



CLEPA
*European Association of
Automotive Suppliers*

CLEPA

The European Association of Automotive Suppliers

Research Infrastructures

Stefan Deix, R&I Director



Outlook

- European Road Transport Research
- CLEPA – European Automotive Supplier Industry
- Key innovation areas
- Considerations



European Road Transport Research



Vehicle



Infrastructure



User



System



CLEPA
European Association of
Automotive Suppliers

European Road Transport Research





CLEPA
*European Association of
Automotive Suppliers*

CLEPA

- Founded in 1959
- 110 Corporate Members
- 25 National Trade and European Associations
- > 3000 Companies
- > 5 Million employees
- 600 Billion €
- Partner EU and UN

Facts



CLEPA

What we do...

- ✓ EU Governmental representation - CARS2020
- ✓ Access to finance (Horizon2020, Skills Council, COSME, EIB funding)
- ✓ Defining future technical regulation (UNECE WP29)
- ✓ International business support
- ✓ Investment and co-operation activities with India, Russia and China
- ✓ Ensuring harmonious development of international trade



Working Groups

Strategic Advisory Council

Research & Innovation

Technical Regulation

EU Affairs

Legal Affairs

Trade

Warranty

Aftermarket

Skills and Growth

SME

CLEPA



The Challenge

GLOBAL
COMPETITIVENESS

GRAND SOCIETAL
CHALLENGES

RESEARCH & INNOVATION



Key Innovation Areas



SAFETY



DECARBONISATION



ITS



LIGHTWEIGHT
MATERIALS AND
DESIGN



MANUFACTURING
AND GLOBAL
COMPETITIVENESS





Safety



- Automation of road transport
- Connected vehicle safety (applications)
- Intelligent vehicle dynamics control
- Vulnerable road user safety
- Human factors and interfaces
- New materials and structures
- Electrified vehicle safety



