

**ELECTRIFYING THE
CITY OF LIGHT**

Exploring Autolib',
Paris' innovative electric
car-share scheme

**SETTLING IN FOR
THE LONG HAUL**

Sports Car racing
revitalised by the World
Endurance Championship

**THE UNIVERSITY OF
LIFE ON THE ROAD**

The new FIA initiative
aiming to help clubs reach
their full potential

**WINNING THE
FI ARMS RACE**

How Formula One takes
on the brightest minds in
racing - and wins

INMOTION

The international magazine of the FIA



THE ROAD TO SAFETY

How FIA Action for Road Safety is helping to save 5 million lives by 2020

**STOP UP TO 3 METRES SHORTER
WITH MICHELIN ENERGY™ SAVER TYRES.***



There are important reasons to choose a MICHELIN ENERGY™ Saver tyre:

STOPPING DISTANCE	TYRE LIFE	FUEL EFFICIENCY
STOPS UP TO 3 METRES SHORTER ON WET ROADS*	LASTS 6,000 MILES LONGER THAN ITS COMPETITORS**	SAVES UP TO 80 LITRES OF FUEL***

The MICHELIN ENERGY™ Saver tyre stops up to 3 metres shorter in wet conditions*. What's more, it lasts 6,000 miles longer than its competitors** and helps you save up to 80 litres of fuel***.

See how the right tyre changes everything at www.michelin.co.uk



*Compared to the previous generation of the MICHELIN ENERGY™ Saver tyre. 2007 TÜV SÜD Automotive test on tyre size 175/65 R 14 T.
**On average for the MICHELIN ENERGY™ Saver tyre compared to its main competitors. Tests conducted by TÜV SÜD in 2008 and DEKRA in 2009 and 2010 on sizes 175/65 R 14 T, 195/65 R 15 H and 205/55 R 16 V, with tyres available on the market at the time.
***Estimate of average saving with MICHELIN ENERGY™ Saver tyres compared to main competitors for petrol vehicles. TÜV SÜD Automotive 2009 rolling resistance tests on 15 key sizes for the European market (Michelin was first in 13 sizes and second in 2 sizes). Calculated over the average life span for Michelin tyres i.e. 28,000 miles (internal source).

INSIDE

Dear Friends,

We have devoted much of this issue to our campaign to educate drivers and reduce road deaths and injuries. FIA Action For Road Safety is in support of the United Nations Decade of Action and is key to what our federation will be engaging in over the coming years, combining the energy and know-how of motor sport with the grass-roots knowledge and government contacts of our vast global club network.

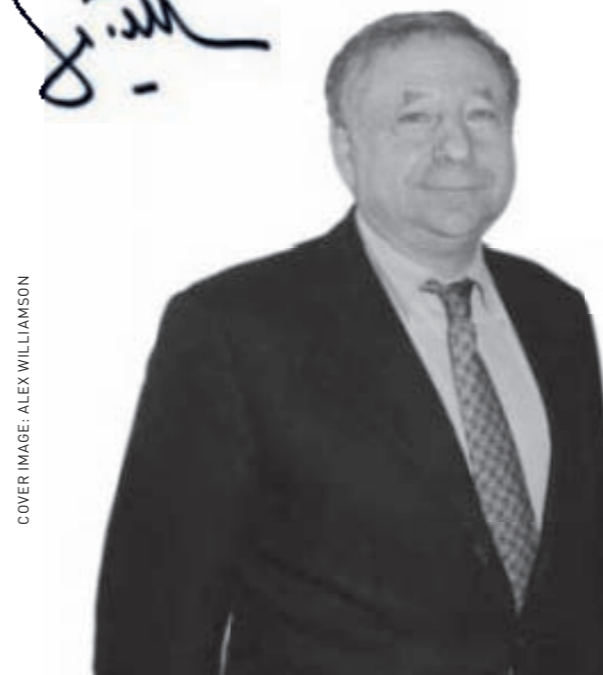
In addition to this special section, you will find features on how the car industry is tackling the issue of power usage, both on the streets of Paris - in our story about the city's innovative Autolib' initiative - as well as on the globe's most famous racing tracks, where we look at the exciting new World Endurance Championship.

Staying on the motor sport theme, FIA Formula One Technical Director Charlie Whiting outlines the rule modifications and clarifications that have been introduced for this season's grand prix season, all of which will make the racing closer and more exciting than ever.

Soon we will also be introducing the FIA University to all our member clubs. This is a fascinating new project aimed at helping all our members to gain access to best practice across the complete spectrum of mobility interests and eventually, it is hoped, motor sport.

I hope you enjoy this issue of InMotion, our magazine for all FIA members as well as the many colleagues and friends in both sport and mobility who make up our thriving and vibrant community.

Best wishes,



COVER IMAGE: ALEX WILLIAMSON

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The latest developments in mobility and motorsport as well as news from across the FIA's worldwide network of clubs

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20 The Road to Safety Taking the FIA's Golden Rules for Road Safety as a starting point, our 20-page Action for Road Safety special reveals that from distracted driving to the largely unrecognised scourge of drugged driving, and on to the fatal effects of fatigued driving, action is being taken by clubs, campaigners and stakeholders all over the world.

40 Enduring Passion With its emphasis on innovation, the FIA's new World Endurance championship has grabbed the attention of the world's motor manufacturers - including Toyota. InMotion looks at why we could be about to return to a golden age of sportscar racing.

50 The University Challenge The FIA University is a new initiative designed to help all member clubs to develop to their full potential by teaching best practice in all things mobility. InMotion goes back to school to find out more.

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INFOCUS

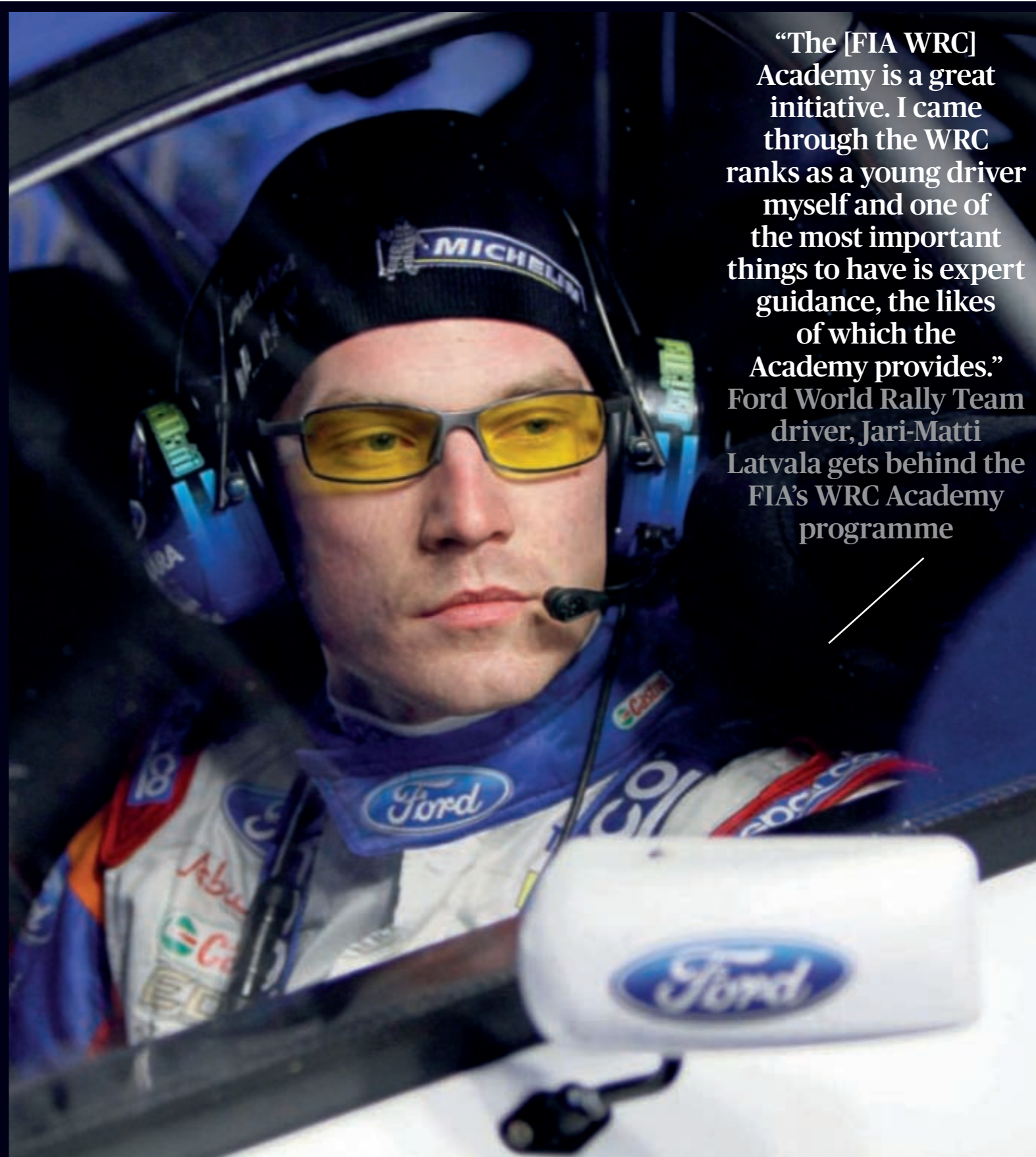
FIA NEWS MARCH 2012



“We have discussed our finances and he (Bernie Ecclestone) has agreed. Now we await the position of our Belgian friends since the project is to alternate between Le Castellet and Spa. We are ready and we need it. I remind you that we have a nice car industry.”
 French Sports Minister David Douillet confirms that Formula One is set to return to the country in the near future



“European legislation concerning safety and the environment should be made on the basis of sound evidence. This report is disappointing as the evidence of all key stakeholders, in particular users and suppliers, has not been included.”
 FIA Region I Director General Jacob Bangsgaard on an EU motorcycle ABS report that the region branded “flawed”



“The [FIA WRC] Academy is a great initiative. I came through the WRC ranks as a young driver myself and one of the most important things to have is expert guidance, the likes of which the Academy provides.”
 Ford World Rally Team driver, Jari-Matti Latvala gets behind the FIA’s WRC Academy programme

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FIA Region I appointment

BRUSSELS Ms Frederikke Bollerup-Jensen has joined the staff of the FIA Region I office in Brussels. Apart from her native Danish, Frederikke also speaks fluent English and Spanish. She began work within the office late last year as an intern and has now begun work as a full-time Junior Project Manager. Her main responsibility will be to provide administrative support to the region as well as supporting the office in the organisation of FIA Region I events, including the creation and dissemination of campaign and event materials.



Swedish motorbike alarm helps save riders' lives

GOTHENBURG Fast and adequate help at a traffic accident can be crucial. Pawsec, together with the Swedish Motorcyclists Association (SMC) and TeliaSonera, recently announced the world's first intelligent alarm system for motorcycles, CQrify MC, at the Motorcycle show På Två Hjul in Gothenburg.

About 40 per cent of all fatal accidents on motorcycles are single-vehicle accidents. Most incidents occur on minor roads with low traffic density and a speed limit of 70kph. Sometimes it takes a long time before these single-vehicle accidents are discovered by passing road users.

According to Jesper Christensen, Secretary General of SMC, CQrify MC is linked to the driver's smartphone. If an accident occurs a signal is sent to the alarm centre. The alarm operator can analyse relevant information about what happened seconds before the accident and hear the sound from the accident scene. This enables the operator to assess what action is needed and relay details to the ambulance team as soon as it is routed to the scene.

"SMC's involvement in the development of CQrify MC has been primarily to define the product based on the motorcyclists' needs, and not government," Christensen explains. "This means that we have a product that can not only save lives, but also enables the individual motorcyclist to analyse their riding outside perspectives such as speed and traffic situations."

Luca Pascotto, Mobility Director, FIA Region I said: "We believe this system has the potential to reduce the severity of accidents and save many lives Europe-wide."

Launch of European projects on eMobility supported by the FIA

BRUSSELS The FIA Region I office recently participated in the launch of four European eMobility pilot projects (SmartCEM, ICT4EVU, MOBI.Europe, and MOLECULES) at the European Parliament. Each strives to enhance user experience and acceptance of electric vehicles through demonstrations on test sites across Europe.

