



Automotive Innovation and Horizon 2020 opportunities

Tommaso GIUNTI,
Daniele BASSAN,

Centro Ricerche Fiat S.C.p.A., IT

Index

- CRF Mission
- Research and innovation positioning
- CRF sites
- CRF organization
- Focal point for research and innovation activities
- World Class Manufacturing Research & Innovation
- Collaborative projects
- Membership network
- Collaborative Research and Cluster projects

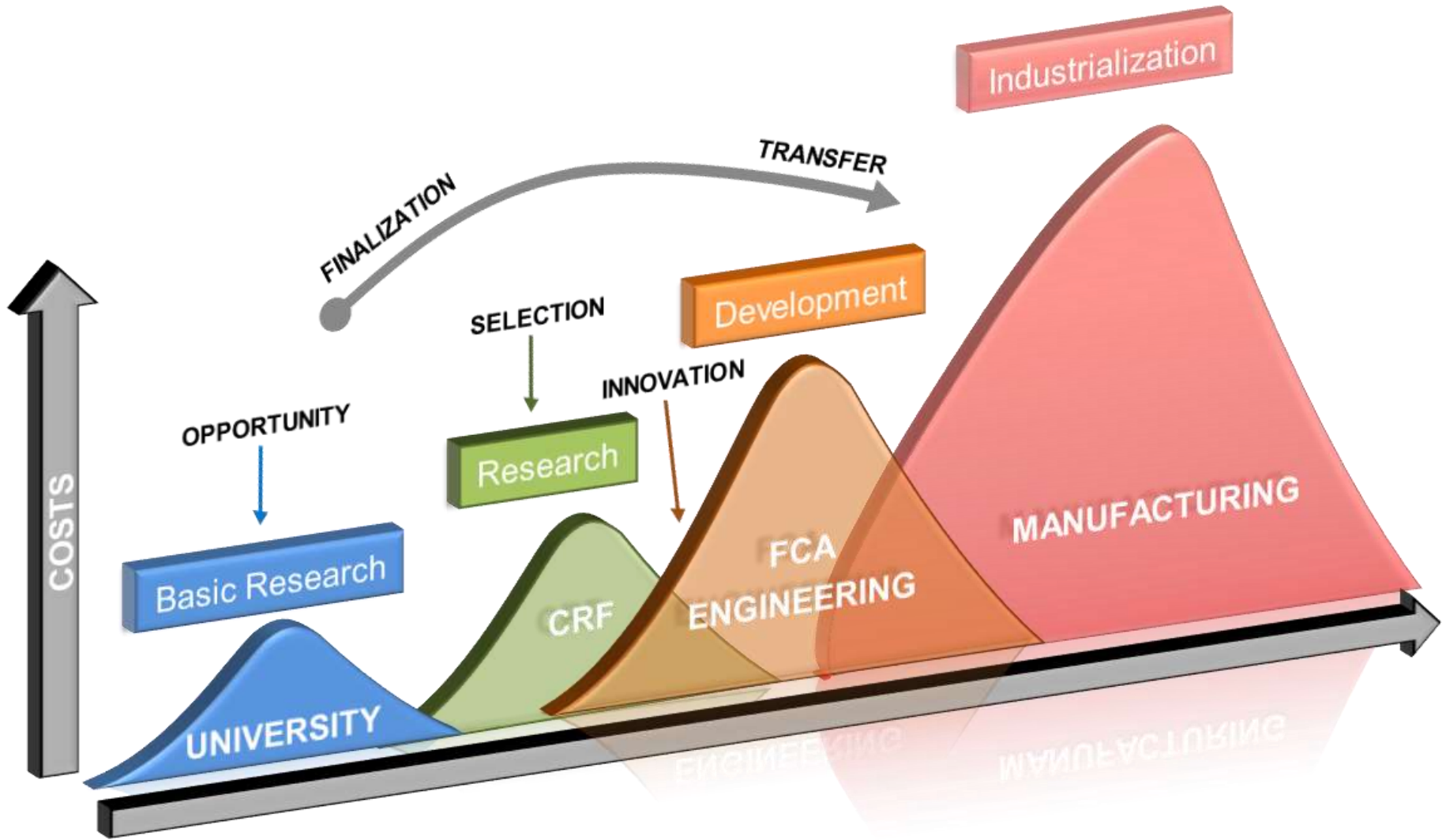


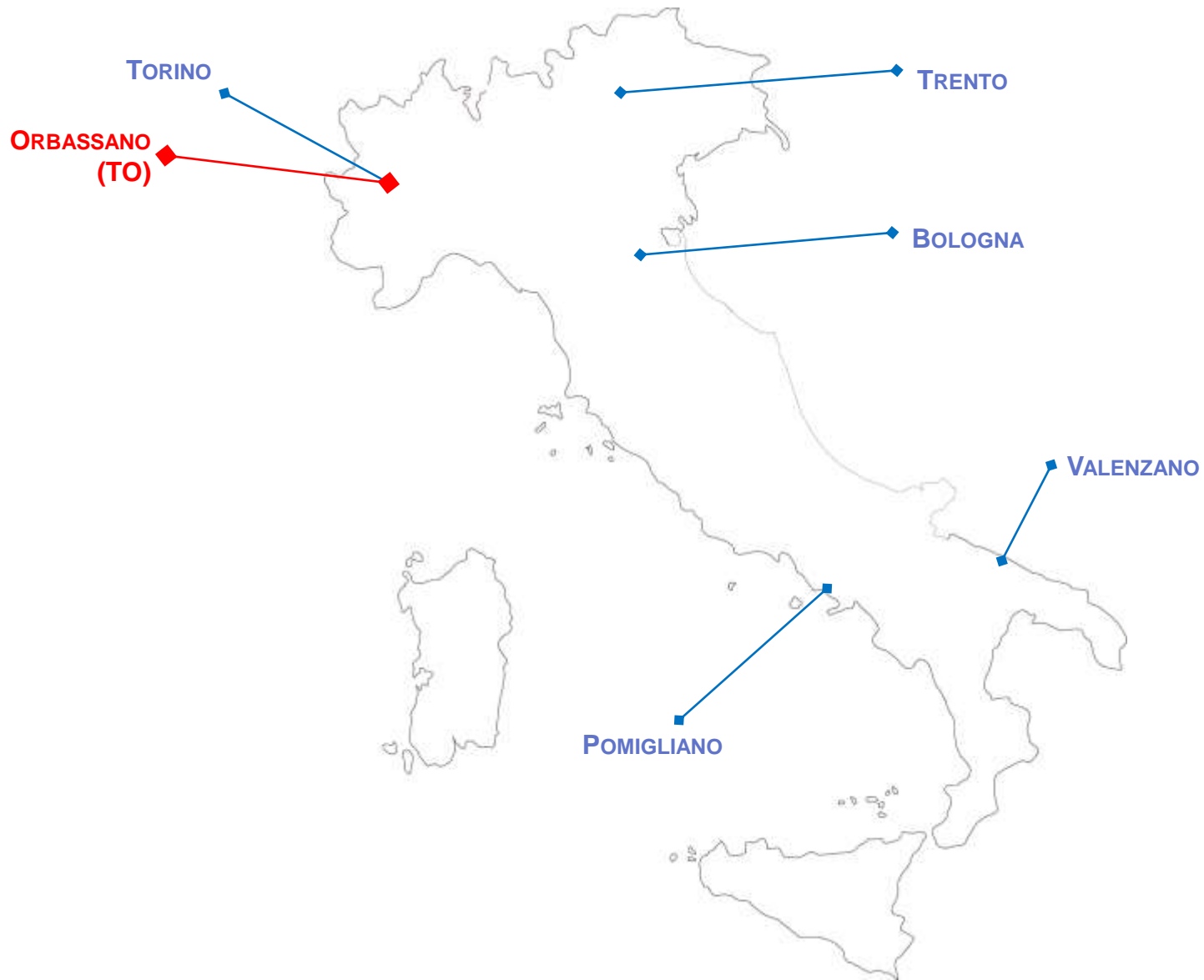
Mission

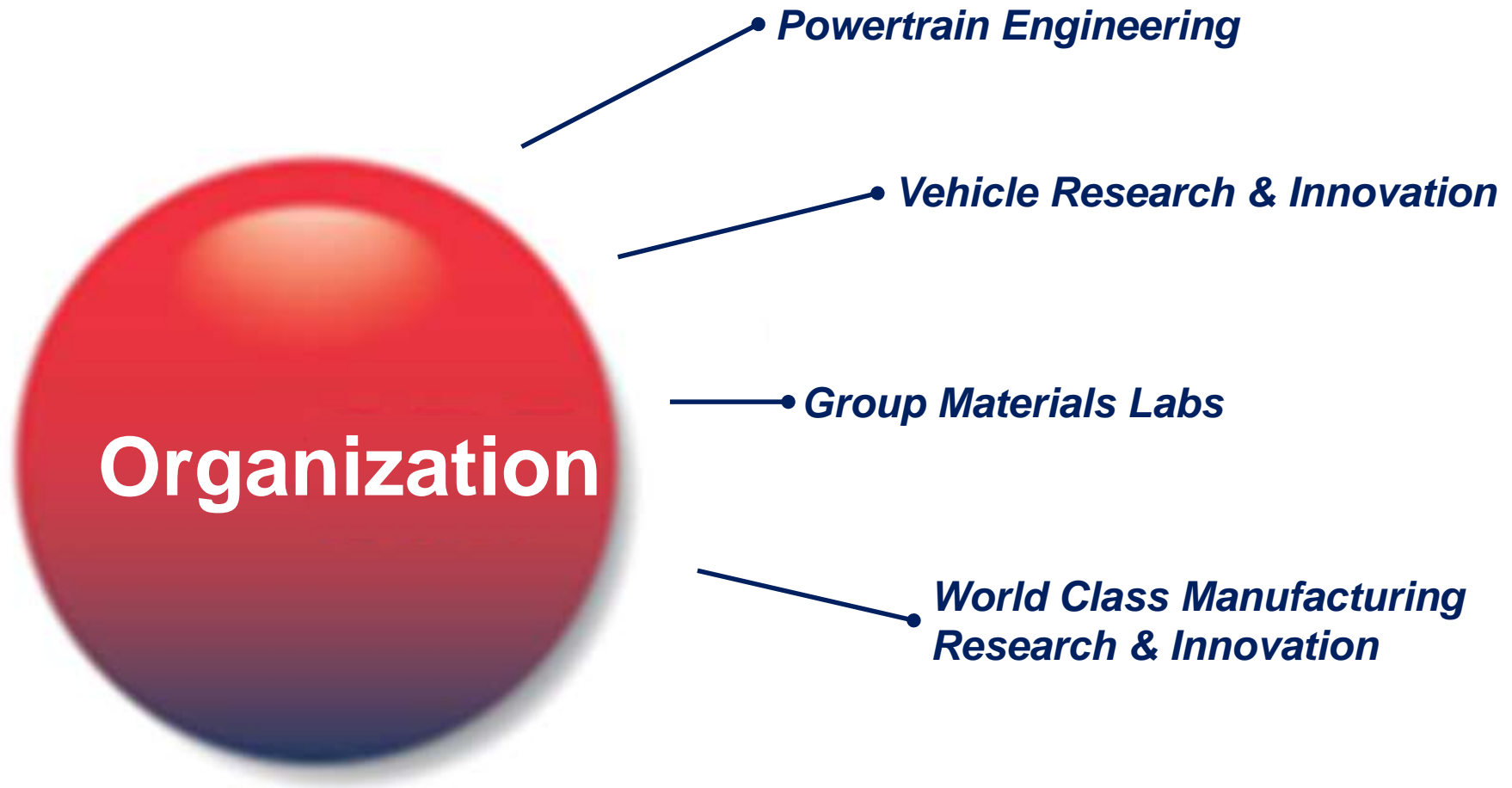
Develop and transfer innovative powertrains, vehicle systems & features, materials, processes and methodologies together with innovation expertise in order to improve the competitiveness of FCA products

Represent FCA in European and National collaborative research programs, joining pre-competitive projects and promoting networking actions

