



Intelligent vehicles.
Efficient mobility.



iMobilityChallenge



@iMobChallenge

www.imobilitychallenge.eu

“Thanks to vehicle connectivity we are on the verge of a new era in mobility. An array of new technologies provides an outlook to safer, greener and smarter driving experiences for road users, but reaching out to them is of critical importance.”

Jean Todt,
FIA President



“Europe’s auto manufacturers invest billions of euros every year into research and development in order to bring new vehicle technologies to market. **iMobility** technology is making vehicles cleaner, safer, more efficient and easier to drive, whilst giving consumers the ability to choose vehicle options that suit their individual needs.”

Ivan Hodac,
Secretary General, ACEA



“Our economic and environmental future depends on smart solutions for transport: we need to seize every technological opportunity we can get.”

Neelie Kroes,
Vice-President of the European Commission
European Commissioner for Digital Agenda



“**iMobility** means enhancing road safety, improving air quality, reducing carbon emissions and increasing the capacity of the European transport infrastructure. By combining innovative technologies, driving becomes smarter, safer and more efficient: simply better!”

Jean-Marc Gales,
CEO CLEPA

What is iMobility?

iMobility is about combining innovative technologies that make driving cleaner, safer and more efficient – and also more fun. It means ITS solutions that increase your comfort and safety – and at the same time spare the environment and your wallet.

Energy efficiency

Systems for energy efficiency such as gear shift indicators, tyre pressure monitoring systems and start-stop systems are increasingly available in a wide range of vehicles. Additional features such as smartphone applications for fuel-efficient driving offer assistance and help choosing the appropriate driving mode. Saving fuel and reducing CO2 emissions the smart way has never been easier.

Connectivity

New cooperative systems and connected cars will completely transform the way vehicles interact with their surroundings. Car to car and car to infrastructure communication will play an important role in our future mobility, linking real-time traffic information with a vehicle's infotainment structure makes our cars more intelligent – and enables them to plan ahead. This means more benefits for the consumer; it's about saving energy, money and time.

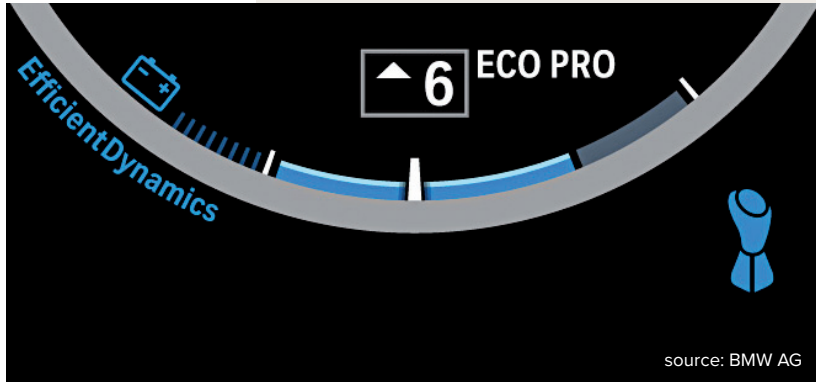
Smart&safe

Making the most of innovative technologies: it's about seizing great opportunities to drive efficiently, protecting the environment and saving lives on our roads. For example, all new types of passenger cars will have to be equipped with the eCall technology by 2015. Speed alert and cooperative adaptive cruise control combine safe driving at an individual level with smart traffic management in cities and urban areas.



Eco-driving assistance

Eco-driving assistance allows you to drive more efficiently by providing information on energy consumption and gear selection.

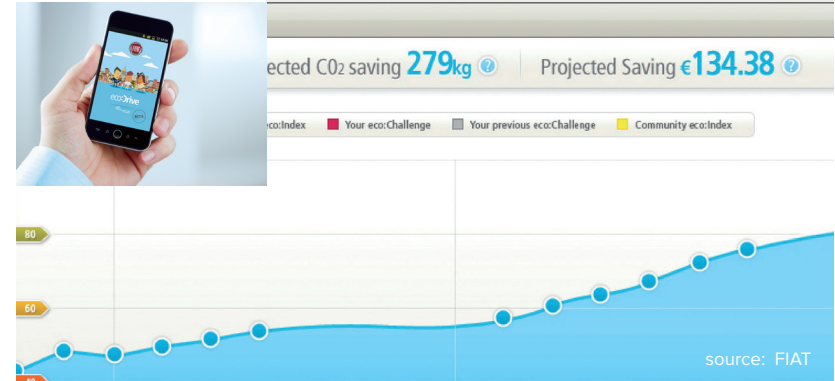


Eco-driving assistance assists and encourages the driver to adopt Eco-driving by providing information to the driver about the current fuel consumption, energy use efficiency and appropriate gear selection taking into account engine and transmission efficiency, vehicle speed and rate of acceleration etc. Apart from displaying instantaneous and mean fuel consumption on the instrument panel (from the on-board computer), there can be an “Eco-drive Indicator”, which indicates when the vehicle is being operated in a fuel-efficient manner with respect to driveline efficiency. The measure also informs the driver when a gear shift is appropriate.



