



Luxembourg

Automotive

Sector

Green, automated & connected mobility

Luxembourg automotive sector

- ✓ Almost 50 companies
- ✓ OEM's (2), component suppliers, connectivity & smart mobility service providers (vehicle related)
- ✓ University of Luxembourg and 2 Luxembourg based public research institutes
- ✓ About 1,5 billion € sales turnover
- ✓ About than 2.5 billion € additional turnover (equivalent) related to Luxembourg based R&D cost-centres
- ✓ About 10.000 employees in total
- ✓ About 2.500 multi-lingual and multi-cultural professionals in R&D
- ✓ Sector “powered” by German, French and Italian automotive engineering experts
- ✓ Export to 5 continents
- ✓ Founding member of AUTOREGION (Greater Region - cross border - automotive cluster)

Luxembourg automotive sector

Some of our well known global players



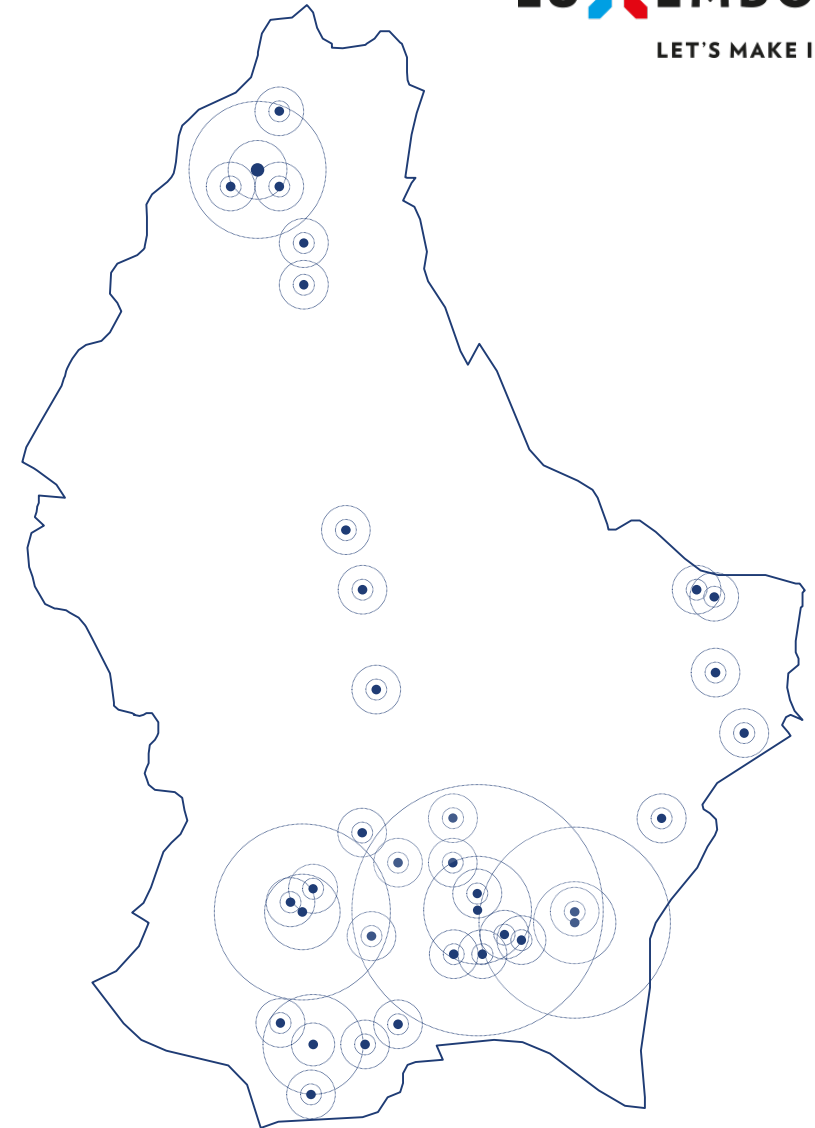
	 TERALINK solutions	
	 a subsidiary of CENTRAL GLASS	 ROTAREX VALVES • FITTINGS • REGULATORS
 a sense for innovation	 MAHLE Driven by performance	 ArcelorMittal
		