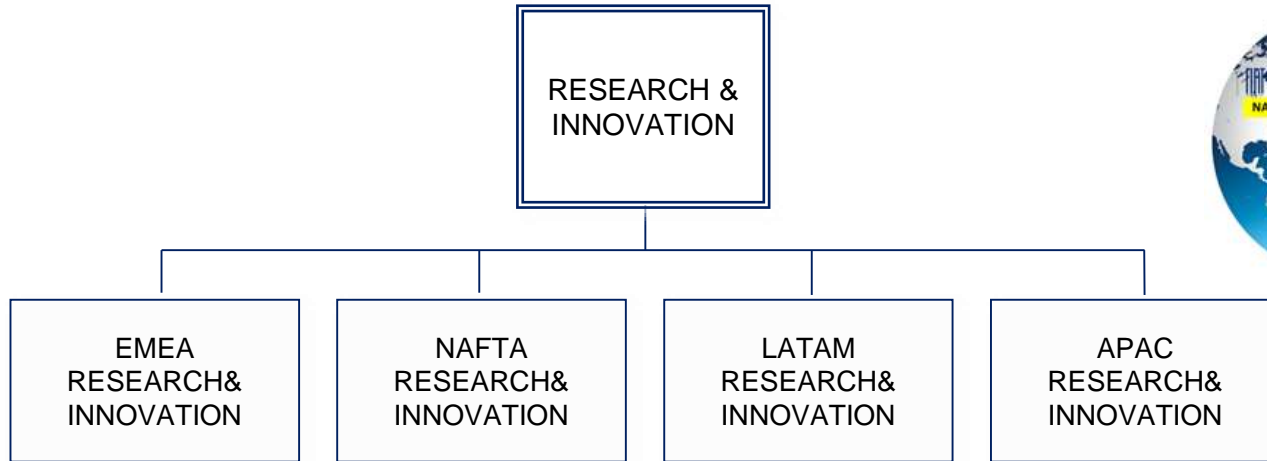
Support FCA in the protection and enhancement of intellectual property







Focal point for research and innovation activities



Strategic Innovation → Innovation Programs → Innovation transfer





- **WCM Research & Innovation** is mapping the WCM research needs with the aim to promote through international collaborations by:
 - Integrating vision among FCA group with roadmap definitions and strategic Research and innovation agenda finalization;
 - Selecting excellence in Europe and in the World to exploit FCA group innovation to transfer results into the Product Development Process;
 - Sharing long term vision with the different platforms/stakeholders to promote altogether common research needs;

more than 3.000 relations
with about 1.750 partners
264 running projects



A large, 3D-rendered red sphere with a gradient from red at the top to dark blue at the bottom. The words 'Membership network' are written in white, bold, sans-serif font across the center of the sphere.

Membership network

▪ European Technology Platforms

- ERTRAC: Road Transport
- EPOSS: Smart Systems
- MANUFUTURE: Manufacturing
- EUMAT: Materials

▪ Public Private Partnerships

- European Green Vehicle Initiative
- Factories of the Future

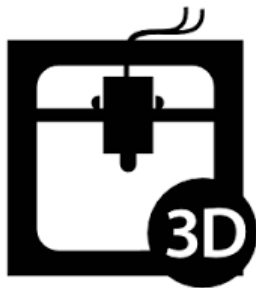
▪ Associations

- EFFRA
- ERTICO ITS Europe
- EUCAR
- Human Factors and Ergonomics Society – Europe Chapter

▪ Joint Undertakings

- ECSEL (ex Artemis, ENIAC)

- **FoF Clusters:**
 - Eco Factories
 - Human robot interaction
 - Focus
- **Green Car Cluster:**
 - Seam Cluster



FoF Project Clustering #1: EcoFactories



Factories of the Future
Public Private Partnership

Different projects funded under the European Seventh Framework Programme have joined forces to give a coherent view of clean manufacturing to industry.

EMC2-Factory is working with AREUS, ENEPLAN and REFORM on different aspects of the eco-factory. Joint dissemination and training activities will spread a single message on competitive, green manufacturing to industry.



EMC2-Factory



Automation and Robotics for EUropean Sustainable Manufacturing





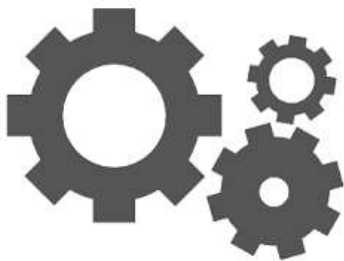
Different projects on human robot Interaction will spread a single message on competitive, green manufacturing to industry on dissemination and training activities: ROBO-PARTNER, ROBO-MATE, FACTORY-IN-A-DAY, CUSTOMPACKER, LIAA





FOCUS project is a cluster of different projects on main FoF research priorities:

- Zero defect manufacturing
- Robotic
- Clean manufacturing
- High precision production technologies
- Maintenance & Support





Safe Efficient Advanced Materials

The European RTD-Cluster on Lightweight Design. In order to coordinate and harmonize the four projects SafeEV, ENLIGHT, ALIVE and MATISSE, the SEAM cluster has been established.