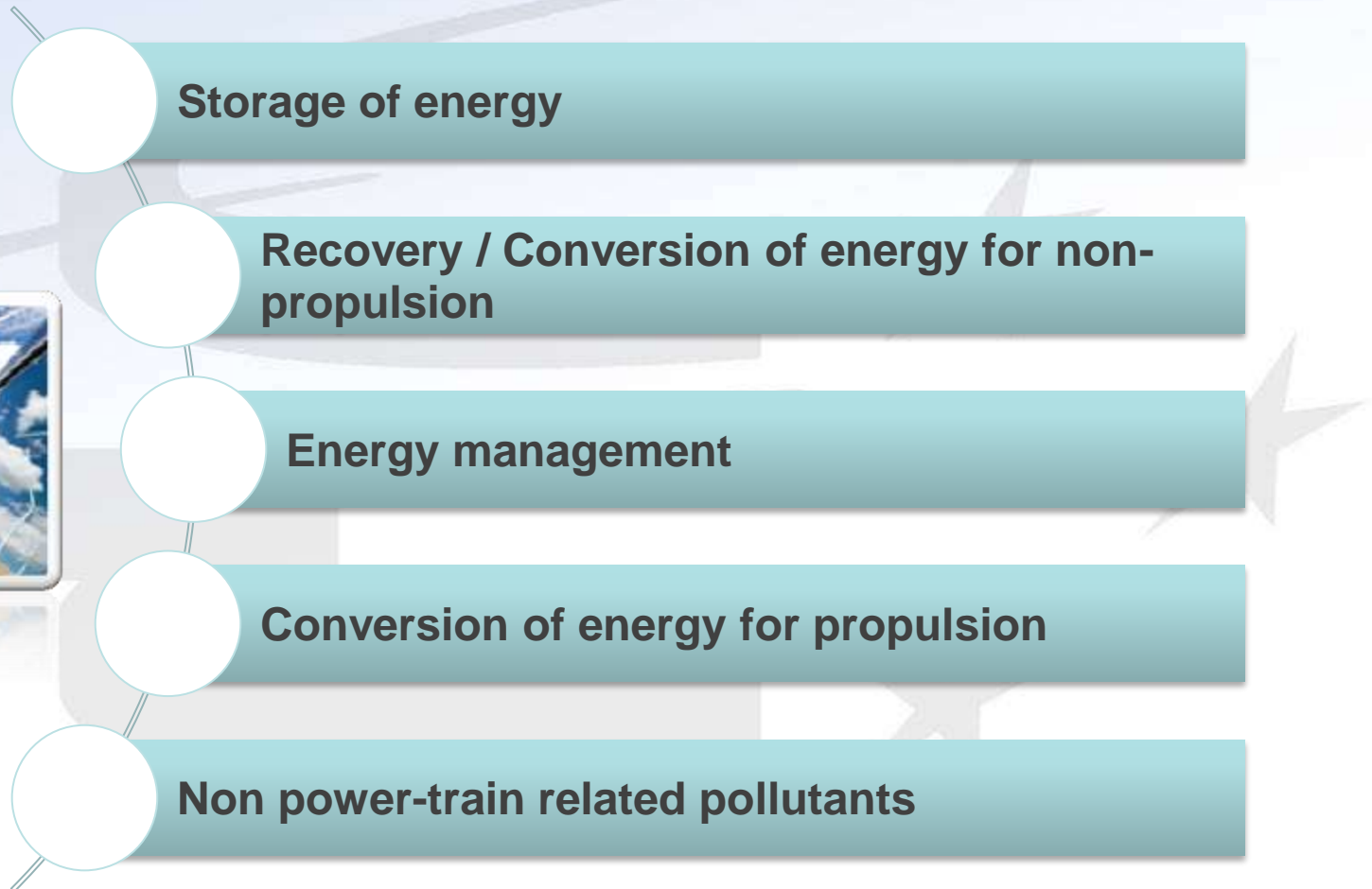
Safety

Research Infrastructure

- Active and passive safety
- Vehicle dynamics
- Impact and crash testing
- Driving simulator
- Test tracks and test cars
- Large scale real world testing
- Battery testing (safety)



Decarbonisation





Decarbonisation

Research Infrastructure

- Large scale real world testing
- Battery testing (efficiency and life-cycle)
- Engine/emissions testing
- Aerodynamic and wind tunnel testing
- Fuels and integrated systems testing
- Tire testing



ITS



Applications and Technological Solutions for Cooperative systems

Communication and Interfaces to Infrastructure (V2I, V2V)

Automated Driving Vehicle Technologies

Services, Navigation and Traveller Information



ITS



Research Infrastructure

- Large scale real world testing
- Active Safety Testing
- Vehicle dynamics testing
- Electronics and microelectronics testing
- EMC/electrical interference testing
- ITS standard conformity



Lightweight Materials and Design



High Performance Metals and Alloys with Reduced Weight

Integration of Plastics and Composites

Efficient Forming and Joining Techniques

Lightweight by Design and Optimization

Advanced Manufacturing for Lightweight Materials



Lightweight Materials and Design

Research Infrastructure

- Materials testing
- Aerodynamic and wind tunnel testing
- Vibration and shock testing
- Acoustic testing
- Mechanical testing
- Reliability/life-cycle testing
- Fatigue/fracture testing



Global Competitiveness and Satisfaction



Driver/User behaviour

Affordability

Comfort



Customer Expectations

Research Infrastructure

- Driving simulator
- Large scale real world testing
- Aerodynamic and wind tunnel testing
- NVH testing
- Environmental testing
- Reliability/life-cycle testing
- Tire testing