Coverage of all major key-competences

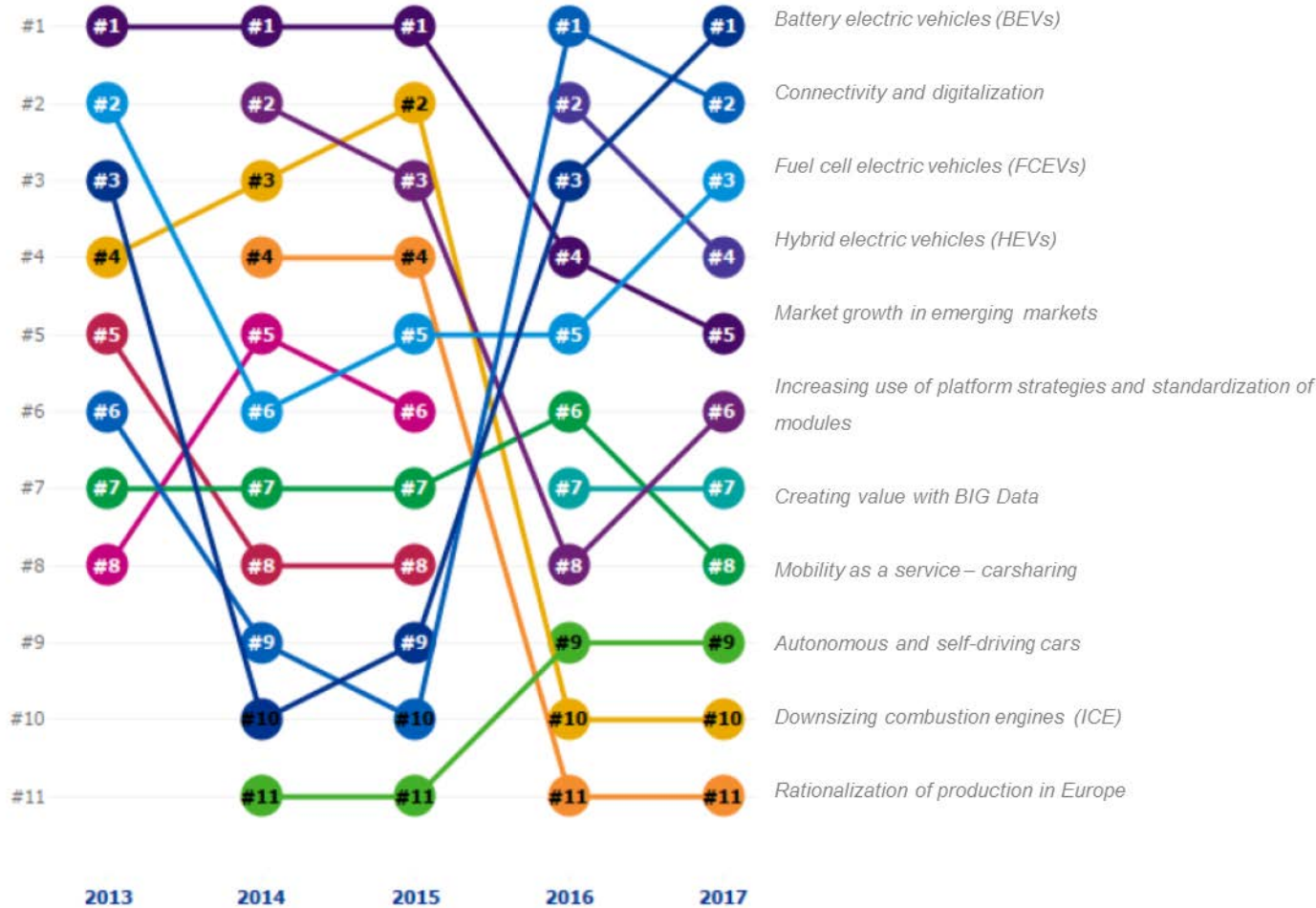


... almost 50 automotive companies in total

- | | | |
|------------------|-----------------|--------------------------|
| Accumalux | Fanuc | Motion-S |
| AECT | Faurecia | QED |
| Airtech | FB Consulting | Raval Europe |
| Amora | Goodyear | Rotarex Automotive |
| ArcelorMittal | Carlex | SAIC |
| Ateel | Hitec | SDAAC |
| Brace Automotive | HUSKY | Siemens |
| CEBI (Elth) | Hydro Aluminium | SES |
| Circuit foil | Hyosung | SNCH |
| Clean Carb | IEE | SnT |
| Codipro | KATCON | Tarkett |
| Delphi | KYMCO | Technofibres |
| Dometic | LIST | Textilcord |
| DuPont | Luxcontrol | TERALINK Solutions |
| Eurocomposites | LuxMobility | U-Jet |
| Examotive | Mahle | University of Luxembourg |



Innovation & new business development



Source: KPMG global automotive executive survey 2017



#1 Electrification of mobility



#2 Connectivity, digitalization, Big Data