Eco-driving coaching

Eco-driving coaching previews your upcoming journey, and provides instruction on the efficiency of your driving style while on route.



Eco-driving coaching uses preview information to enable optimal advance planning. The preview information, obtained from enhanced map data, should include road slope, road curvature and other road attributes such as speed limits, stop signs etc. Compared with Eco-driving assistance, the system tends to have at least some of the following features: recommendation of optimal speed profiles, especially regarding deceleration and avoidance of unnecessary stops etc. For example, the driver can be advised to slow down to a certain speed, at an appropriate distance before an intersection which cannot yet be seen by the driver but that requires a stop.



Fuel-efficient route choice

When entering a destination, the navigation system will give you the most fuel-efficient route choice.



source: FIA - BMW strategic routing

Faster, shorter, more fuel-efficient – navigation systems can now do all that in one go! Depending on different parameters, the route calculation function offers the driver the most economical route. Fuel-efficient route choice is not only a smart choice – it is also considered to be a safer style of driving!



Start-stop assistant

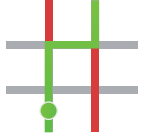
To avoid unnecessary fuel consumption, the start-stop assistant turns off the engine when you are not using it.



source: Johnson Controls

Once the car has come to a stop in front of a red light, the engine simply shuts off. There is no idling, no fuel consumed, no emissions. The engine restarts when the driver puts the car back in gear. In addition to reducing emissions, start-stop technology improves fuel economy by 5-12% in new vehicles.

Real-time traffic info



Real-time travel and traffic information provides advice on congestion and weather conditions so that you can choose the most efficient route and be prepared for the journey ahead.

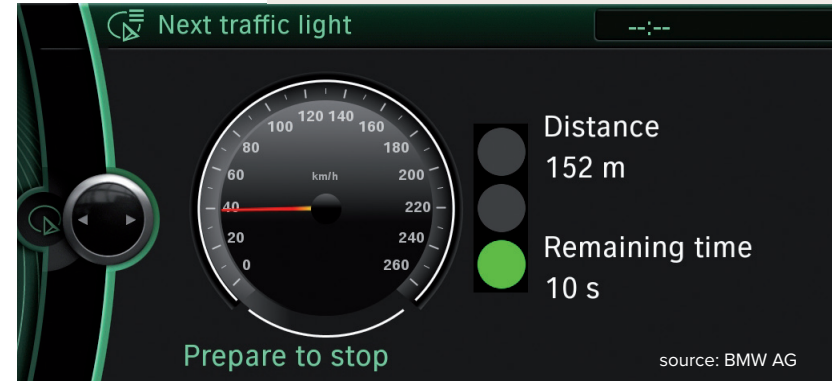


Avoiding congestion before it builds up? The future is already a reality! Taking into account the latest traffic situations and weather conditions, the system can advise and help drivers avoid unnecessary delays. With more and more real-time traffic information available through public as well as private service providers, this helps not only the individual driver, but also leads the way to an integrated traffic management.

Dynamic traffic light optimisation



With dynamic traffic light optimisation and optimum speed advisory, your car informs you of the “time to green” for lights or provides an optimal speed to avoid unnecessary stops.

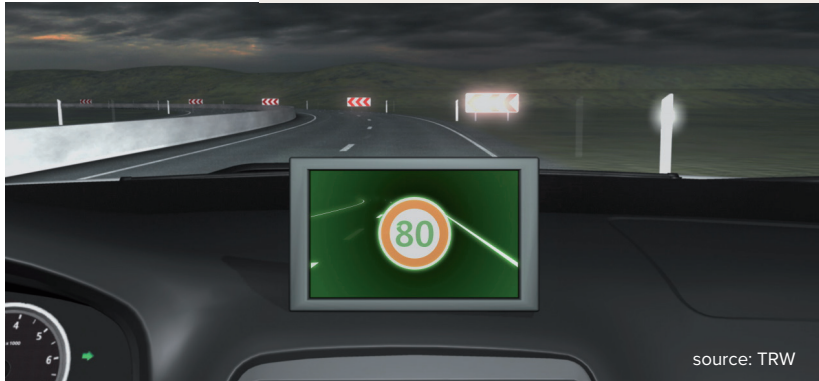


Ever dreamt of “riding the green wave”, but while driving effortlessly and relaxed? This is possible when your car starts “speaking” to its environment – for example, the traffic light signalisation infrastructure. By using the parameters speed, distance and signaling frequency, vehicles can calculate and tell their drivers how to approach intersections at optimum speed. When stopping at red lights becomes a thing of the past, this helps not only to increase fuel-efficient individual driving, but also makes traffic run more smoothly everywhere.



