



European Green Cars Initiative

Roadmaps, Projects And Future Plans of the European Green Cars Initiative PPP

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EU Policy for Clean Transport

- **Europe 2020 Strategy**

 - 20% cut of GHG emissions

 - 20% more renewable energy

 - 20% less energy consumption
(in 2020, compared to 1990)

- **Transport 2050 Strategy**

 - 60% cut of carbon emissions by 2050

 - 50% less conventionally fuelled cars in cities 2030

 - no more conventionally fuelled cars in cities 2050

- **EU Fleet Emission Standards for New Cars**

 - 130g CO₂/km (2012 – 2015, phase-in)

 - 95g CO₂/km (2020)





European Green Cars Initiative

- **Public Private Partnership (PPP)**
in the European Economic Recovery Plan
- **Total budget:**
1 bn EUR for research and development
(500 Mio EUR funding)
- PPP of industry and European Commission
- **Implementation** through the instruments of the
7th Framework Programme (2010-2013)
- **Goals:** climate protection, energy security, zero local
emissions, safety, traffic fluidity, and global
competitiveness of the automotive industry
- **Major focus** on electrification (ca. 2/3 of budget)



European Green Cars Initiative

- **Three Pillars:**
 - Electrification / Fully Electric Vehicle
 - Long Distance Trucks
 - Logistics and Comodality
- Implemented by **European Technology Platforms**



EPoSS

European Technology Platform
on Smart Systems Integration



- **Industrial Advisory Board** established
- Supported by **Coordination Actions**





Public-Private Partnership

ERTRAC / EPoSS / SmartGrids ...
SRA and Long-Term Roadmaps

Private

Consultations



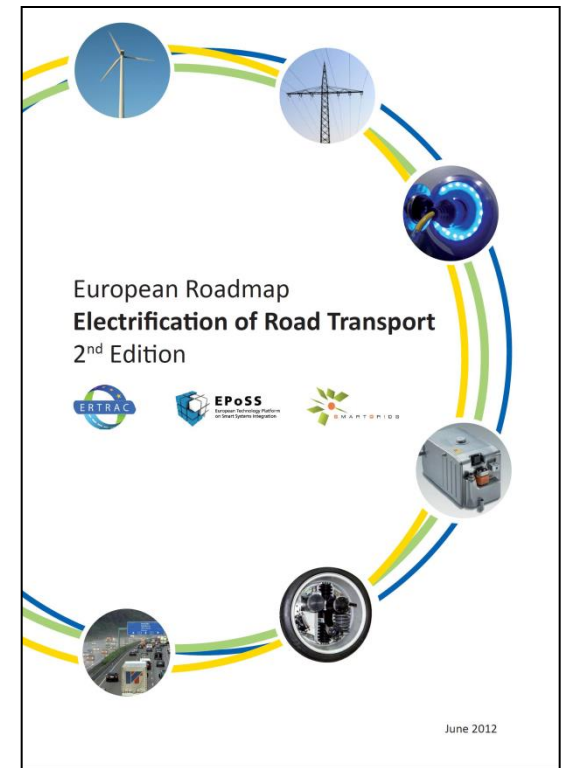
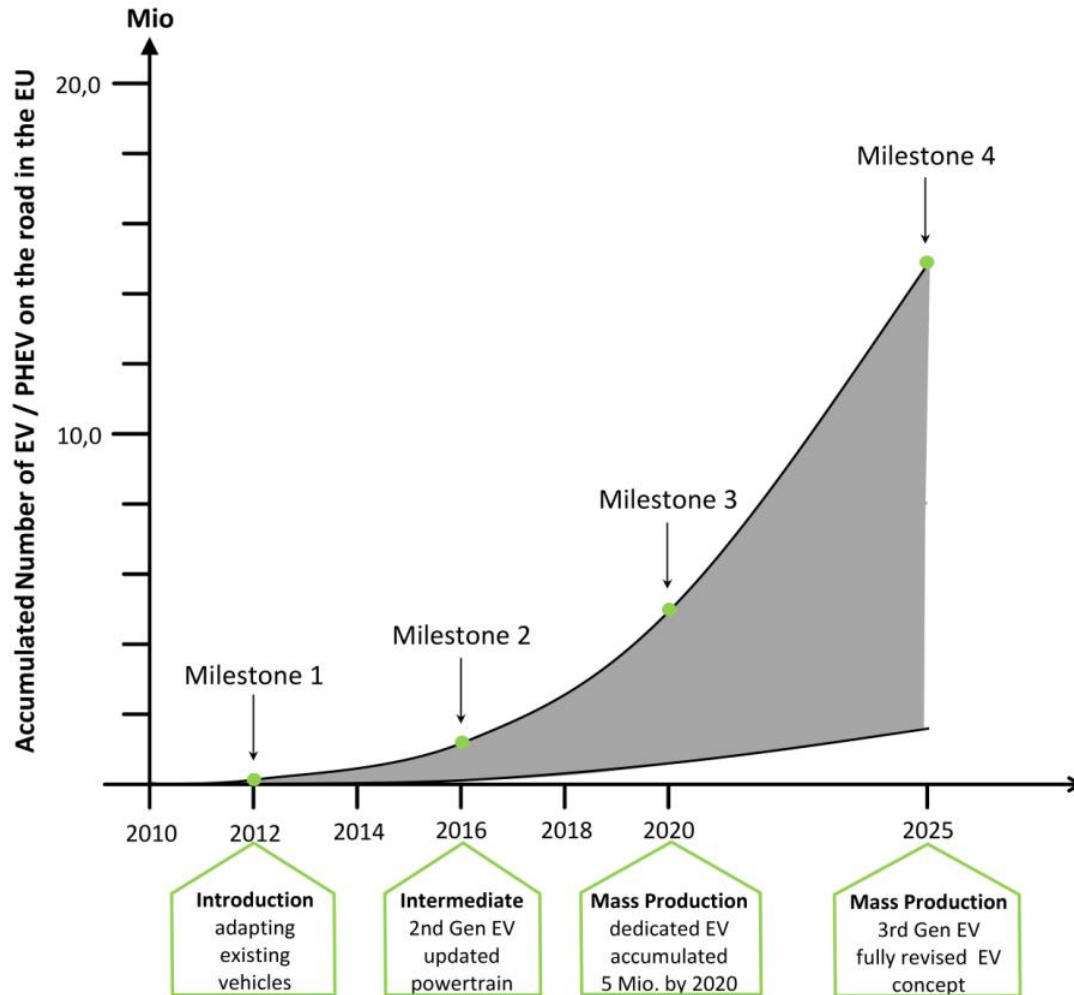
Proposal