Global battery-partnerships (2016)



CATL PRIDE 普莱德
BAIC



Panasonic
Tesla Volkswagen Ford



BYD



LG Chem RENAULT GM Ford



SAMSUNG
BMW



GS YUASA
MITSUBISHI



Automotive Energy Supply Corporation
NISSAN

Source: www.evobsession.com

E-Bus Competence Centre (EBCC)

- ✓ Established in 2016 by Volvo Bus Corporation
- ✓ Partnership with Luxembourg Ministries Economy & Transport
- ✓ E-mobility Test Bed with “Opportunity Charging” infrastructure
- ✓ R&D in e-mobility services
- ✓ Use case for ITS technologies: zone management
- ✓ Training & Service Support



Zone management



Traffic management



Opportunity charging



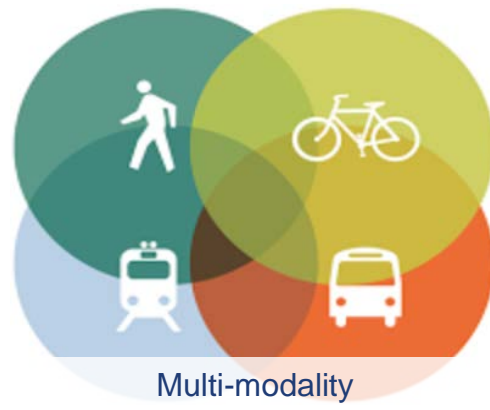
L'ÉLECTROMOBILITÉ AU
GRAND-DUCHÉ DE LUXEMBOURG
800 bornes de charge publiques d'ici 2020



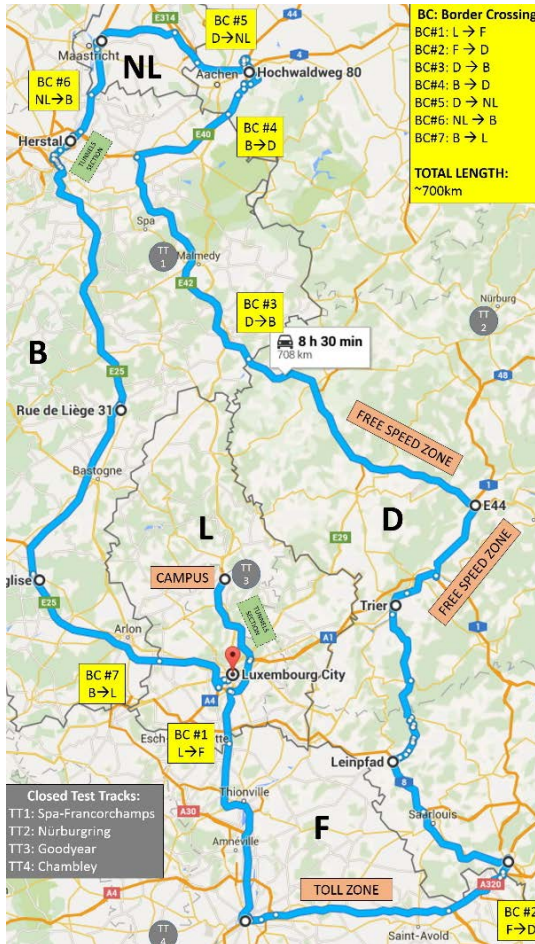
Joined effort: Minister of the Economy Mr. Étienne Schneider (middle) and Minister for Sustainable Development and Infrastructure Mr. François Bausch (Left).



