization

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- Technical harmonization through bilateral trade agreements
- But main body: UNECE – World Forum for Vehicle Regulations
  - Current work on automated driving
  - Definition of 5 categories of automation corresponding to the functionalities that the vehicle will be able to perform
  - Agreed draft performance requirements for the first 2 levels of automation defined by SAE International
  - Removing the current limitation of automatic steering functions to driving conditions below 10km/h contained in UN Regulation No. 79
  - After adoption by the World Forum at one of its forthcoming meetings, integration of these provisions into UN vehicle Regulation No. 79
  - Requirements for more complex highway autopilots to come
  - Impact of the adopted provisions not limited to the construction of vehicles but also to legislation on road traffic

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Trade Trends

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- Total trade of automotive parts between Europe and the rest of the world: €75 billion a year
- Global surplus in Europe for trade of automotive parts: €35 billion a year
- Worldwide market recovery after economic and financial crisis 2007/2008
- Emerging new but difficult markets

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Trade Trends – EU-Japan Free Trade Agreement

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Objectives	State of the art	Challenges
To conclude a favourable FTA for both sides	17th round of negotations took place in September	Though political leaders on both sides have called on the negotiators to conclude an agreement by the end of this year, business circles are worried that it could not happen before the end of 2016
Access to the domestic Japanese market for EU suppliers	CLEPA members provided input for the European Commission	
EU tariff liberalisation, subject to stage-in period		
Inclusion of an automotive EU-Japan NTB Annex		
Respect and inclusion of UN regulations		

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Trade Trends – EU-USA
Transatlantic Trade & Investment Partnership

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Objectives	State of the art	Challenges
Better access (cut or scrap custom taxes on exports, make it easier to sell services and to invest, agree rules that determine where a product is from)	15th round of negotiations took place in October with focus on regulatory cooperation and rules area	Stakeholders hope to end the discussions by the end of President Obama's term in office, as the new US President is likely not to put TTIP as a priority
Less red tape (agree ways to cooperate to set new rules, cut technical barriers to trade, cut the costs of meeting rules that differ)	CLEPA & MEMA share join commitment in favour of TTIP	
New rules (sustainable development, energy and raw materials, customs and trade facilitations, investment protection & ISDS, competition, IPR & geographical indications, State to State dispute settlement)		

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Trade Trends – EU-China
EU-China Investment Agreement

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- Opportunities:
  - Huge market
  - Incrase of the income of middle-class
  - Growing exports of manufactured goods from Europe to China

- Uncertainties:
  - Investment & Joint Ventures
  - Intellectual Property Rights
  - Market Economy Status in the framework of the World Trade Organization

- Needs:
  - Clear and safe framework for investment
  - Predictability of regulation

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Thank you for your attention!
ご清聴ありがとうございました。
Grazie per l'attenzione!

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