Considerations

Invest vs.
buy service

Quality
requirements

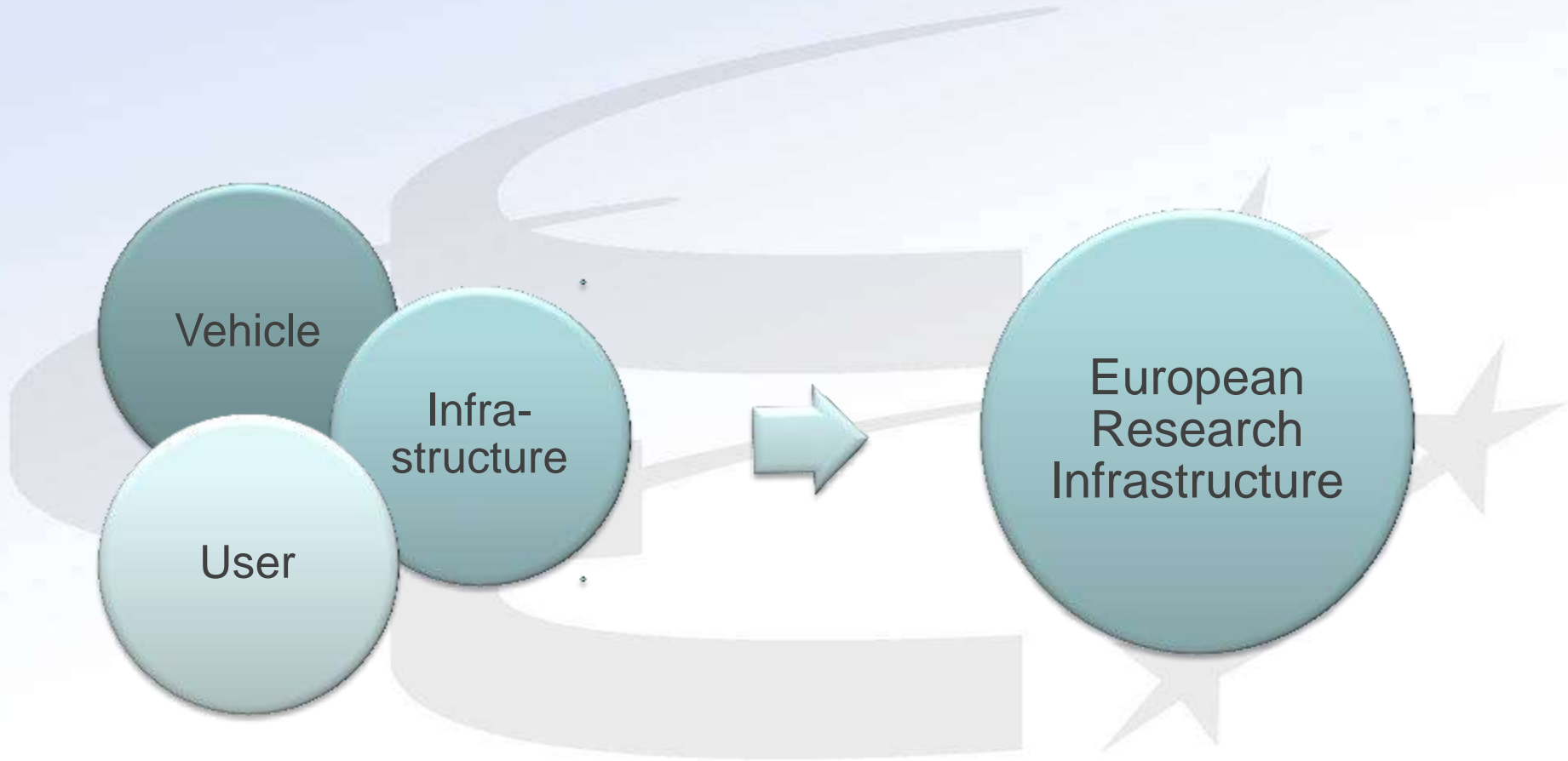
Costs for
testing

Intellectual
property
protection

Timing and
availability
issues



Synergies





Conclusion

- Innovation is key for the automotive industry
- Research with strong focus on implementation
- World class research infrastructure is required
- Good coordination with research providers