Connectivity, digitalization, big data



Cross border testing



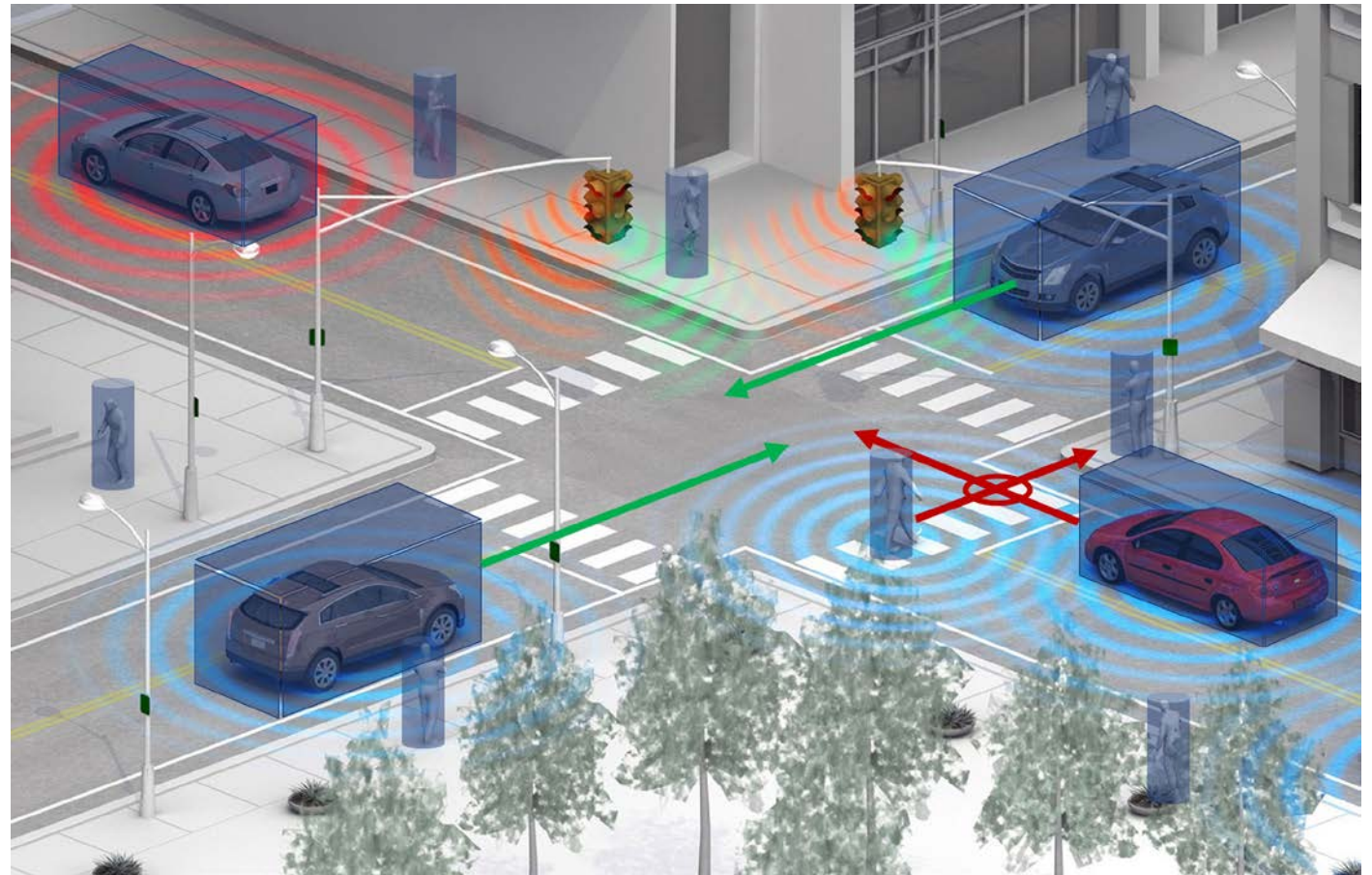
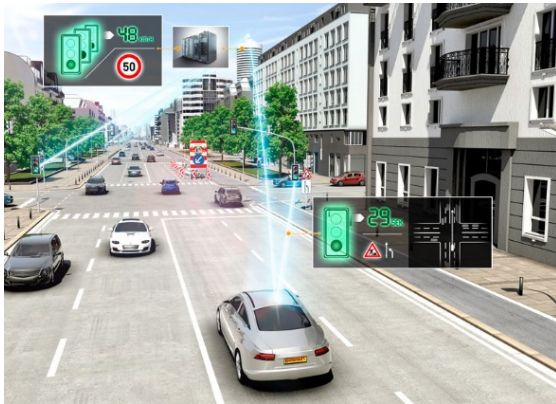
- ✓ Greater Region day trip with 7 border crossings
- ✓ Total distance about 700km
- ✓ Includes high speed section (no speed limitation)
- ✓ Several tunnels up to 3km length
- ✓ Several high dense sections (high congestion risk)
- ✓ Toll section equipped with traditional toll gates