Werner Kraus, President of FIA Region I, explained why the FIA has agreed to partner the smartCEM pilot project. "Raising consumer awareness is key for the adoption of new technologies and the FIA and its member clubs are best placed to play this role," he said. "That's why the FIA fully supports the smartCEM initiative and the demonstration of eMobility as a real alternative for our day-to-day mobility."

Jacob Bangsgaard, Director General, Region I said: "The successful application of Intelligent Transport Systems can remove some of the main barriers to consumer adoption of electric vehicles, for example, anxiety over range. SmartCEM will help demonstrate that intelligent mobility solutions can allow eMobility to meet the needs of everyday life. The added value of these projects is their strong focus on collaboration between a broad base of stakeholders, including service providers, vehicle manufactures, energy providers, local authorities, and research institutes. Our participation keeps the FIA to the fore of the debate on eMobility in Europe."



Euro NCAP unveils its best of 2011

MOTURING A solid safety record has become absolutely essential and indispensable for car manufacturers on the European market and thanks to ever-evolving technology, an array of new safety features and sophisticated systems are available to car buyers today.

Euro NCAP's ratings reflect the progress made in this regard and highlights cars designed to exceed expectations on safety and those that fall short. As such, the organisation recently announced its best in class winner for 2011. That a Volvo features on the list won't surprise many, but the news that the Chevrolet Aveo stole away with the Supermini category surely will. The results also saw Ford, Audi and Mercedes score well.

While Audi walked away with the Small Off-Road 4x4 category, it was the little Chevrolet that stood out. A five-door family city car, the Aveo has six airbags as standard, a four-channel anti-lock braking system (ABS) with brake assist and Electronic Stability Control

(ESC). In an accident the roof is capable of bearing 4.2 times the car's actual weight.

Euro NCAP also rewarded several manufacturers for advanced safety features not yet included in the ratings scheme. The Ford Focus, offered with optional Active City Stop, Driver Alert Forward Alert and Lane Keeping Aid, made headlines as the first high volume car receiving four rewards.

Mercedes' B Class and the new Volvo V60 were also commended for the provision

of Collision Prevention Assist and City Safety respectively. Both are examples of Autonomous Emergency Braking Systems (AEB).

Eleven cars achieved four stars, while the poorest result was achieved by the Dacia Duster SUV, with three stars. Euro NCAP also made special mention of the Ford Ranger, the only pick-up tested by Euro NCAP in 2011. The Ranger is the safest pick-up yet tested by the organisation and scored highly in all areas of assessment, most notably in pedestrian protection.

With electric cars hitting Europe's roads this year, the organisation released the results of four EVs. Plug-in vehicles are exposed to the same test conditions as their gasoline counterparts, while special attention is paid to battery integrity after a crash. The Nissan LEAF was the first of its kind to achieve Euro NCAP five -star overall rating, placing itself amongst this year's best small family cars.



UNFOLDING *the future*

Dreamed up at renowned research facility MIT and now entering production in Spain, could this space-saving, folding electric car be the future of urban transport?



2.5 metres



1.5 metres

HIRIKO WE GO

The CityCar project has now been taken over by Hiriko, a Spanish consortium based in Vitoria, near Bilbao. Their version of the car has a top speed of 90kph on the open road and 50 kph in urban areas. It has a range of 120km. The car also features a haptic steering wheel, which responds to touch and vibration. The first Hiriko cars are due to come off the production line next year.

BOSTON/BILBAO If asked to nominate the two major obstacles in the way of building effective urban transport systems, the most common responses would probably be - lack of space and lack of energy sources.

Older cities in particular suffer from a lack of space and traffic flow is often constrained by narrow streets, which lead to confusing and haphazard road networks. On the energy side, the problem is obvious - dwindling resources and the need to pursue energy beyond fossil fuels.

These were among the issues confronted a dozen years ago by the

Media Lab at the Massachusetts Institute of Technology, where the aim is to 'invent a better future'. One of its research groups focused on Smart Cities, with the goal of making urban living more functional and as a result less stressful. The CityCar, soon to go into production as the Hiriko, is the result of the group's work.

"The story began in 2000 when Professor Bill Mitchell and I put together a proposal to work with the architect Frank Gehry to design a car with General Motors," says MIT researcher Ryan Chin. "Bill came from an urban planning background



and said: 'Dream of a city you want to live in and think what you would design for it.' So everyone starting thinking about it and that is how the ideas came about."

Supported by General Motors, the group announced its CityCar concept in 2005. A two-person vehicle, weighing just 450kg, the CityCar would be 60 per cent the size of a Smart Car. Powered by a lithium-ion battery it would be able to go 120km between charges and would have a top speed of 50kph in urban areas.

The key, though, was the car's ability to fold, with the cab sliding

upwards to reduce the vehicle's parked footprint from 2.5 metres (8ft 2in) just 1.5 metres (4ft 11in) when parked. Couple this with the car's front entry and it meant that CityCar could be parked nose-to-kerb, greatly reducing the street space it took up. Indeed, it is possible to park four such cars in the space usually required for one car.

"The folding system is divided into two compartments," Chin explains. "There is the passenger cabin, which pivots forward on the front axle, and then there is the rear section that tucks underneath the cabin. There are

two actuators that assist with the folding, but because there is no engine in the front and the batteries are located in the rear, there is not much weight to lift. You can even be inside it when it folds up."

When GM went into administration in 2008 and funding dried up it seemed that the project would grind to a halt. However, a Spanish consortium, Hiriko, picked up the baton and the car, largely unchanged, is set to finally go into production next year, with plans for 9,000 cars a year by 2015. Could it be the future of urban transport?

FIA aims to carry on camping

TOURISM Tourism continues to be a key generator of demand for mobility, whether in terms of business or leisure. With over 60 per cent of holiday trips made by car, the FIA is working hard to support the role of clubs in this growing market and the Camping Card International (CCI) has recently introduced additional features.

The CCI began in 1953 as a joint effort between the FIA and its partners, the International Federation of Camping and Caravanning (FICC) and the Alliance Internationale de Tourisme (AIT), to offer discounts to campers worldwide.

Today, the CCI card provides considerable discounts to holders of the card at more than 1,500 campsites in 26 European countries. The discount can be as much as 25 per cent in both high season and low season. The CCI Card is available to all members of an FIA affiliated club and is valid for one year from the date of purchase. For more details see: www.campingcardinternational.com.



'Flawed' report leaves FIA Region I 'disappointed'

BRUSSELS An EU report on the cost-benefit analysis of Anti-Lock Braking Systems for motorcycles (ABS) has been branded "flawed" by Region I of the FIA, with the office's Director General Jacob Bangsgaard, saying that the "disappointing" report had failed to include evidence from a number of key stakeholders in the system.

"European legislation concerning safety and the environment should be made on the basis of sound evidence," commented Bangsgaard. "This report is disappointing as the evidence of all key stakeholders, in particular users and suppliers, has not been included. The report appears to have been rushed, with questions (existing) over the methodology used."

According to an FIA statement, the key findings of the study are based only on the use of manufacturers' 2011 figures for the price (€500) paid by consumers for ABS systems. However, the FIA insists that suppliers say manufacturers only pay as little as €150, including fitting, for the ABS technology today, with the price expected

to drop further once the legislation on ABS is passed.

"These figures highlight the significant difference that exists between the cost of ABS to manufacturers and the price consumers pay," added Bangsgaard. "By making ABS mandatory, legislators can make sure manufacturers are not making high profits on optional safety technologies."

The FIA statement pointed out that, in its opinion, the report "dismisses future savings as a result of economies of scale once the legislation is passed. This is in total contradiction to the experience of Electronic Stability Control (ESC), which became mandatory in November 2011. Suppliers say the introduction of the ESC technology has led to a 75 per cent reduction of price over the past 15 years."

Mr Bangsgaard added: "If European legislators had made the same mistake when debating the benefits of ESC, the technology would not be mandatory today, and we would not be benefiting from the 4,000 lives saved each year as a result."

The FIA concluded by saying it regrets that the analysis "fails to provide a 'high cost' and a 'low cost' scenario, which would have allowed for a more realistic assessment of the potential benefits of the proposed legislation on ABS."

President pushes for road safety in Balkans and on Africa visit

PARIS FIA President Jean Todt has been busy advocating on behalf of FIA Action for Road Safety, undertaking a tough travel schedule in order to meet with representatives of clubs from a number of different territories in a bid to spread the message of the campaign.

The President first travelled to Macedonia, where he visited the Avto-Moto Sojuz Na Makedonija club (AMSM). There, at a press conference, which featured President Todt and government representatives, the focus was on the safety, or otherwise, of roads in the country, with the result that the government created a national strategy for Road Safety 2009-2014 in order to decrease the number of road traffic accident victims in Macedonia. The AMSM also signed a commitment form in support of FIA Action for Road Safety, pledging to increase awareness of drink driving, safety belt wear and speeding.

The President then met with the Automobile Federation Macedonia (AFM) where he again pressed home the message of the campaign and received a commitment from the club to use the Action for Road Safety logo

in all sporting competitions as a means of raising awareness.

President Todt then moved on to Albania, where the Automobile Club of Albania revealed that over half of all fatal accidents in the country are caused by speeding, with one third of fatal accident happening to drivers with between three and six years' experience. As such the club, in committing to FIA Action for Road Safety, pledged to raise awareness on speeding, seat belt use and drink driving.

Following his Balkan travels, the President next visited two African countries to measure progress on road safety in the territories. After productive discussions with Olivier Kamitatu, President of the Federation Automobile De la Republique Democratique Du Congo (FEDACO) Mr Todt met with government ministers to discuss how road safety awareness could be raised through advocacy by local sports stars and on the rally raid the local federation will organise in 2013, at which the FIA President will be the guest of honour.

From there it was on to Nigeria. According to the World Health Organisation, the country has the third highest number of road deaths in the world and Mr Todt was encouraged to learn that a new road safety campaign will begin in the country in 2013, featuring a travelling education programme which will educate drivers and pedestrians on road safety, with particular emphasis on targeting students from primary school to university level.



FIA President Jean Todt meets the media in Albania.



Japan hosts driving instructor training

NARITA As part of its response to the UN Decade of Action, the Japan Automobile Federation (JAF) recently hosted a series of training programmes for driving instructors from across Region II for the second time. JAF officials shared their long experience and know-how in traffic safety with clubs from countries where traffic fatalities are expected to rise in the future.

The training, partially funded by the FIA, was supported by the Japanese National Police Agency, and an officer from the force gave a presentation demonstrating successful policies for reducing traffic deaths by one-third. In all, seven personnel from four clubs in the region took part; Ikatan Motor Indonesia (IMI), the Automobile Association of Malaysia (AAM), the Korea Automobile Association (KAA), and the recently founded Automobile Association of Cambodia (AAC).

Opening the programme, JAF President Setsuo Tanaka told the participants: "It is JAF's mission to share our longtime experience and know-how in traffic safety with our partner clubs in Region II. I hope you will learn more than what you need and implement in your country."

Over the course of two days' of lectures and practical lessons at the Nihon Automobile College in Narita, the participants were schooled in a number of driving techniques from basic to the advanced safety technology including ABS and eSafety (Pre-crash Braking System).

Edwin Haryono, Vice Secretary General of IMI, said the training would be useful in his own clubs' activities. "It should be a standard training for safe driving across Region II," he said.

His sentiments were echoed by Bora Moeu, the President/CEO of AAC, who said: "This training is important for other clubs. It should be continued and other clubs should attend in order to bring the experience back to their own countries."

JAF will host the third Region II Driving Instructors Training in October 2012.

President urges EU Commissioner to focus on road safety

BRUSSELS The FIA President, Jean Todt, recently took the opportunity to meet with Mr Sirm Kallas, Vice-President of the Commission and Commissioner in charge of Transport at the European Commission in Brussels.

During the meeting President Todt reminded the European Commissioner that each of the Region 1 member clubs is fully committed to achieving road safety objectives and both men agreed that their respective organisations shared a common goal in this regard.

Mr Todt added that the FIA is only too willing to join the Commission in organising common actions aimed at promoting the Road Safety action plan.

Mr Kallas stressed the excellent level of co-operation with the FIA clubs, as well as with the FIA's Brussels office, on all the initiatives taken by the European Union for the benefit of motorists.



Region I Club Conference set for Belgrade

BELGRADE This year's FIA Region I International Club Conference (ICC) will be held in Belgrade, Serbia, from Tuesday, 8 May to Friday, 11 May, 2012. The Automobile and Motorcycle Association of Serbia (AMSS) have organised an excellent programme of activities for the event.