Main purpose of the SEAM cluster is to realize and monitor synergies between the four projects on RTD and demonstration level and to execute joint dissemination and exploitation activities.



Enhanced Lightweight Design



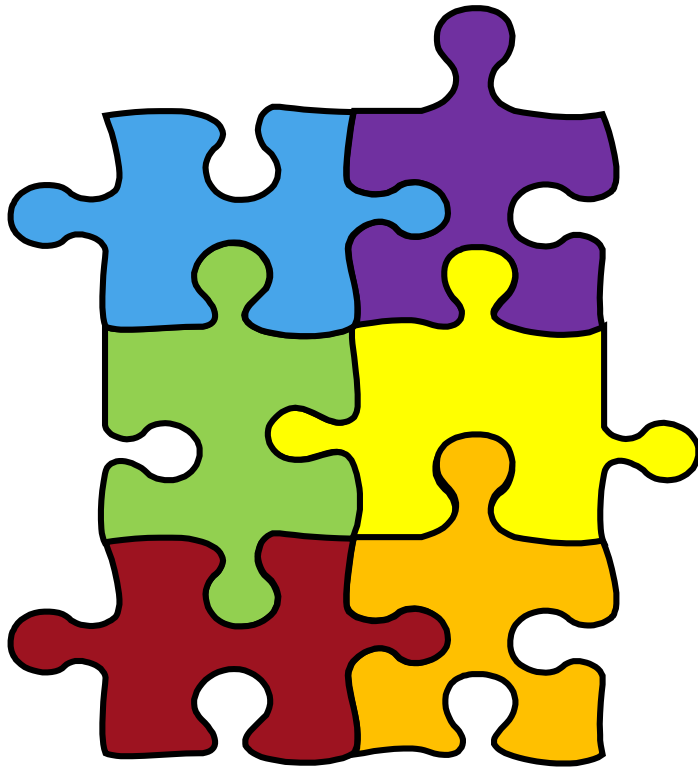
Advanced High Volume
Affordable Lightweighting for
Future Electric Vehicles



Safe Small Electric Vehicles
through Advanced Simulation
Methodologies

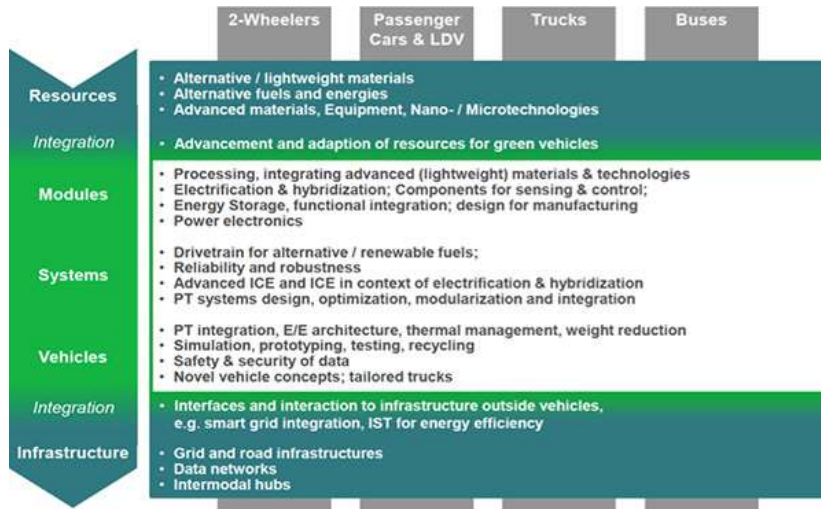


Modelling And Testing for
Improved Safety of key
composite Structures



▪ Research Priorities:

- Advanced manufacturing processes
- Adaptive and smart manufacturing systems
- Digital, virtual and resource-efficient factories
- Collaborative and mobile enterprises
- Human-centred manufacturing
- Customer-focused manufacturing



Research Priorities:

- Alternative/ lightweight materials
- Alternative fuels and energies
- Advanced materials, equipment, Nano-Microtechnologies
- Advancement and adaptation of resources for green vehicles
- Processing, integrating advanced materials & technologies
- ...



CRF

An FCA company

Tommaso GIUNTI
tommaso.giunti@crf.it

Daniele BASSAN
daniele.bassan@crf.it