European Commission
Work Programmes and Annual Calls

Public



Electrification Roadmap



Drafted by an industrial task force
of ERTRAC, EPoSS, SmartGrids (2009, updated 2012)

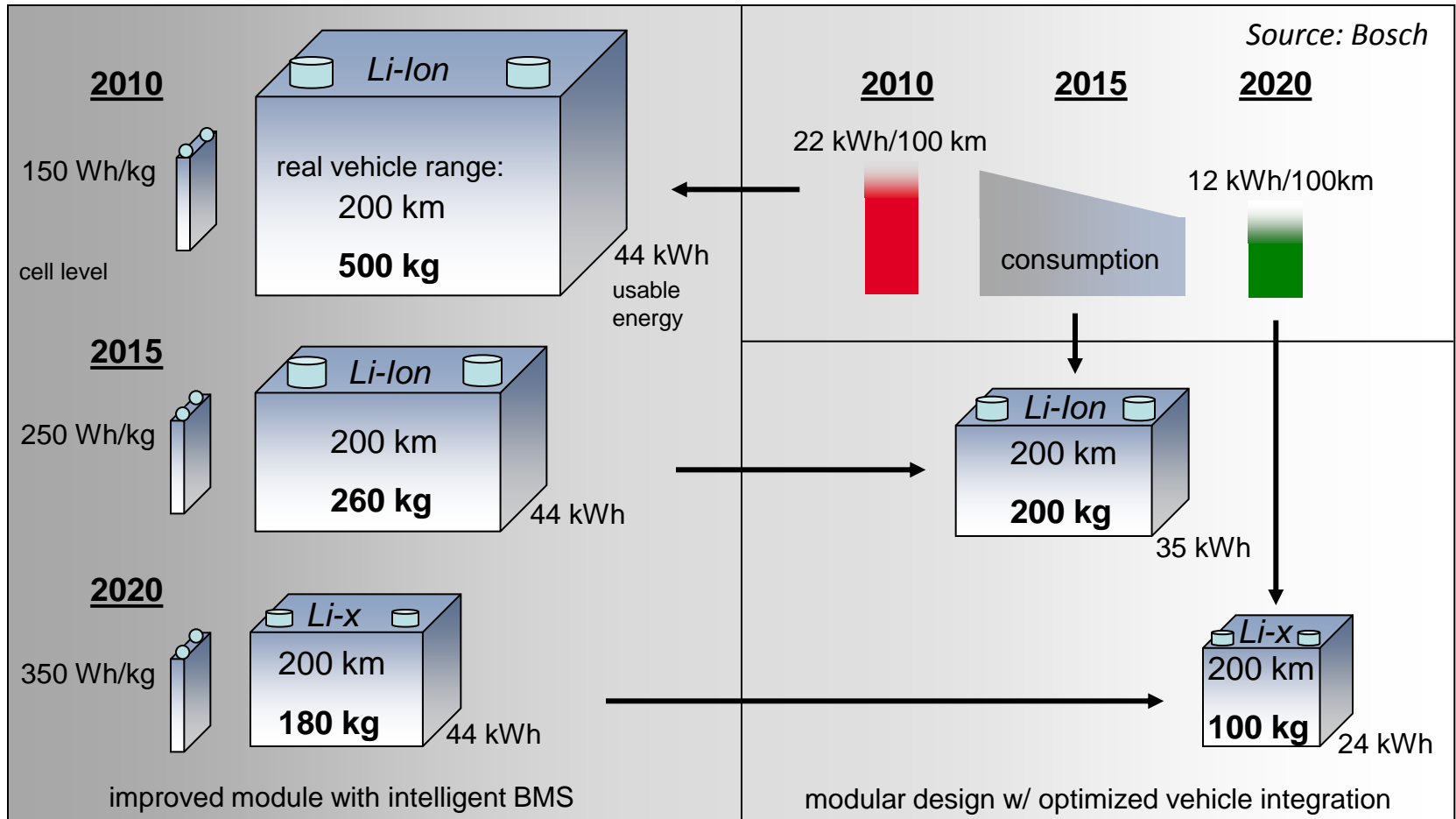


Milestone 4 (2025)

Optimize Battery

PLUS

Optimize Vehicle System