Key issues under discussion will include road safety actions following up on last year's successful launch of the UN Decade of Action, new measures aimed at lowering emissions, and the rising cost of motoring for consumers. A particular focus this year will be placed on iMobility and its potential to make individual mobility safer, greener, and smarter.

For registration to this year's event, please go to www.fiaregion1.com or contact Ms Sinziana Gille at sgille@fia.com.



Motor sports Doctorate for ATCUAE Director

ANU DHABI ATCUAE Director of Strategy Sean O'Connor has been awarded a PhD for his research into the management and marketing for Formula One and World Rally Championship events. The Irishman, who has worked in motor sport for over 30 years, also has a Masters degree as a result of research into TV coverage and WRC. "I welcome this achievement by Sean in securing his Doctorate and so adding to knowledge in the complex motor sport management," said ATCUAE President Mohammed Ben Sulayem.

Dr O'Connor has pioneered the relationship between ATCUAE and the University of Ulster which has taught Sports Studies for over 50 years in the UK. Currently six students are enrolled in research degree programmes via ATCUAE and the university in the area of motor sport management.



Pirelli uses F1 to promote 'green' message

MILAN/IZMIT Formula One tyre supplier Pirelli is using its involvement in the sport to highlight its efforts in sustainability. The Italian multi-national has badged its wet F1 tyres with the Cinturato name, reinventing a model dating back to the 1950s.

Synonymous with speed and power through the '70s, the model has been dormant for two generations but was revived to help promote Pirelli's image as an innovator, specifically in eco-friendly products. New processes eliminate the aromatic oils in the tyres and minimise the environmental impact, both at the production stage and over the life of the tyre, without affecting performance.

To emphasise this the company has

adopted the slogan "Green Performance". The modern Cinturato tyres have reduced rolling resistance, which results in fuel savings for the driver. The tyres are made from eco-compatible materials that minimise environmental impact and are designed to last on average 30 per cent longer than traditional tyres.

Now the Cinturato brand is being used for the wet weather tyres in Formula One.

"F1 is a very visible," says Pirelli chairman Marco Tronchetti Provera. "And it shows that you can have performance and be green at the same time. If we produce light tyres you can reduce emissions and F1 tyres are very light, so the emissions are very low."

"Waste rubber is not easily biodegradable, but there are a number of ways where we can do things: using the rubber in trucks tyres; in rubberized asphalt for new roads and in the production of new forms of concrete. This is all part of a programme to reduce our consumption and cut down on waste."

TYRE PROVIDER KEEPS F1 IN TURKEY

The Turkish Grand Prix may have disappeared from the Formula One calendar, but Turkey is still an important territory for the sport – as Pirelli's entire motor sport production is carried out at the company's plant in Izmit.

Design work on the tyres is done by 150 research engineers who work exclusively on F1 at the Pirelli research and development laboratories in Milan.

Their designs are realized at the motor sport department in Izmit, where nearly 200 people are employed. The tyres developed are manufactured on a special F1 production line, which covers an area of 15,000 square metres and features the latest production machinery available. The processes used in Izmit are based on energy and water efficiency and the reduction of emissions, such as carbon dioxide. Special attention has been given to the recycling of used F1 tyres, most of which end up being used in the manufacture of tyres for trucks.

President visits Bentley factory

CREWE As part of Volkswagen's plans to expand its motor sport presence, FIA President Jean Todt, at the invitation of Mr Wolfgang Durheimer, the CEO of Bentley and Bugatti and the person in charge of Volkswagen Motorsport within the VAG Group, recently paid a visit to the headquarters of the Bentley car brand in Crewe, England.

After a lengthy discussion concerning the sports activities of the VAG Group, Wolfgang Durheimer introduced his principal staff members at Bentley to President Todt before taking him on a guided visit around the plant where the luxury cars are constructed.

The FIA President was impressed by the contrast between the ultra-modern mechanical unit, with its array of robots, and the departments where the final touches, using leather and wood, are still carried out in a traditional way that reflects all the care that is taken over the niceties of a Bentley's finish. The President was particularly interested in the wide choice of leather available and by the different qualities of wood used to build a vehicle that has lost nothing of its reputation as a luxury car. ☺



Jean Todt with Bentley's Wolfgang Durheimer

PAY AND DRIVE FREEDOM OF THE CITY

After changing the way Parisians navigate their city with its widely copied Velib' bicycle-share scheme, the city fathers and entrepreneur Vincent Bolloré are repeating the feat, but this time with electric cars

In 2007, Paris began operating a bicycle-share system called Velib'. The scheme offered people the opportunity to hire a bicycle, ride wherever they wanted, and leave it there. Since then there have been more than 100 million rentals and the idea has been copied in cities all over the world.

Now Paris is moving on to Autolib', a similar initiative, but using electric cars. The scheme was launched last December with 250 cars and 250 docking stations. The aim is to increase this to 1,100 docking stations and 2,000 cars by the summer, and eventually 3,000 cars and 6,600 stations.

Autolib' is the idea of Paris's mayor Bertrand Delanoë, who awarded the contract to Groupe Bolloré in December 2010. It has been a big investment for the company, with estimates of around €150 million to get the programme started.

"We have had to provide not only all the cars, but also everything around them: the recharging points, the communication units and all the other infrastructure," says company chairman Vincent Bolloré. "But this is a revolutionary product, the first real car-sharing scheme in the world. You can have a car that you can take somewhere and you do not have to take it back to the same place. This is an opportunity for the people of Paris and visitors to try an electric car and to see what it is like."

The company has been working on electric cars for more than 15 years, but Bolloré's goal is not to be a motor manufacturer. Instead, he wants to sell batteries, developed by batScap, one of his subsidiaries. The company has designed a unique solid-state Lithium

Metal Polymer (LMP) battery. These are able to store five times as much energy as traditional car batteries and have a life of more than 200,000km.

"As an entrepreneur you have to take risks," Bolloré says. "It is the role of industrialists to innovate. Taking leaps in technology is part of the DNA of this company."

Groupe Bolloré has a long history during which it has had to adapt and change a great deal. Today it has a turnover of €8.5 billion and around 35,000 employees. The firm was

established in 1822 when Breton René Bolloré established a business manufacturing very thin paper, learned after visiting China. For the next 100 years the business flourished, selling paper to be used for tracing and in Bibles. When cigarettes became fashionable, Bolloré provided the paper and by the 1950s it had a 10 per cent share of the worldwide cigarette market. It also became a big player in teabags and capacitors.

In the 1970s the family had to sell the business but Vincent Bolloré bought it back a few years later and began restructuring, diversifying with investments in tobacco, shipping and advertising, as well as more speculative forays into other businesses.

Bolloré bought into batScap in 2004. He reckons the group has so far invested €1.5 billion in battery development, including buying a Canadian company called Avestor - the only other business with the technology to manufacture LMP batteries - and building a factory at Ergué-Gabéric in Brittany.

Bolloré chose to embark on car building to promote the batteries and the Bolloré BlueCar was the result of a collaboration with Italian design house Pininfarina and former Matra designer Philippe Guédon. The Autolib' cars are a development of that design.

"The key to electric cars is the battery," he says, "and we are the only ones to manufacture this kind of technology. It is superior to other batteries in terms of



PHOTOGRAPHY: JEAN-BAPTISTE GURLIAT/MAIRIE DE PARIS (2), FRANCISCO GONZALES, GETTY IMAGES

"We calculate around 100,000 subscribers. I am convinced this will be a great success over the next 10 years," says Vincent Bolloré (below) of his Autolib' electric car scheme.

IT'S SHARE AND SHARE ALIKE

Autolib' is by far the most ambitious car share scheme ever launched, although there have been many others, dating back to 1974 when Dutchman Luud Schimmelpennink set up Witkar in Amsterdam. It received little support and was closed down in 1986.

Most schemes that followed involved customers having to return the cars to the pick-up location. Among the more successful was Germany's StadtAuto, which was started in 1988 and worked with the German railways to provide cars for rail travellers when they reached their destination. In 2004 it was bought by the Dutch firm Collect Car and has since been rebranded as Greenwheels.

In the US, Zipcar has 9,000 vehicles and 650,000 subscribers and has finally begun to make a profit after 12 years. It allows cars to be reserved and driven in 28 cities in North America and in the UK, but they must be returned to the pick-up location.

Car2Go, a subsidiary of Daimler AG, began in Ulm, Germany, in 2008. It has expanded to 10 cities including Amsterdam, Austin San Diego and Hamburg. Customers leave the cars where they like, with the next client then finding the car and the level of charge left on the Internet.

A pioneering one-way service was La Rochelle's Lisélec, begun in 1999. It provided electric cars and a limited number of charging stations in the city.

safety and performance. Our battery is unique. The technology has permitted us to develop a car that runs 250km, a bus that goes 140 or 150 km, without noise and without fumes. And from a household perspective people can have a sort of suitcase in their home in which they can store electricity when it is cheap and use it when it is most expensive."

"Autolib' is both a great showcase and an effective stress-test for the cars," he says. "It will allow us to show that despite frequent recharging the battery will work. If our batteries are really better than those of our rivals then things will develop a great deal."

The Autolib' cars have a top speed of 130kmh. They are 3.65 metres in length and can carry four people and even have space for two average sized suitcases. They are available to anyone aged 18 or older with a valid driving license who takes out a paid subscription. The user enters a cabin at the docking station and connects to an operator to register the driving licence and credit card details.

They are then issued with a card that unlocks the car, which features GPS navigation and an on-board computer that not only guides the driver to a docking station, but also allows him to reserve space before he gets there.

Managing the Autolib' infrastructure is not going to be easy, however.

"People forget that the Bolloré Group is also a leading logistics company," he says. "We know how to have things in the right places at the right times. As with a lot of revolutionary products it will take a little time to get right. We do have experience from La Rochelle, although those cars were of an older generation. If we transpose the figures from there to Paris we calculate around 100,000 subscribers and I am convinced that this will be a great success over the next 10 years."

The company has calculated that Autolib' will start making money in about seven years if there are 80,000 subscribers using the cars twice a week, for more than one hour on each occasion. Thus far the response has been positive. The scheme gained 6,000 subscribers - twice the expected number - in the first few weeks. However, there have been more malfunctions and vandalism than was expected as well.

Bolloré believes that profits will come and believes there will be more than 100,000 subscribers and that each car will be used more than 10 times per day. There are also plans to integrate the scheme into the existing ticketing systems for Paris's traditional modes of public transport. ☺

OPINION SCHOOL FOR CHAMPIONS

As Formula Two enters its fourth year, series Chief Executive JONATHAN PALMER explains why, in uncertain economic times, the FIA's major feeder series makes more sense than ever

This year marks the fourth season in the new era of the FIA Formula Two Championship and there are a number of changes this year. We're delighted to have Yokohama as a new partner and from what we have seen in testing so far we are confident that the new tyres are going to offer not only better pace, but also improved consistency.

I believe that this is crucial in maintaining the completely equal environment that F2 provides. We continue to work closely with Williams F1 and this year's JPHIB F2 car is an incredibly sophisticated machine. The design has been upgraded and we have new carbon composite brakes, which, allied to the tyres, will result in lap times around two seconds faster than last year, based on the testing we have done.

Formula Two was revived by the FIA in 2009 in order to give young drivers the opportunity to show their potential in a much more cost-effective environment than the other available championships. Before F2 came along, the path to F1 was incredibly expensive and for some it was just impossible. Others were unable to show their true potential because they ended up with uncompetitive teams.

F2 is not only reasonably priced, but it also provides drivers with identical cars. All the cars are prepared and run by our team from a base at Bedford Autodrome in the UK. The cars feature a 1.8 litre turbocharged Audi engine, producing 425bhp, increasing to 500bhp when a driver applies the overboost facility.

The key point is that F2 offers each driver exactly the same opportunities. If a driver can find the right set-ups and races well, then they can win. The cars

are the same. At the start of the race meeting no-one has an advantage.

We also limit the things that drivers can change, so as to keep costs to a minimum. Spring changes front and rear are limited to two options apiece. There are also two options of rear anti-roll bar. The front anti-roll bar has an extensive range of adjustment, via a cockpit control. The drivers cannot change the gear ratios or differential settings - these are optimised for each circuit.

At the same time there is still a huge amount they can change, including ride heights, camber, tracking, wing flaps, damping, tyre pressures and even the engine mapping, so they learn a lot.