Speed alert

Speed alert informs you about the speed limits on the road and warns you when you are about to exceed them.



And yet another example for how vehicles can communicate with their surroundings: “intelligent road signs”, equipped with transponders or in-vehicle cameras with traffic sign recognition will keep you informed about the current speed limit and warn you when you are about to exceed it - by the means of visual, acoustic or even haptic warnings.



Cooperative adaptive cruise control

Cooperative adaptive cruise control allows cars to communicate with one another so that you keep a constant speed or distance from other cars when driving.

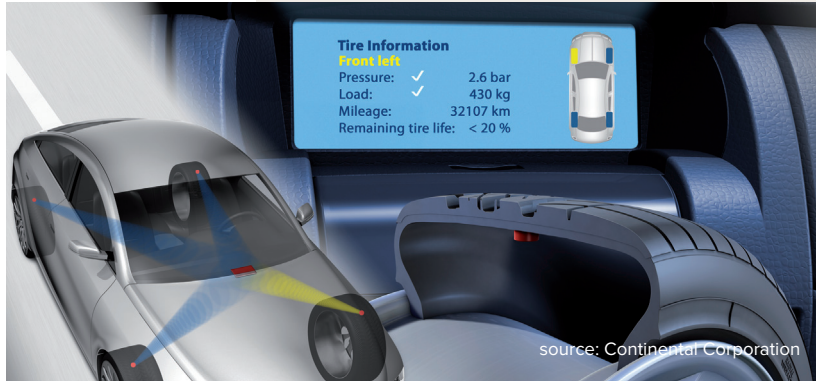


Cooperative adaptive cruise control is taking smart, safe and sustainable mobility one big step further: using car-to-car communication, the speed of a single car and its distance to others becomes part of a mutual cooperation and adaptation scheme. When driving at a constant speed thanks to adaptive cruise control, the vehicle will also be able to keep a constant distance from other vehicles – even if their speed still varies. This way, distances between vehicles can be safely reduced while increasing the comfort of driving.



Tyre pressure monitoring system (TPMS)

A tyre pressure monitoring system alerts you when your tyres are below their ideal pressure.



source: Continental Corporation

A flat tyre is not simply a flat tyre – it affects not only your driving style, but also your safety, the safety of others and even your wallet! Under-inflated tyres lead to tread separation and tyre failure, resulting in accidents and serious or fatal injuries. Moreover, the European Union reports that an average under-inflation of 40 kPa produces an increase of fuel consumption of 2% and a decrease of tyre life of 25%. But this can and will be helped: Since November 2012, all new passenger car model types approved in the EU must be equipped with TPMS. From November 2014 on, all new cars sold in the EU must be equipped with TPMS as well.



eCall

In case of an accident, the eCall system in your car will automatically call the emergency services, allowing a rapid rescue.



When an accident happens, every second counts. Whether the connection to the emergency services is being established automatically or manually, the eCall system ensures that data relating to the accident, such as the location, time, and direction of travel, are being transmitted as fast as possible. The European Commission estimates that this service could save the lives of around 2,500 people every year, the reason being that emergency service response times are cut by 50% in rural areas and by 40% in urban areas. The information available about the aftermath of the accident is also improved.



iMobility systems make it possible for cars to communicate with one another or to communicate with the road.

iMo, the expert in intelligent mobility, knows all about it!



FUEL-EFFICIENT
ROUTE CHOICE



ECO-DRIVING
ASSISTANCE



SPEED ALERT



COOPERATIVE ADAPTIVE
CRUISE CONTROL



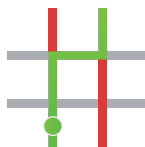
DYNAMIC TRAFFIC LIGHT
OPTIMISATION



START-STOP
ASSISTANT



ECO-DRIVING
COACHING



REAL-TIME TRAFFIC
INFORMATION



TYRE PRESSURE
MONITORING SYSTEM



E-CALL

PARTNERS



FEDERATION INTERNATIONALE DE L'AUTOMOBILE
REGION I



CLEPA
*European Association of
Automotive Suppliers*



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Automobile
Manufacturers
Association

ACEA



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INTELLIGENT TRANSPORT SYSTEMS AND SERVICES - EUROPE



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