Synergies in various technology fields

lead to increased energy efficiency and cost reductions



Transversal Topics as Annexes

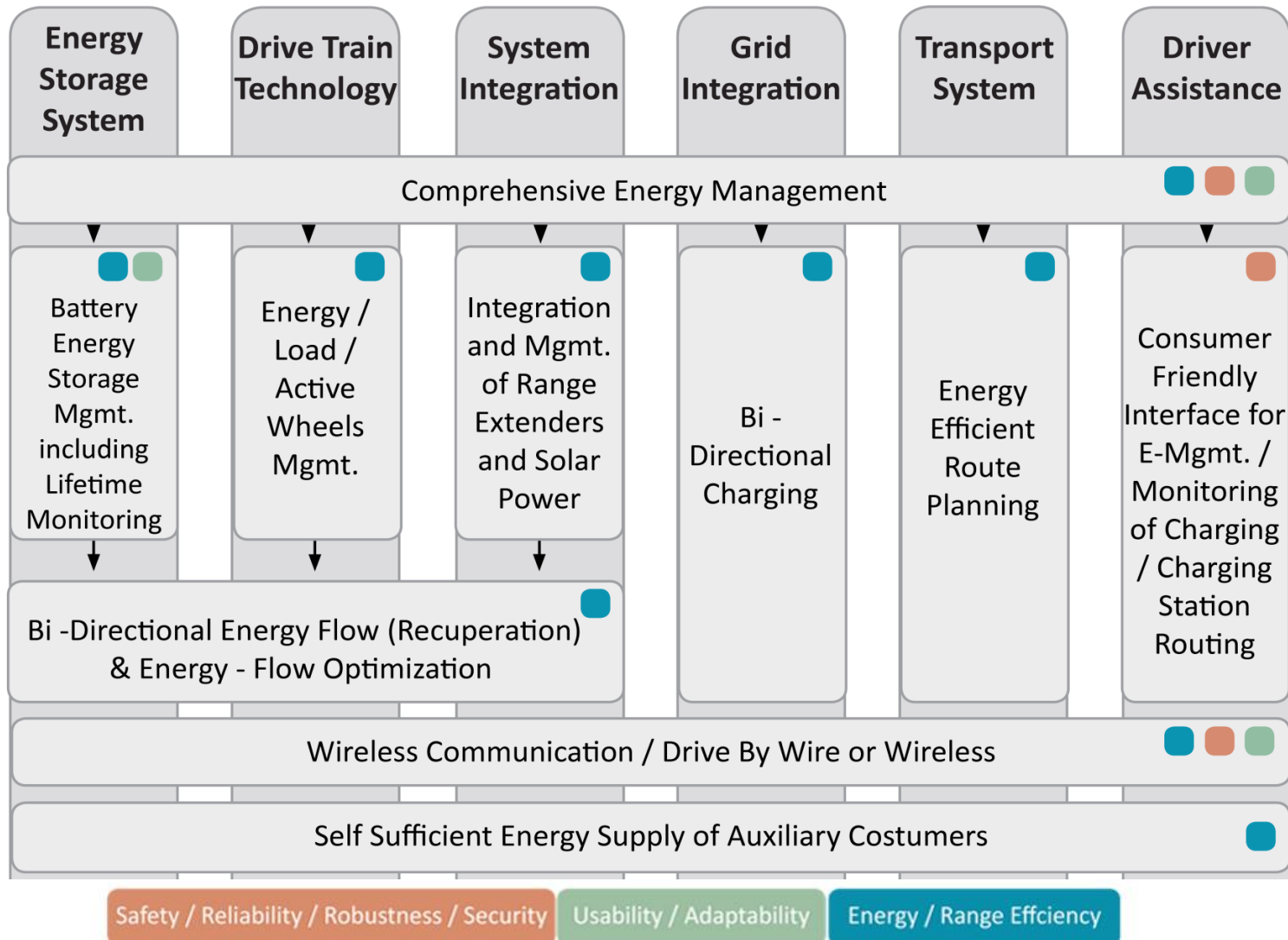
- Modelling & simulation (CAPIRE)
- **ICT for the FEV (ICT4FEV)**
- Grid Infrastructure (CAPIRE)
- Materials (CAPIRE/Smart EV-VC)