I think one of the major advantages is that a driver can adjust the front wing of the car from the steering wheel, which means he can balance the car aerodynamically as he or she drives. This enables them to make more changes faster and to gain more experience of what is the optimum aero balance -

probably the most important thing to understand in modern single-seater racing. In every other formula you need to pit to do this, losing valuable track time, which is a big handicap when practice sessions are short.

Formula Two has much more practice time than most comparable series, as well - a full 90 minutes - and then there are two separate qualifying sessions. So there is a lot of time to make set up changes and learn how to make your car quick. All the drivers can see the data and onboard video footage of the fastest driver from each session, as well as video from their own sessions - something that has yielded huge performance gains for a lot of our drivers in the past

To give drivers a good idea where to start they are given a baseline set-up and can discuss set-up with their engineers. To keep down costs a driver shares his F2 engineer with two other drivers, although they can also have their own engineer if they like. However only the F2 supplied engineer can communicate with the driver or his mechanic during any session. The F2 engineers move around on a rotational basis, moving to a different driver group each event, to provide the optimum equality. At the same time it also teaches the drivers how to work with different engineers, which makes them more adaptable.

Reliability is vital to maintaining confidence in the series and attention to detail is really important. In 2011, we had a total of 352 car-starts in the races with only five failures, which is 1.4 per cent. I think that is a remarkable figure.

The other thing we have done to enhance the benefits of the series is to alter the calendar to visit more tracks that are used by Formula One, so that drivers get a broader education. This year we have eight venues, including Spa and Monza and, for the first time, the Hungaroring. At each event we have a maximum of 230 minutes of track time,



Designed as a cost-effective alternative route to F1, a full Formula Two season can cost almost a quarter of the price of a season in F3 and a tenth of the price of a GP2 campaign.



“BEFORE F2, THE PATH TO F1 WAS INCREDIBLY EXPENSIVE AND FOR SOME, JUST IMPOSSIBLE”

which means that drivers can really get to understand the circuits.

We also have a strong partnership with Motors TV, which will continue to provide extensive coverage of the series. This will be available in 38 countries around the world, predominantly in Europe. Motors TV screens each of the 16 races live, as part of a one-hour programme, with a pre-race build up, podium presentations and post-race interviews. Each is shown at fixed start times, so that people know when to watch - just as with F1. There will also be regular highlight shows.

In addition to this every race will be streamed live on via the F2 website. We are working with a number of partners to secure wider distribution of race highlights and F2 race footage is now being broadcast to a global potential of more than a billion households. As we own the rights to the footage we can help out drivers in their own national markets, by providing footage to any driver's local news channels. We can even provide a Live TV feed if requested.

We also have our own online video channel, which we call F2TV, which offers a wide range of videos on the series from both on and off the track.

The top three points scorers in the F2 Championship are all eligible for a FIA Superlicence, which is required in order for a driver to be able to compete in Formula One. On top of that the champion gets a full test drive with the Williams F1 team during the official Rookies Test at the end of the year.

This is an incredible opportunity and they receive not only great track time but also engineering support and technical advice. The driver is also fully prepared beforehand, working with the team and learning on the simulator. Other drivers are paying hundreds of thousands of Euros to get such an opportunity, so our alliance with Williams is very valuable.

This year we have a new prize for the rookie of the year. The best rookie gets two days of free winter testing during the championship's regular winter test programme, which will be very helpful to assist them in their preparations for their second season in Formula Two.

I believe that F2 offers a unique combination that is great value for up-and-coming drivers: low costs, decent performance, car equality, high reliability, a good training in setting-up cars, plus a superb live television package and prizes that help the winners move on in their careers.

We are very proud of what we have achieved thus and we look forward to much more success in the future.”

F1 2012 BEATING THE BOFFINS

Formula One's rules are a constant battleground, with the FIA closing loopholes in the law as quickly as team engineers find them. Race Director CHARLIE WHITING explains what's been shut for the 2012 season

The exact formula that defines the world's top open-wheel racing series is a constantly moving target. The furious speed of innovation at the top teams means that the sport's legislators often find themselves positioned as peacemakers in an ever-escalating technological arms race, frequently being called in to rule out brainwaves that sail marginally beyond the exact letter of the regulations.

This year's set of rules is no exception and in response to a litany of developments over the past few years, Race Director Charlie Whiting has redrawn the regulations to once again level a playing field that had become somewhat skewed.

The most noticeable thing about the latest generation of cars is that most have a step between the monocoque and the nose. This is because of a change of regulation to lower the noses.

"The height of the survival cell was 625 millimetres before," says Whiting. "We wanted it to be 550 millimetres, but some teams began to complain, saying they would have to completely redesign their cars and that this would have knock-on effects on suspension packaging. So we agreed that from a point 1950mm in front of the rear edge of the cockpit template, the height should be at 550mm. The effect has been some rather ugly cars, with a step down from 625mm to 550mm at that particular point. Yes, the cars all look a bit like ducks but thankfully that's not really our problem!"

The second major change is a limitation on the size and positioning of the exhaust outlets, in response to

the proliferation of 'exhaust blown diffusers' last year, a system whereby exhaust gases were ejected onto the rear diffuser, effectively pushing the cars close to the track and providing better downforce and aerodynamic grip.

An incredibly complex and emotive issue due the variety of systems in use, and their methods of activation, the only answer, according to Whiting, was to outlaw the technology. He still admits, however, that there will be ways around the legislation.

"We all know that our new rule cannot be 100 per cent effective," he says. "It is a classic case of not being able to unlearn things once they have been invented. The engineers know that there are benefits to be had and there is still some scope for development in this area. And we can't wipe the memories of the engineers like a computer, can we?"

"However, the systems won't be nearly as effective as last year," he adds. "The rules only apply to the last 100mm of the tailpipes, which have to point between 10 and 30 degrees upwards. I'm pretty sure, that they will all be on 10 rather than 30 degrees. They will probably introduce the exhaust gases in that final part of the tailpipe, at an angle, to get as much of the gas going down as they can. The bodywork behind that exhaust gas will likely be designed in such a way that the exhaust gases stay attached to bring them into the diffuser area.

"We combined the exhaust rules with additional constraints on engine mapping and these will make it really difficult to exploit the exhaust gases in the manner of last year. We are aware however, that they will do as much as

they can to direct the exhaust gases down into the area where they want them. I think, it will be 20 per cent of what they had before. I suspect we'll have to have another go at it in 2013.

"We put all these constraints into our electronic control unit (ECU) code, so that they can't operate outside this. The ECU and its software had to be approved by the FIA. Generally, we want to stop them producing exhaust gases when the driver is off-throttle."

The 2011 season also saw teams experiment with front wings that moved under load and the sport has introduced laws to govern the amount of movement.

"By introducing a new test we have effectively halved the permitted deflection," he says. "With a 1,000 Newton load they were allowed a deflection of 20mm. As a result of this they built wing after wing to be tested and to get the deflection to 19.9mm. We have had enough of this. Twenty millimetres was a guideline. But then we saw some extreme forms of deflecting on track. These wings had been designed with flexibility in mind. We believe that the principle as laid down in Article 3.15 is the key issue, not the guidelines for deflection limits in Article 3:17.

"We are allowed to introduce new deflection tests if we feel that our guidelines are not followed in the way we think they should be. So there is a new test which moves the pressure point rearwards by 10mm and inboard by 5mm and this reduces the permitted deflection to 10mm."

There have also been some changes to the rules about wheel guns?

"We have banned the use of helium, which was being used to make the wheel guns operate faster. It was just madness spending money on helium, when you can use compressed air."

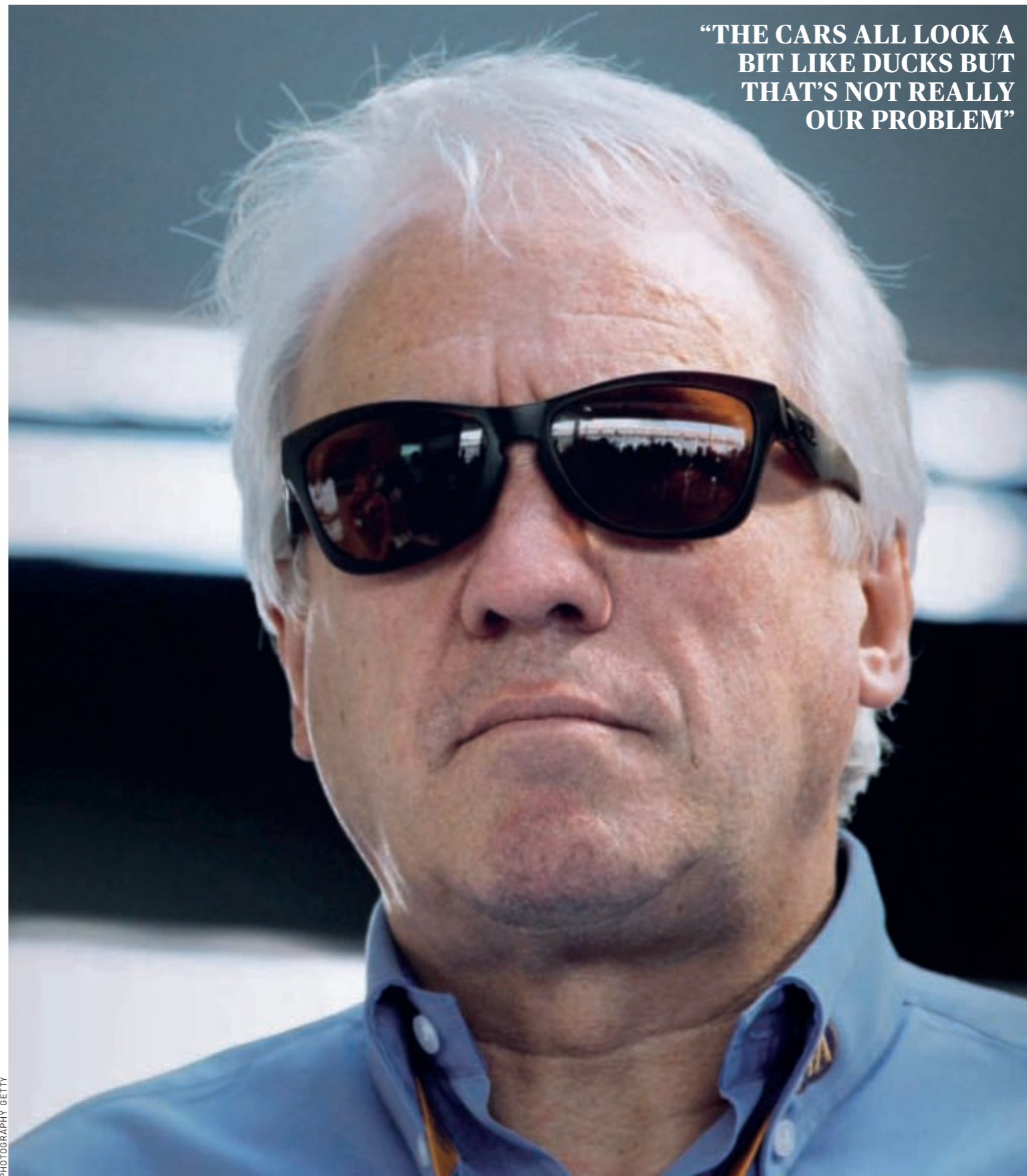
And what about new Sporting Regulations? You have restricted the maximum race time to four hours.

"Yes. If we have another race like Canada [where torrential rain led to long stoppages and faltering light], then after four hours we will show the drivers a signal indicating that there is one more lap to go. Then they get the chequered flag. The race in Montreal lasted four hours and four minutes. It should not go much longer than that."

What about the new rule about drivers leaving the race track without reason?

"We have seen some drivers on in-laps or reconnaissance laps cutting chicanes to save time. Some engineers think that they save a bit of fuel or time by doing this. But if one driver does it, they all do it and no one is going to use the track. →

"THE CARS ALL LOOK A BIT LIKE DUCKS BUT THAT'S NOT REALLY OUR PROBLEM"



PHOTOGRAPHY GETTY

→ We could put barriers there to stop that, but that looks stupid. The rules say that drivers should use the track. If they don't they will need to justify why."

And what about the overtaking rule? It says that if a driver has moved off the racing line to defend and then moves back onto the line as he reaches a corner, he must leave at least one car width.


"The problem goes back many years," he says. "The argument was that if the defending driver moves completely to the side to block the inside of the road, and the other one tries to pass on the outside instead, how far is the defending driver allowed to move back. If the driver behind is still able to go around the outside, it is okay. If not, it would have meant, that the driver in front had made a second move to defend his position. That is potentially dangerous because there is the risk that one driver will hit the back of the other.