Vehicle & prototype preparation and offices for development teams or development consortia can be offered on the future (2018) Luxembourg Mobility innovation campus in Luxembourg

Intelligent infrastructures

- ✓ HD mapping & positioning
- ✓ 5G connectivity
- ✓ Infrastructure (optical) sensors
- ✓ C2X - C2C communication

Goal: enhanced safety in urban environments



Cyber security considered as key competence



The University of Luxembourg runs the reputed Interdisciplinary Centre for Security, Reliability and Trust (SnT)



**OVER 20 STRATEGIC PARTNERS
OVER 180 RESEARCHERS**

MAIN FOCUS AREAS:

applied security, software transfer of resources



**18 STRATEGIC PARTNERS
OVER 170 RESEARCHERS**

MAIN FOCUS AREAS:

Parkinson, Bioinformatics, Alzheimer



Collaborate with new generation world-class research institutes

- **OUTSOURCE RESEARCH WITH BEST INTERNATIONAL TALENTS IN APPLIED AND MARKET-DRIVEN RESEARCH**
- **DEVELOP NEW INTELLECTUAL PROPERTY**
- **PLAN MEDIUM-TERM RECRUITMENT WITH TRANSFER OF RESOURCES**

World-class data centres

46,741 M² FLOORSPACE | 23 DATACENTERS



1. BCE Junglinster (Broadcasting Center Europe)
2. BCE Kirchberg (Broadcasting Center Europe)
3. BT
4. CEGECOM – Artelis
5. CETREL
6. EBRC Resilience Centre City 1
7. EBRC Resilience Centre City 2
8. EBRC Resilience Centre West
9. EBRC Resilience Centre South
10. EBRC European Resilience Centre East
11. EDH (European Data Hub)
12. LAB DataVault PSF
13. LuxConnect DC 1.1
14. LuxConnect DC 1.2
15. LuxConnect DC 1.3
16. LuxConnect DC 2
17. Data4 Luxembourg
18. SES
19. Sungard
20. Le Freeport
21. Telecom Luxembourg Private Operator (TLPO)DC4
22. Verizon
23. Visual Online

Well-connected ultra low-latency hub



Mobility innovation Campus

- Strategy Public – Private partnership in open innovation and shared R&D on behalf of next generation green, connected and automated Mobility
- Capacity Total surface 14 hectare of which 8 hectare available for new investors, infrastructure capable of hosting 4.000 engineers and scientists daily – business incubation surface 1.400m²
- Planning Inauguration phase 1 early 2019



Well connected - easy access to European markets



Luxembourg Automotive Sector



Joost Ortjens

Head of Sector - Automotive

LUXINNOVATION GIE

7, rue Alcide de Gasperi

L-1615 Luxembourg

T (+352) 43 62 63 - 653

M (+352) 621 139 474

joost.ortjens@luxinnovation.lu

Thank you!
Questions and answers