ICT for the FEV Roadmap



Enabling energy-efficient, safe and user friendly FEVs

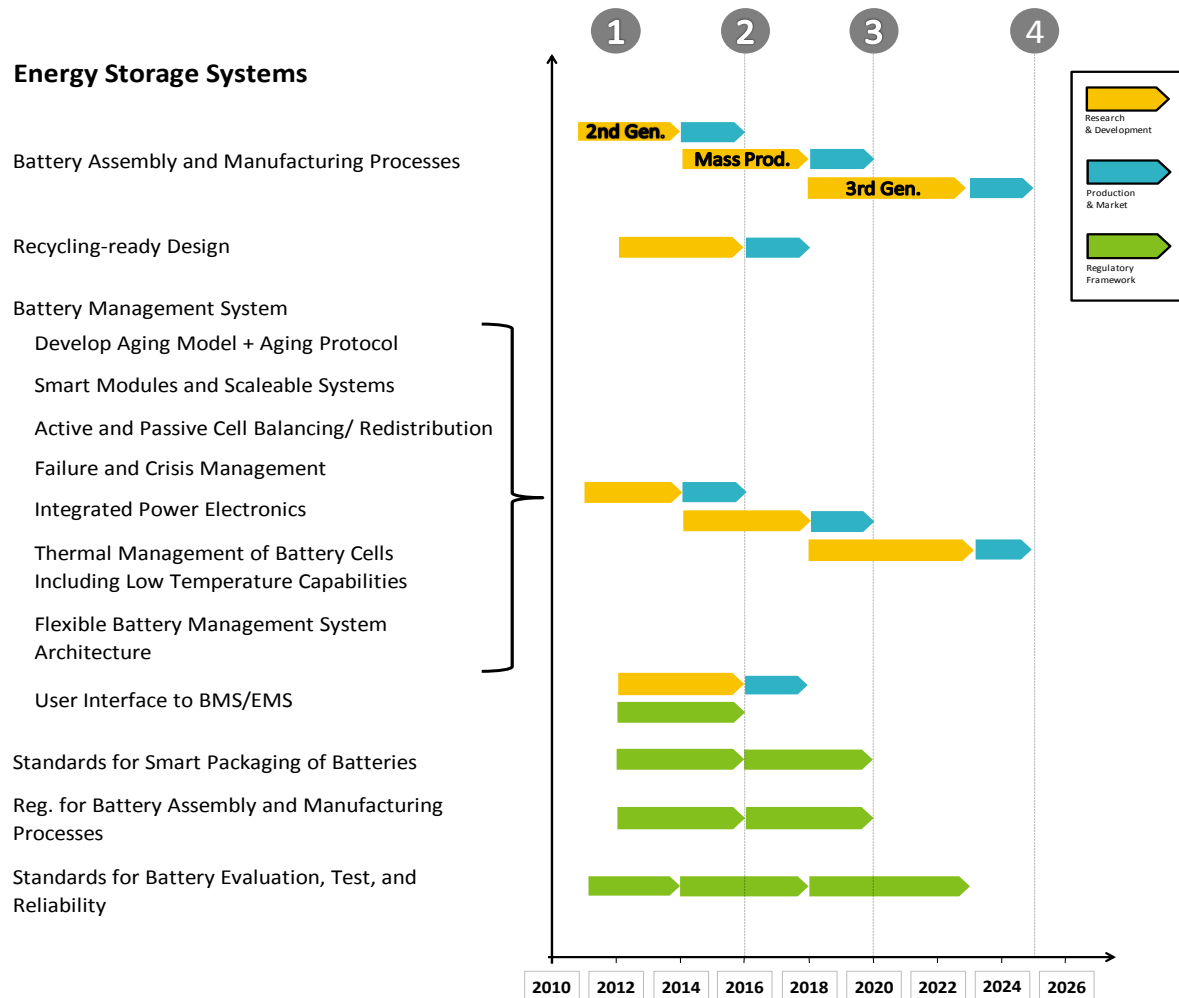




ICT for the FEV Roadmap



Translation of Functionalities into critical ICTs and smart components & systems





Calls for Proposals

- **2009**
 - Electrical **Components** and **Machines**
 - **ICT** for the Fully Electric Vehicle
 - Electrochemical **Storage** Applications
 - Integrated **Demonstration** Project
- **2010**
 - **Safety** Issues of EV
 - **Manufacturing of Batteries** and Components
 - **ERA-Net+** Electromobility
 - Optimization of **Internal Combustion Engines**
 - Efficient **Logistics**
- **2011**
 - **Lightweight Materials**
 - **Smart infrastructures** and services
 - **Modeling and testing** for Safety of EVs
 - **Urban Freight** Electric Vehicles (Demo)



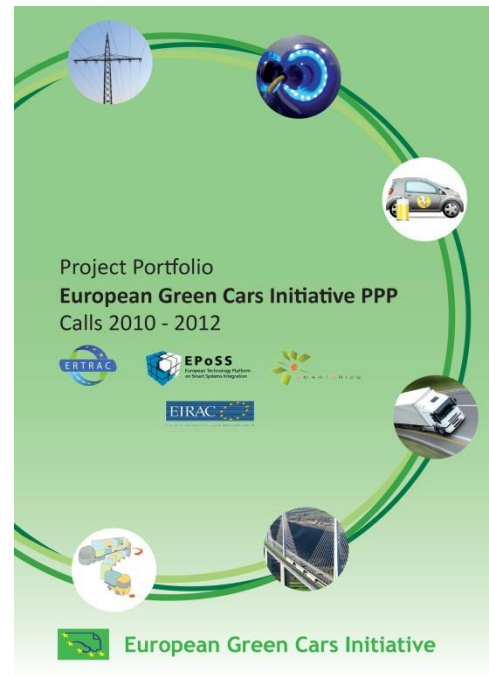
Calls for Proposals

- **2012**
 - **Ageing resistant batteries**
 - Feasibility analysis and technological development of **on-road charging**
 - Next generation **electric motors**
 - Future **light urban electric vehicles**
 - Demonstration of **electric buses**
 - Advanced **System Architecture for FEV**
 - Comprehensive **Energy Management**
 - Configurable and adaptable **truck**
 - **Energy conversion** for heavy duty transport
 - Technical and operational connectivity in **intermodal freight transport**