"We cannot ask the defending driver to stay completely on the inside line, but he may not come back so far that there is no room for the guy behind. In order to avoid getting into arguments we decided that there must be at least a car width."

Tyre use has also been revised, offering drivers more options.

"We have changed the tyre rules so that drivers may use more than three sets on Fridays. Each driver still gets 11 sets of tyres for the weekend, of which he has give back three on Friday and another two after Free Practice on Saturday. We have also agreed that lapped cars that are between cars on the lead lap during a Safety Car intervention can pass the faster cars and drive around to the back of the field before a race is re-started. We have had the rule before but we took it away because before it was very difficult to manage.

"Now we will make it easier by being clearer about when the order to pass will be established. That will be by the second time everyone has crossed the line behind the Safety Car. Once they are in the correct order, we tell the lapped drivers that they can overtake.

"We also made a few changes at the WMSC meeting in Milan," he concludes. "We decided that one set of dry weather tyres can be carried over to Saturday if both Friday sessions are wet. The reason for that is to give the teams the chance to run more laps on Saturday. We also decided that we would clarify things with regard to DRS use so that we can prohibit the use of the adjustable rear wing if we feel that visibility is too poor in wet conditions. We did that on safety grounds because of concerns about the speed differential between cars." 

2012 F1 Season Preview

THE LONG AND WINDING ROAD

The 2012 season is set to be the longest in Formula One history, with a whopping 20 races pencilled in. After the series raced for the first time in India last year, the headline-grabber this year will be the sport's return to the USA after a five-year absence, with a new US GP due to be held at the newly constructed Circuit of the Americas in Austin, Texas. The new 5.5km facility, designed by F1 circuit guru Hermann Tilke will feature a number of exciting

sections, including a section based loosely on Silverstone's challenging Maggots/Becketts complex and a corner modeled on Istanbul Park's fearsome, triple-apex Turn 8. Match that with the tech and college town atmosphere of cosmopolitan Austin, a town best known for its superb South by Southwest citywide music festival and the US GP looks to have found an interesting new home. The race is set to be held on the weekend of 16-18 November.

TEAMS AND DRIVERS

RED BULL RACING

2011: Champions

Drivers:

1. Sebastian Vettel

Nationality: GER
Born: 03/07/1987
Wins: 21. Poles: 30. World Titles: 2
2011: Champion.

2. Mark Webber

Nationality: AUS
Born: 03/07/1987
Wins: 7. Poles: 9. World Titles: 0
2011: 3rd



MCLAREN

2011: 2nd

Drivers:

3. Jenson Button

Nationality: GBR
Born: 19/01/1980
Wins: 12. Poles: 7. World Titles: 1
2011: 2nd



4. Lewis Hamilton

Nationality: GBR
Born: 07/01/1985
Wins: 17. Poles: 19. World Titles: 1
2011: 5th



FERRARI

2011: 3rd

Drivers:

5. Fernando Alonso

Nationality: ESP
Born: 29/07/1981
Wins: 27. Poles: 20. World Titles: 2
2011: 4th



6. Felipe Massa

Nationality: BRA
Born: 25/04/1981
Wins: 11. Poles: 15. World Titles: 0
2011: 6th



MERCEDES

2011: 4th

Drivers:

Michael Schumacher

Nationality: DEU
Born: 03/01/1969
Wins: 91. Poles: 68. World Titles: 7
2011: 8th



Nico Rosberg

Nationality: DEU
Born: 27/06/1985
Wins: 0. Poles: 0. World Titles: 0
2011: 7th



LOTUS

2011: 5th

Drivers:

Kimi Raikkonen

Nationality: FIN
Born: 17/10/1979
Wins: 18. Poles: 16. World Titles: 1
2011: Did not race



Romain Grosjean

Nationality: FRA
Born: 17/04/1986
Wins: 0. Poles: 0. World Titles: 0
2011: Did not race



FORCE INDIA

2011: 6th

Drivers:

Paul Di Resta

Nationality: GBR
Born: 16/04/1986
Wins: 0. Poles: 0. World Titles: 0
2011: 13th



Nico Hulkenberg

Nationality: DEU
Born: 19/08/1987
Wins: 0. Poles: 1. World Titles: 0
2011: Did not race



SAUBER

2011: 7th

Drivers:

Kamui Kobayashi

Nationality: JPN
Born: 13/09/1986
Wins: 0. Poles: 0. World Titles: 0
2011: 12th



Sergio Pérez

Nationality: MEX
Born: 26/01/1990
Wins: 0. Poles: 0. World Titles: 0
2011: 16th



SCUDERIA TORO ROSSO

2011: 8th

Drivers:

Daniel Ricciardo

Nationality: AUS
Born: 01/07/1989
Wins: 0. Poles: 0. World Titles: 0
2011: 27th



Jean-Éric Vergne

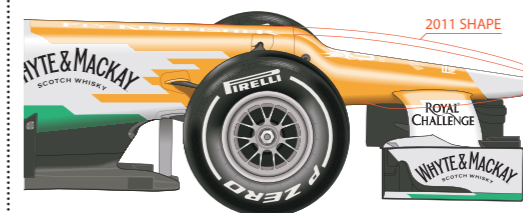
Nationality: FRA
Born: 25/04/1990
Wins: 0. Poles: 0. World Titles: 0
2011: Did not race



VIVE LA FRANCE!

It's a bumper year for Frenchmen in F1. The Tricolore last flew in F1 when Romain Grosjean raced the final seven rounds of the 2009 championship and this year he returns for Lotus. Over at Toro Rosso, Jean-Éric Vergne will race alongside Australian Daniel Ricciardo, while at Marussia Charles Pic partners Timo Glock. Remarkably for a country with such a long and proud F1 tradition it's the biggest French contingent since the Brazilian GP of 1999, when Stephane Sarrazin made his single race appearance, lining up alongside Jean Alesi and Olivier Panis.

UGLY DUCKLINGS, RACING SWANS?



With F1 designers seeking ever better ways in which to channel air under their cars, F1 nosecones have in recent years risen to heights the FIA considers hazardous. This is particularly so in the event of a nose-to-sidepod collision, where the nosecone of one car might be higher than the side protection of another.

For 2012, the area ahead of the front bulkhead can be no higher than 550mm, while the area behind the bulkhead can go as high as 625mm. And the results are aesthetically challenging to say the least! Caterham got the ball rolling by leaking images of their car on Twitter and the CT-01's duck-billed platypus styling quick put noses out of joint beyond its own. Other teams followed and the first test in Jerez was awash with cars in dire need of major rhinoplasty. Indeed, the only team out of step with the stepped nose is McLaren, whose gently curved nose is the cleanest solution of a pretty dirty dozen designs. The bottom line though will be victories. No matter how 'ugly' a car appears at first it will soon become a thing of great beauty should it have its stepped nose in front at the end of the final lap.

SIX OF THE VERY, VERY BEST

If you want a clue to just how good this season might be then you need look no further than the fact that six champions will line up on the grid, and all in competitive machinery.

There's two-time defending champion Sebastian Vettel at Red Bull Racing, while McLaren will field 2009 title winner Jenson Button and 2008 victor Lewis Hamilton at McLaren. Double champion Fernando Alonso lines up for Ferrari again, while over at Mercedes, the man he beat in '05 and '06, Michael Schumacher, will make a bid for a staggering eighth world title.

And the final member of this illustrious sextet? It's none other than 2007 champion Kimi Raikkonen,

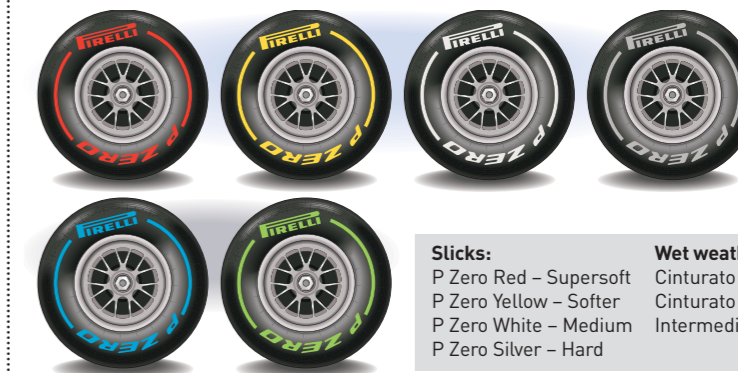
who will race for an already competitive looking Lotus this season. With 18 wins and 62 podium finishes to his credit, as well as a reputation as the quickest man in F1 when the mood was upon him, Raikkonen sensationally walked away from F1 at the end of 2009, headed for a career in rallying. There he drove first for the Citroen Junior Team and then last year his own Ice Racing 1 team. He posted a best finish of fifth at the 2010 Turkish round. His return to F1 was marked in fine style with the fastest time in the first session of the first test of the year in Jerez last month. The return of the man they call 'The Iceman' will make Formula One a much more interesting prospect.

GETTING A GRIP

How cars and drivers dealt with tyres was the big talking point last year, with supplier Pirelli, at the request of the governing body, bringing rubber that was much more prone to degradation. There was also a big difference in the performance of the various options on offer and tyre strategy became a key factor in 2011.

Pirelli have changed the game again for 2012. According to the company's Motorsport Director Paul Hembery the performance gap between options was too great last season and will be much tighter this year. "We made it too easy for the teams by using soft compounds at each (race) weekend," he said. "This year we want to mix it up more. The teams were making choices based on tyres that had a 1.5 seconds difference - we have tried to get that down below one second and the aim is to have it at around 0.8 seconds."

The slimmer performance gap should mean that the race strategies are not so cut and dried and, once qualifying is over with, there should be a wider variety of scenarios for starting the race. The tyres, in general, are more aggressive, the compounds being softer and offering more grip. As such the racing should be even more exciting. The Italian company has also made its tyre 'flavours' more recognisable this year, with improved colour coding so that spectators can easily identify the tyres a driver has opted for.



Slicks:
P Zero Red - Supersoft
P Zero Yellow - Softer
P Zero White - Medium
P Zero Silver - Hard

Wet weather tyres:
Cinturato Blue - Full wet
Cinturato Green - Intermediate

GRAPHIC: JOHN RIGBY

THE ROAD TO SAFETY



Dear Friends,

The FIA Action for Road Safety campaign is at the centre of everything the federation will be doing for many years to come. And that is right, as we have a pivotal role in the fundamental process of education and accident prevention, so that we significantly participate to reduce road deaths and injuries over the next 10 years. The figures are stark: 1.3 million people lose their lives on the world's roads each year, and another 50m are injured. Most are young people in fast-developing countries. It is a global tragedy and this is why we have set up our campaign to support the United Nations' Decade of Action for Road Safety, which targets 5 million lives saved by 2020.

In the following articles you will read that by focusing on a simple set of messages encapsulated in the FIA's Golden Rules for Safe Driving, we can successfully engage with all levels of institutions, as well as 'real' people who can act as ambassadors for roads safety in their communities. I trust that you will enjoy reading this special section on road safety. The hope is that it gives you plenty of food for thought, so as to motivate you to commit to this campaign through your clubs, institutions, companies and on a personal basis too.

Jean Todt

PAY ATTENTION

#1 DRIVEN TO DISTRACTION

If you thought driving while using a hands-free phone was safer than driving drunk, you'd be wrong...



International Auto Show held in Detroit: infotainment is now what sells cars.

According to Ron Szabo, Director of Delphi's Forward Engineering, Infotainment and Driver Interface Business Unit, consumers are inevitably going to demand the same level of functionality in the car that they get at home or in the office, "it really is about providing consumers with those features and the connectivity they see in other environments - but designed in the most distraction-free way possible."

A cornerstone of Delphi's concept is user configurability - in essence enlarging TFT displays to take over the space formerly occupied by analogue gauges and dials and then allowing the driver to place information - within limits - where they want it. This is believed to limit distraction, though the big advantage comes from integrating the displays with sensor technology to give the vehicle a degree of discretion in what the driver is allowed to see.

Gerry Witt, Manager of Advanced Driver Interface Activity explains: "Configurability will help us manage distraction, particularly by alerting the driver to serious issues or by modifying the functionality of the vehicle based on driving conditions. For example during a 'high-traffic' event - dense traffic with many distractions - we may want to disable certain features. In normal situations we would use text-to-speech technology to read out text messages from the driver's cell phone but during a high-traffic period the system could just alert the driver that a text message has been received but not process that message until the situation has passed.

"Likewise, the configurable display has the capability to display lots of information but it can choose to not. If the driver monitoring system senses the driver is in a high workload situation it can reduce the information down to a very basic level and maybe limit access to certain features. It's not necessarily something that would prove popular but it is important to make sure the driver is focused on the driving task."

If that sounds a little like the car is gently urging the driver to pay more attention, the next feature is more like a slap on the wrist. "It's called the exogenous alert," says Szabo. "If our driver state sensor sees the driver is not paying attention for an extended period of time it'll flash a bright light in their →

23

TIMES MORE LIKELY TO BE INVOLVED IN AN ACCIDENT IF YOU TEXT WHILE DRIVING

0.08%

BLOOD ALCOHOL CONCENTRATION EQUALS THE LEVEL OF IMPAIRMENT CAUSED BY MAKING A HANDS-FREE PHONE CALL. THAT'S THE EQUIVALENT OF THREE DRINKS FOR A PERSON OF 63KG

cent of the brain activity that would usually be tasked to driving, while researchers at the University of Utah conclude that a call creates a real-world impairment equivalent to a blood-alcohol level of 0.08 per cent. Essentially, there's little difference between making a phone call and driving while drunk.

But even without the external devices that litter vehicles, there's still an increasing level of information being offered to the driver in the form of SatNav, extra functionality for DAB and so on. It's a complicated environment in which to work.

In the UK the Royal Society for the Prevention of Accidents cites driver distraction as one of the key areas to be tackled in making roads safer.

"There isn't always anything to be done about distraction outside the vehicle but inside there is a lot more to say about how distraction can be prevented," argues Duncan Vernon, RoSPA road safety manager for England.

"There's a need to continue research that looks at how people interact with vehicles, how vehicles impart information and how vehicles prioritise the information drivers need.

"Obviously there's the risk that if the interaction between driver and vehicle isn't done well, the end result is a cluttered steering wheel, console and an instrument cluster filled with all sorts of buttons and displays that distract the people using them."

Simply banning the technology from the vehicle is one option but in a battle between legality and convenience, history backs convenience, so ordering people to put away smart phones and iPods isn't going to work. The alternative is to manage their use by controlling the interface - which means integrating the device with the car.

Delphi first began distracting drivers in 1936 when a direct predecessor of the company first put a radio into a production dashboard. Seventy-

28%

MORE LANE EXCURSIONS AND 140% MORE INCORRECT LANE CHANGES BY DRIVERS SENDING AND RECEIVING TEXT MESSAGES

six years on, they're a major player in automotive electronics and heavily involved in vehicle safety, infotainment systems and the nebulous area that exists between the two. Their latest concept, called 'MyFi, Connecting with Safety', is an all-encompassing system designed to provide drivers the infotainment options they've come to expect while supporting the ideal of eyes on the road and hands on the wheel. It focuses heavily on voice recognition,

text-to-speech translation, large touchscreens and configurable displays.

Tellingly, Delphi chose to launch it at the Consumer Electronics Show in Las Vegas, rather than the concurrent North American

→ peripheral vision. Because the natural response to a flash of light is to look in that direction, it draws the driver back to the eyes-forward position - which is where they should be.”

Johnson Controls International (JCI) produced 7 million instrument clusters/ displays and 5.1 million instrument panels in 2011. It makes complete cockpits for Ford and Mercedes, and instrument clusters for most everyone else - and it views the future of display

technology and the science of Human Machine Interaction (HMI) as rich with possibility.

The recently launched Citroën DS5 features an instrument cluster and a head-up display (HUD) from

JCI. By using a HUD and putting key information into the driver's primary field of vision, JCI claims that data is processed much faster than from standard displays. “We talk about the primary field of vision being a 12° arc in front of the driver, that's where we want

27%

OF AMERICAN ADULTS ADMIT TO HAVING SENT OR READ TEXT MESSAGES WHILE DRIVING

to put the important information,” explains Gert-Dieter Tuzar, principle designer for HMI, Johnson Controls.

“We will have systems

in the future that use a bigger area of the windshield,” he adds. “Ten or 15 years in the future the windshield will become the information delivery system.”

The DS5 is JCI's first full-colour HUD after a range of monochrome systems on recent Peugeots, but before the windscreen displays become ubiquitous, JCI believes there's still considerable scope for improvement in traditional displays, particular with 3D.

“The multi-layering of 3D has potential to better provide information,” says Tuzar. “We really haven't exploited this yet and there is enormous potential to create information systems that greatly improve the situational awareness

of the driver, particularly when using active safety such as collision warnings and blind spot detection. There is a lot of room to make things better.”

25%

OF AUSTRALIANS ADMITTED TO USING A MOBILE PHONE WHILE DRIVING



CASE STUDY: PRACTICING SAFE TEXT

Modern research suggests driver distraction plays a key role in over half of all road traffic accidents - and with the growing ubiquity of MP3 players, SatNav devices and complicated in-vehicle infotainment options, the problem is growing.

Particularly dangerous is the commonplace use of mobile phones behind the wheel. Talking on the phone while driving is incredibly dangerous, though worse is the practice of texting while driving, combining as it does the need to take eyes off the road and hands off the wheel. The problem of texting while driving is particularly prevalent among young people.

The Canadian Automobile Association provided a graphic demonstration of how driving deteriorates when distracted by placing two drivers in a simulator and having them text while driving. To demonstrate that it really doesn't matter how high your level of driving skill is beforehand, the drivers they picked were F1's Felipe Massa and Michael Schumacher.

“If you use a mobile phone, whether texting or phoning, or playing with it, you will increase your chance of an accident by more than 23 times. That is an outrageous number,” said seven-time F1 champion Schumacher after crashing in the simulator. “Not only do you risk your own life, but more, or even important is that you risk other people's lives.”



#2 LESSONS IN ROAD SAFETY

If the world's roads are to be made safe then the lessons of good practice on the streets and behind the wheel must be learned early, but are our children getting the right messages?

One are the days when road safety education was a grainy public information film featuring a faintly scruffy pop star or footballer imploring kids to look right and left before crossing. These days the buzz words shout that using social media to deliver peer-to-peer campaigns is the way forward.

Whether it is pre-schoolers playing road safety games online with their parents, or teenagers downloading graffiti-covered leaflets to hand out to friends, the ways in which children learn about road safety are being forced to move with the times.

Road accidents are the biggest killer of young people worldwide and the statistics make for sober reading. Each year almost 1.3 million people die in road traffic crashes and more than 30 per cent of these are young people - that's 1000 each day. The need to educate children about road safety is imperative, but how does this happen?

As with any other aspect of a child's education, learning about keeping safe in traffic starts at home. Thanks to the internet, parents can access a range of educational tools - many provided by government agencies and charities - in order to pass on basic information such as 'Stop, Look, Listen' to their pre-school-age children. Early years educational providers such as childminders and nursery staff also have a responsibility to teach road safety and →



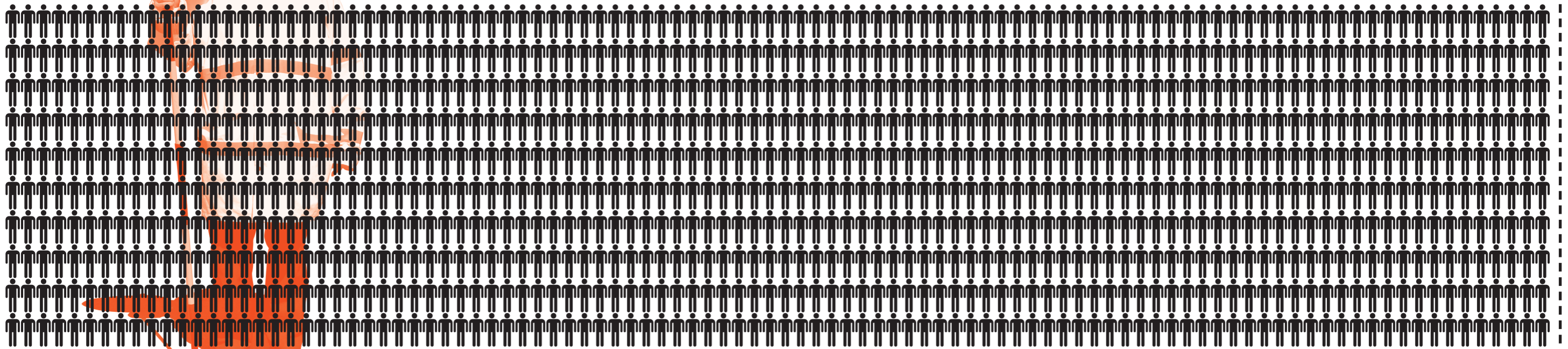
37%

OF FATAL ROAD CRASHES IN SPAIN IN 2008 WERE CAUSED BY DRIVER DISTRACTION



1000

YOUNG PEOPLE DIE ON THE WORLD'S ROADS EACH DAY, MAKING UP 30 PER CENT OF THE 1.3 MILLION PEOPLE KILLED EACH YEAR



→ can get involved in local and national schemes in their countries.

The British charity Brake organises a Beep Beep! Day for infants as well as the Giant Walking Bus march for primary school children and a 2young2die campaign for secondary-school kids. The latter offers training workshops, competitions and online resources such as videos to help teachers get the message across. The key to Brake's approach is to target information at different age groups rather than relying on a one-size-fits-all attitude.

But it is not just parents and educators who need to get involved. A great example of how different parties can work together comes from Faro, Portugal, where a 'Safe Road to School' scheme was started in seven schools in 2001 and rolled out across many others.

Statistics showed that only 20 per cent of children used rear seatbelts on their way to primary school in Faro. The Portuguese Association for Child Safety Promotion (APSI), local police, and others stakeholders designed an initiative aimed at 6-16 year olds, which included interactive workshops with primary school children, an evening information session for parents and spot-fines at the school gates. Use of rear seatbelts increased to 89 per cent following the programme.

But while casualty and death rates are falling in the Western world, the downward trend is not being repeated elsewhere in the world.

Floor Lieshout is director of YOURS - Youth for Road Safety - an organisation set up in 2009 and born out of the 2007 UN World Youth Assembly for Road Safety. It aims to make the world's roads safe for young people aged 15-29. He says: "While road traffic death rates in many high-income countries have stabilised or declined, data suggests that in most regions of the world the global epidemic of traffic injuries is increasing.

"Without increased efforts and new initiatives, the World Health Organisation (WHO) expects the total number of road deaths and injuries worldwide to rise by 65 per cent between 2000-2020 and in low-income and middle-income countries deaths by as much as 80 per cent. Ninety per cent of the world's fatalities on the roads occur in low-middle income countries, which have just 48 per cent of registered vehicles. Road safety is a global crisis and needs a global solution."

In November 2010, in conjunction with Cambodia Red Cross and the Global

Road Safety Partnership, YOURS helped organise a workshop for 20 young road safety trainers in Siem Reap. It analysed national road safety statistics and discussed why young people behave as they do in traffic. Some successful examples of peer-education were examined, and the group also considered the best forms of youth communication.

This practice of targeting young people with the communication tools they use has become key to the modern approach to child safety. The Tune In To Traffic campaign in the UK uses social media and the internet to deliver its message. Its research showed that 75 per cent of young people admitted to listening to music while crossing the road. It is targeting the danger in a way it hopes will appeal to youths.

Lieshout concludes, however, that any efforts should be part of broader programmes. "A country can take many actions to keep children safe. Not only the government, but the entire country has a role: private sector, local and national authorities, schools, the police. We are all in this together and an entire country should be taking the responsibility on their shoulders."

75%

OF YOUNG PEOPLE IN THE UK ADMITTED TO LISTENING TO MUSIC THROUGH HEADPHONES WHILE CROSSING THE ROAD



CASE STUDY: PROTECT AND SURVIVE

Child protection and education is a major cornerstone of FIA Action for Road Safety and crosses all national boundaries. The European Traffic Education Contest saw children chosen by clubs from across Europe congregate in Paris to contest a series of theoretical and practical exercises designed to promote road safety awareness and skills. FIA President Jean Todt was on hand to present awards.

Meanwhile, half a world away the Touring y Automóvil Club del Perú, together with the Ministry of Education, has sponsored a safety education bus that will tour schools over the next decade. The bus features audio and video systems designed to teach more than 35,000 six to 12-year-olds how to obey traffic rules.