Collaborative Projects

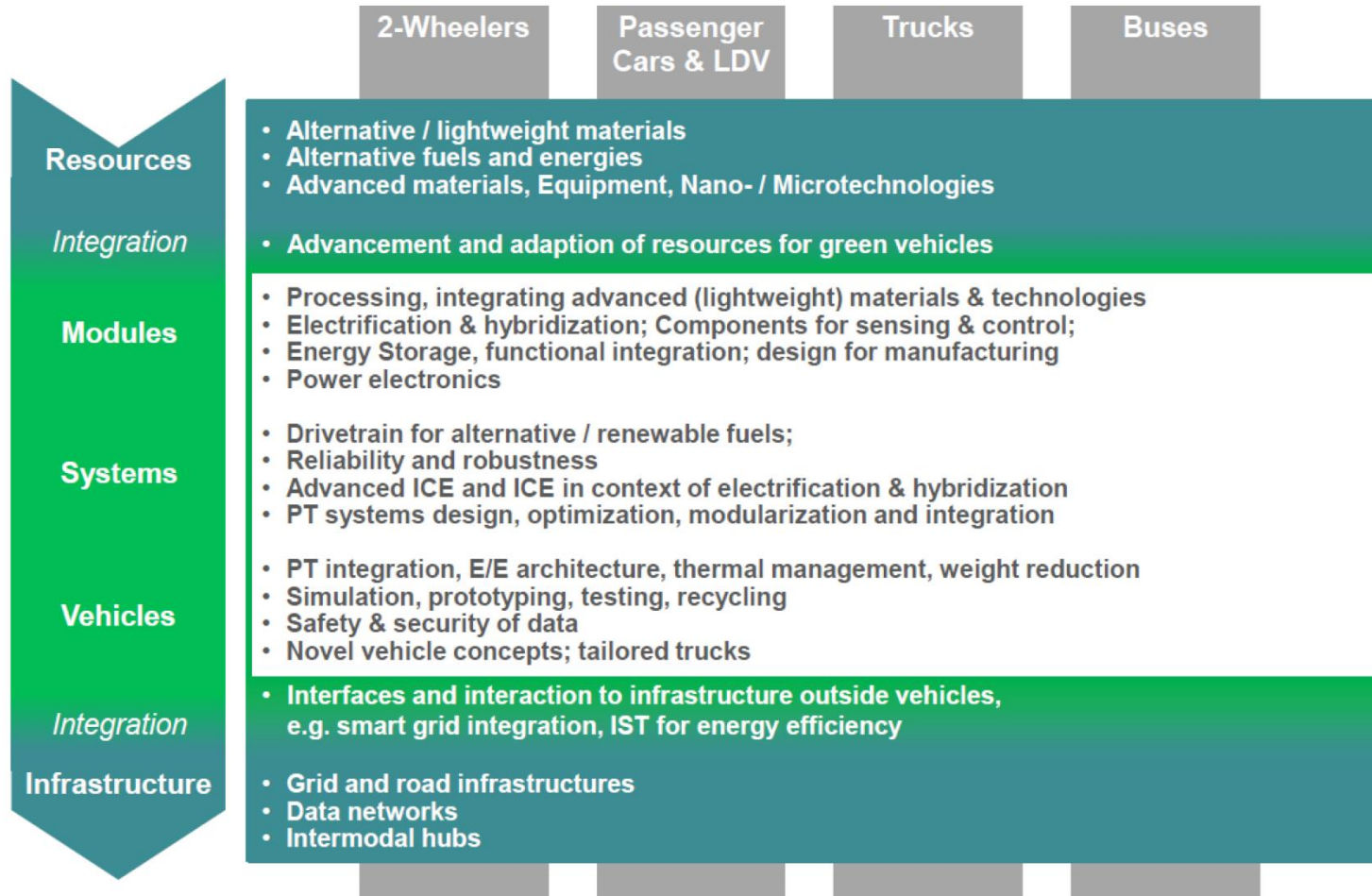
| Topic | # of Projects |
|---------------------------------|---------------|
| Energy Storage Systems | 21 |
| Drive Train Technologies | 15 |
| Vehicle System Integration | 22 |
| Grid Integration | 9 |
| Safety | 7 |
| Transport Syst. Integration | 5 |
| All projects of calls 2010-2012 | 74 |



Project Portfolio



Continuation in Horizon 2020



European Green Vehicles Initiative PPP:
Energy Efficiency of Vehicles & Alternative Powertrains



AMAA 2013

- **Topics:** Driver Assistance & Road Safety, Networked Vehicles, Green Power Trains & Vehicle Efficiency, Vehicle Electrification, Components & Systems
- **Confirmed Speakers:**
Sven Beiker, Director, Stanford Center Automotive Research
Frank Moebius, Director Technology Development, BMW
Willy Van Puyenbroeck, Head of Unit, DG CNECT, EC
- **Online registration:** www.amaa.de

17th International Forum

Advanced Microsystems for Automotive Applications

Smart Systems for Safe and Green Vehicles

17-18 June 2013, Berlin, Germany



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