In Australia, WRC star Mikko Hirvonen showed his support for FIA Action for Road Safety by joining students at Coffs Harbour High School to talk about the importance of safe driving as part of the Confederation of Australian Motor Sport 'Ignition' programme, a pre-licence safety initiative aimed at educating youngsters prior to them getting behind the wheel. "It is important the drivers of tomorrow are taught the rules of the road and how to drive safely," said Hirvonen. "There is no better time to instil that information than when they are this age."

RESPECT THE HIGHWAY CODE

#3 TOUGHER RULES ON THE CZECH LIST

With beginner drivers responsible for 17 per cent of accidents in the Czech Republic, the Autoklub České Republiky is pressing for a tougher highway code

CASE STUDY:

Having good road safety laws is crucial - but so is ensuring that those laws are properly understood and adhered to by the driving populace. That's why the Auto Club of the Czech Republic (Autoklub České Republiky) has rolled out a comprehensive FIA Action for Road Safety programme designed to lobby for a more stringent highway code, while also improving driving training and awareness. In the Czech Republic, a cause of particular concern is the frequency of accidents involving inexperienced drivers. Beginner drivers are responsible for 17 per cent of accidents, while motorcyclists with fewer than two years' experience account for more than a third of accidents involving bikes. With this in mind the Autoklub's strategy involves initiatives it hopes will lead to changes in Czech law. It lists its five key tasks as: lobbying and preparing proposals tasked to improve the quality of laws applied to road traffic; boosting the quality of driving schools; making mandatory the completion of advanced driver courses for beginners; increasing cooperation with, and support for, driver-training organisations; improving the standard of driving school instructors. It has also launched a social/modern media campaign to raise awareness of road safety, particularly among young drivers and riders, using rally driver Jan Kopecký, kart racer Lucie Panáčková and World Superbike rider Jakub Smrž.

In any straw poll of drivers asked to name the human factors involved in a car crash, intoxication and speeding usually top the list. Distractions such as mobile phones, iPods, SatNavs and passengers also feature heavily. Few people mention sleep deprivation.

According to much of the data on the subject those are fair assumptions. Looking at fatalities, 2009 reports from the US National Highway Traffic Safety Administration (NHTSA) showed 32 per cent of vehicle fatalities involved an alcohol-impaired driver, and 31 per cent a speeding driver. 16 per cent involved a driver who was distracted. That fatigue isn't included in these statistics suggests the inattention with which the subject is treated.

Based on an aggregation of some older research the common perception is that between 2-3 per cent of fatal crashes in the US have fatigue as a contributory factor, however modern research by the American Automobile Association Foundation for Traffic Safety suggests this figure woefully misrepresents the magnitude of the problem. The AAA's recent research suggests fatigue is responsible for one in six road deaths.

The reason for the discrepancy is explained by AAA Foundation for Traffic Safety Senior Research Associate Brian Tefft. "When we look just at the data that the US Department of Transportation compiles from fatal crashes, we see that drowsiness is a factor in between 2 to 3 per cent of fatal crashes - but the problem with this is many drowsy driver crashes are single vehicle, single occupant events. In the case of fatalities, when a police officer arrives minutes or hours after the event, the only person involved is deceased. There's almost no way to find out what happened."

Tefft's report, entitled *Asleep at the Wheel: The*



STOP! I'M TIRED

#4 THIS IS YOUR WAKE-UP CALL

Tired drivers are a danger to themselves and others - but quite how big a danger is something that authorities are only slowly waking up to.

Prevalence and Impact of Drowsy Driving, presents evidence that drowsy drivers are more common on the roads than has previously been believed. Through statistical analysis of ten years' worth of crash data it also estimates that 7 per cent of all crashes in which a passenger vehicle was towed from the scene had fatigue as a contributory factor. That figure rises to 13.1 per cent when the crash resulted in someone being admitted to hospital and to 16.5 per cent of crashes

when there was a fatality. The disparity between this and the commonly quoted figures is based upon the 45 per cent of crashes, single occupant or otherwise, in which the drivers' level of attention is coded as 'unknown'. Using the imputation method of statistical analysis, researchers concluded that drowsiness was a contributing factor in many more cases than had been established by empirical evidence alone.

As the US, with its mix of urban, suburban and rural population, is a good model

for road data in the developed world as a whole, it suggests a previously unrealised global pandemic of fatigue-related road deaths.

The higher figures are backed up by research into the prevalence of people driving while fatigued. The AAA Foundation's 2010 Traffic Safety Culture Index surveyed 2,000 representative drivers, 41 per cent of whom admitted to having fallen asleep for at least a couple of seconds while driving. Within that figure, 3.9 per cent said they had done so within the past month, 7.1 per cent within the past six months and 11 per cent within the past year. These figures are most likely conservative, based as they are on drivers being willing to answer questions honestly but also on their awareness of having fallen asleep in the first place.

This is one of the unnerving aspects of driver fatigue: in instances of 'microsleep', drivers are not necessarily aware that they have been asleep. Tefft says: "A laboratory sleep study, that I find in equal parts fascinating and frightening, concluded that, on average, people had to be asleep for as long as two to four minutes before having any recollection that they had been sleeping. By the time people are having microsleeps in the vehicle, they'll be aware that they are tired and desire to go to sleep but often they will be unaware they spent a few seconds actually sleeping."

There is a perception that older drivers are most at risk from fatigue, though the data says otherwise. "In our study we estimated drivers aged 16-24 were 75-80 per cent more likely than drivers aged 40 plus to be in a drowsy crash - which I found a little surprising," says Tefft. "In

our interviews we found the proportion of people that said they had fallen asleep at the wheel in the past year decreases uniformly across the board from the youngest to the oldest. We don't have answers as to why that would be, though some other researchers have suggested that it might be that young people are less likely to allow their perception of being fatigued to stop them from getting in a car in the first place, or that they are less likely to act appropriately and pull over for a nap if they become aware they're getting into difficulties."

The automotive industry is perhaps paying this issue more attention than road traffic authorities and fatigue detection systems are beginning to trickle into passenger cars. Recent years have seen active safety measures such as this coming to the fore as crash avoidance takes over from crash mitigation as the object of intense research. While better airbags, crash-structures and seat-belt pretensioners are out there, the incremental gains from improving mature technologies such as these become smaller every year. Active systems that prevent crashes are where the big improvements are going to be made.

RECENT RESEARCH BY THE AAA SUGGESTS THAT FATIGUE IS RESPONSIBLE FOR ONE IN SIX ROAD DEATHS

While there are some sophisticated devices that observe the driver - ranging from facial recognition and eyelid droop detection cameras to seat sensors that monitor breathing - the systems most commonly coming to market look instead at driving behaviour. Volkswagen has a fatigue detection system that analyses the first 15 minutes of a journey for the driver's characteristic steering and driving behaviour. Further into the journey the system continually evaluates →

→ signals such as steering angle, use of pedals and transverse acceleration. If the monitored parameters indicate a deviation from the initial behaviour it assumes concentration is waning and provides a warning tone and a recommendation to take a break. The system has been an option for several years but has recently become standard on several new VW models.

Volvo likewise has a fatigue detection system, in this case using the same hardware behind its lane departure warning. It analyses driving performance and relays a message to the driver when algorithms detect behaviour it perceives to be indicative of fatigue. Erik Coelingh, Senior Technical Leader for Safety and Driving Support Technologies at Volvo explains: "When we are alert, our focus as a driver is quite far out from the vehicle. We plan our steering movements along a long prediction horizon, looking maybe 50-60 metres ahead of the vehicle and steering in curves based on that prediction. Conversely, when we're becoming tired and beginning to fall asleep, we have difficulty focusing at long distance and our focus moves closer and closer to the vehicle. We start to introduce many more steering corrections. It's this behaviour we are able to capture."

The Volvo alert is a warning chime, with the symbol of a coffee cup displayed on the instrument panel. It follows an unwritten industry principle that the vehicle should warn the driver but not go further. "The system has proven itself to work well but there's always a risk it will overreact and falsely detect a tired driver," says Coelingh. "There has to be a balance between warning when it's needed and not disturbing the driver during normal driving conditions. That affects the way we design the system. We could stop the vehicle, we could limit its speed but we don't think that's appropriate."

A FEW STATISTICS TO KEEP YOU AWAKE AT NIGHT

According to the AAA Foundation's 2010 Traffic Safety Culture Index

41%

OF RESPONDENTS ADMITTED TO FALLING ASLEEP WHILE DRIVING

3.9%

OF RESPONDENTS ADMITTED TO HAVING DONE SO WITHIN THE PAST YEAR

26.1%

OF THOSE WHO SAID THEY FELL ASLEEP DID SO BETWEEN THE HOURS OF NOON AND 5PM

...THAT'S A GREATER NUMBER THAN THOSE WHO SAID THEY FELL ASLEEP BETWEEN MIDNIGHT AND 6AM (24.7%) MEN (52.2%) ARE MORE LIKELY TO ADMIT TO HAVING FALLEN ASLEEP THAN WOMEN (30.1%)

56%

OF DRIVERS SAID THEIR LAST INSTANCE OF FALLING ASLEEP AT THE WHEEL OCCURRED ON A MULTI-LANE DIVIDED HIGHWAY

58.8% OF THOSE WHO FELL ASLEEP REPORTED HAVING DONE SO WITHIN AN HOUR OF SETTING OFF ON THEIR JOURNEY

ONLY 20.6% HAD BEEN DRIVING FOR THREE HOURS OR LONGER

27.7%

OF THOSE WHO FELL ASLEEP SAID THEY REALISED STAYING AWAKE MIGHT BE A PROBLEM WHEN THEY SET OFF

26.6% OF THOSE INTERVIEWED ADMITTED TO HAVING DRIVEN DURING THE LAST MONTH WHILE 'SO SLEEPY THEY HAD A HARD TIME KEEPING THEIR EYES OPEN'

2.4% ADMITTED TO DOING THIS REGULARLY

Volvo is currently collating data on a study that will shed some light on how successful its fatigue detection has been in preventing accidents. Anecdotal evidence suggest it works very well, though Volvo points out it isn't going to catch everything.

"We won't be able to detect every single case of a driver falling asleep, but our tests show that in almost every case we have been able to warn drivers at least two minutes before they actually fell asleep," says Coelingh. "So I think the performance is very good - but I wouldn't call it perfect. Theoretically there is no one method of measuring fatigue perfectly."

Of course detecting driver fatigue should be the last line of defence, not the first. As with any affliction, properly diagnosing the problem is the first step to treatment. The AAA Foundation study demonstrates that the

scope of the problem has been woefully underestimated and as a result the issue has never been publicised with the ardour directed towards speed, alcohol and mobile phones.

Better education is the key to reducing fatigue-related crashes.

At first glance the issue seems fairly basic: driving while tired is obviously dangerous - but it isn't necessarily something that's understood well enough to prevent people attempting to drive at times when they perhaps shouldn't. It's the difference between an objective understanding of dangerous behaviour and the application of that understanding subjectively. For example the dangers of driving while drunk are widely understood but many people meeting the medical definition of intoxication wouldn't consider themselves to be so. However, they can

accept guidelines on a 'safe' intake of alcohol before driving. Similar guidelines exist for fatigue - but aren't publicised to the same extent.

"One of the reasons public education on this issue is challenging is a lack of awareness," says Tefft. "Our survey showed that of people who have fallen asleep at the wheel, less than 30 per cent started out believing they might have difficulty staying awake: 71 per cent said they felt fine when they set off."

The fatigue-equivalent of 'no more than one small glass of wine' is having not less than six hours' sleep the previous night and not being awake for more than 15 hours before setting off. An older AAA study done in conjunction with the University of North Carolina demonstrated that drivers with less than six hours sleep the previous night were significantly more

likely to have a drowsiness-related crash than those who had slept for eight hours or longer.

Other forms of dangerous driving are countered with a combination of public education

and the heavy hand of the law. Fatigue suffers as an issue because, unlike, drink, drugs or speed it's almost impossible to prove beyond a legally-acceptable level of doubt that a person was too tired to drive safely. Correspondingly, unlike those other issues, driving tired is not yet greeted with the same level of social vilification. Changing social attitudes will perhaps be the greatest challenge authorities face with the issue.

To get yourself in the right frame of mind, consider this: the next time you're driving on a highway in the evening or early in the morning, there's a reasonable chance not all of the drivers around you are fully conscious.

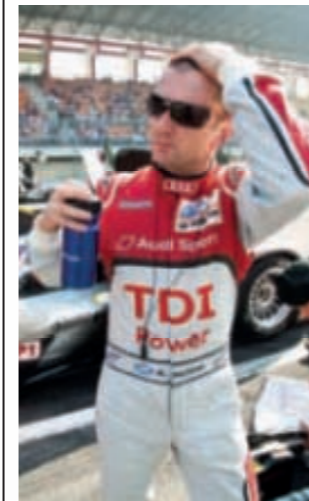
THE FATIGUE EQUIVALENT OF 'NO MORE THAN A GLASS OF WINE' IS NO LESS THAN SIX HOURS' SLEEP BEFORE DRIVING



CASE STUDY: A MATTER OF ENDURANCE

Fatigue has long been a cause of road accidents but until recently one that has not been well understood. The difficulty attached to data gathering in this field has meant the problem is under-represented and therefore action to tackle the problem has been limited. Recent research, however, suggests fatigue causes as many crashes as inebriation and - perhaps surprisingly - is most prevalent among the young. FIA member associations are lobbying governments hard to have more attention paid to this area, while FIA Action for Road Safety has teamed up with the ACO and some of the world's greatest stars of endurance racing to promote the idea of only driving when safe to do so.

"My local area around Dumfries in the South of Scotland has some beautiful roads, but also too many road accidents especially involving young people," says Allan McNish, who as a two-time Le Mans winner and double ALMS champion knows all about being behind the wheel for long periods. "As a racing driver who knows the enjoyment of both driving and racing, but who also knows the risks that are always present, I think FIA Action for Road Safety is very important in the education and training of drivers to reduce road fatalities."



BELT UP!



#5 BOSNIA LEARNS TO BELT UP

With, at worst, only 20 per cent of Bosnians using seat belts, local auto club BIHAMK has teamed up with the police and its government to get the nation to 'buckle up'



CASE STUDY:

While seatbelt and child-restraint laws are very nearly universal, adherence to the law varies wildly from country to country. The Bosnian auto club BIHAMK has pledged itself to the FIA Action for Road Safety campaign with a programme intended to tackle the country's indifference in this matter. In cooperating with transport police and the Ministry of Communication and Traffic it has launched the 'Buckle-up - Seatbelt Saves Life' promotion, aimed at drivers who choose to drive without seat restraints.

Research undertaken by the World Bank suggests that only 20-30 per cent of Bosnian drivers, 10-20 per cent of front seat passengers and less than 10 per cent of rear seat passengers use a seatbelt or child seat. The main goal of the campaign, therefore, will be to raise awareness of the critical importance of using restraints, with the initial aim of improving compliance to at least 50 per cent across the board.

Getting the message across will involve an intensive media campaign taking place in all major Bosnian cities, including video spots and radio jingles, the distribution of CDs containing seatbelt videos and the production of hard-hitting educational brochures.

OBEY THE SPEED LIMIT

#6 FAST TRACK TO SAFETY

You'd think the last thing a Formula One champion needs is education on the perils of speeding. Not so, says Damon Hill, who believes everyone should take a speed awareness or advanced driving course once in their life on the roads

There are few better qualified people to talk about speed than Damon Hill. The 1996 Formula One world champion took 22 grand prix wins, 42 podium finishes and 20 pole positions in eight seasons in the sport. Since retiring in 1999 has acted as President of the British Racing Drivers' Club as well as forging a career as a businessman and media pundit. In short there's not a lot he doesn't know about driving fast - and that includes breaking the law and being punished for it.

"Yes, I was caught," he smiles. "It was a camera going into a village. I was slowing down, but just not fast enough! I was given the option of points on my licence or going for what's called a Speed Awareness course. I thought, well, lets see what they have to say?"

Speed Awareness courses operate in the UK and are used as an alternative to prosecution for drivers who have broken the speed limits by relatively small margins, the reasoning being that education about the offence is preferable to doling out a slap on the wrist, a fine or penalty points on the offender's licence.

Many drivers have been forced to go on such courses and the first reaction is normally one of annoyance at being dragged back to the 'classroom' like a naughty schoolchild being sent to

detention. Hill's reaction was similar but it soon turned into something else. "It was curiosity," he says. "I thought, well at least they are trying to get me to change. It's all too easy to just take the pain (of a sanction) and carry on as before."

Once the course is accepted in preference to points, the offender must attend a half-day series of lectures designed to raise the driver's awareness of speed as a cause of problems while at the wheel and to refresh the offender's appreciation for the rules of the road.

So what did Damon learn from the experience?

"It was amazing," he admits. "The people who do the course are very persuasive. I went with an open mind, but even so, they showed that we all have an immunity to reason when it suits us! No matter how we tried, they showed that the facts cannot be denied. The greater the speed, the greater the risk to life."

Did it make him change his own habits? →



CASE STUDY: RACING TO SAVE YOUNG LIVES

While any road death is a tragedy, perhaps the greater tragedy is the over-representation of children and young adults in the statistics. Young people are the group most at risk and concurrently the least likely to heed road safety advice from sources perceived to be authoritarian. That's where the campaigning ability of so many stars of international motor sport has been vital. Everywhere, from F1 - where the biggest names in the sport pledged their support to FIA Action for Road Safety - to WRC, Endurance and WTCC World, racing heroes have joined their voices to the FIA's. By virtue of their visible achievements, the message gets across and lives are saved.

Reigning WTCC Champion Yvan Muller sums it up best: "When road users think of racing drivers they always think of speed and madness but that's completely wrong. On the contrary, our experience may be used to pass on very important messages about the necessity of evaluating potentially dangerous situations; road safety, braking distances, sobriety at the wheel and so on."

Eight times Le Mans winner Tom Kristensen adds: "I support the FIA Action for Road Safety campaign. We all know it is all about being alert, clever and focused behind the steering wheel on the roads, and this campaign will surely improve awareness."

Eight times WRC Champion Sébastien Loeb has proved a tireless campaigner for road safety, particular with his work to make people recognise the dangers of riding motorcycles without helmets. He said: "Road crashes kill on the same scale as malaria - it is important to have long term action at the highest level in order to make roads safe."

Summing up the support F1 has given FIA Action for Road Safety, Rubens Barrichello said: "By raising awareness of the dangers that exist on the road, improving driver education and providing better training, we can reduce the frequency of accidents, the tragedy of which is compounded by the disproportionate number of children and young adults involved in them."



→ “Initially, I totally forgot everything that they had tried to teach us,” he laughs. “Then, five minutes into driving home, I thought, OK let’s give it a go, by which I mean driving at the speed limit! It was very painful at first. It was a changing the habit of a lifetime. For years I had driven at whatever speed I felt comfortable at, which, for an F1 driver, is unfeasibly swift.

“Yes, I could and have been driving in my own sweet way ever since I passed my test, but I have had near misses and the odd impact,” he adds. “There is no doubt that I would not have had those events if I had been driving slower. But the real clincher for me was that I suddenly realised that ‘they’ were on my side! It dawned on me that I would be protected by law if I had an accident and I was driving within the speed limit (provided I wasn’t doing something else wrong).”

So, did the course make Damon think differently about how we learn safe driving and whether those messages need to be reinforced on a more regular basis?

“Yes it did,” he says emphatically. “I have an unusual advantage in that I can appreciate the energy involved in an accident and what it feels like to be out of control. I think most drivers have no concept of how it feels to be in a car that won’t stop as quickly as you want. These events just do not happen often enough for drivers to get to grips with the situation... until it is too late. For racing drivers it happens every corner!”

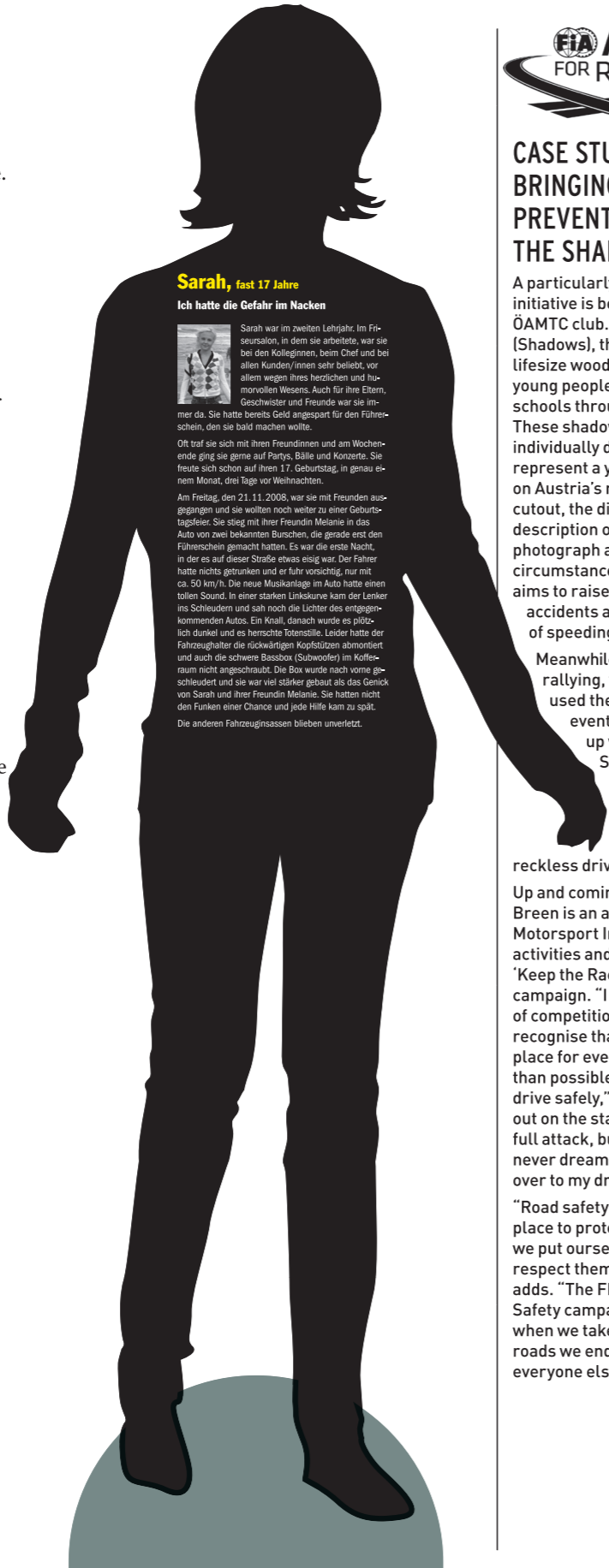
“So, what to do? The speed awareness course demonstrated the science and the statistical proofs of an accident. I think most people who attended were impressed enough to change the way they drove.”

The new awareness led Hill to carry on with road safety work and he has been active on a number of fronts.

“I supported a similar campaign called ‘Safe Drive Stay Alive’, which is based in Surrey in the UK. It’s a campaign aimed at new teenage licence holders. It is very shocking and leaves nothing to the imagination with regard to the real effects of road traffic accidents. The idea is that the ‘flash bulb’ experience will remain with the drivers, whom it is hoped will never take unacceptable risks on the road.

So should such driving courses be compulsory every 5-10 years?

“I would recommend a courses like this at least once in driver’s lifetime,” he concludes. “Perhaps 10 years is sufficient to remind us old folk, but young people could probably benefit from a five-year refresher.”



Sarah, fast 17 Jahre

Ich hatte die Gefahr im Nacken



Sarah war im zweiten Lehrjahr. Im Fitnesstudio, in dem sie arbeitete, war sie bei den Kolleginnen, beim Chef und bei allen Kunden/innen sehr beliebt, vor allem wegen ihres herzlichen und humorvollen Wesens. Auch für ihre Eltern, Geschwister und Freunde war sie immer da. Sie hatte bereits Geld angespart für den Führerschein, den sie bald machen wollte.

Oft traf sie sich mit ihren Freundinnen und am Wochenende ging sie gerne auf Parties, Bälle und Konzerte. Sie freute sich schon auf ihren 17. Geburtstag, in genau einem Monat, drei Tage vor Weihnachten.

Am Freitag, den 21.11.2008, war sie mit Freunden ausgegangen und sie wollten noch weiter zu einer Geburtstagsfeier. Sie stieg mit ihrer Freundin Melanie in das Auto von zwei bekannten Burschen, die gerade erst den Führerschein gemacht hatten. Es war die erste Nacht, in der es auf dieser Straße etwas eisig war. Der Fahrer hatte nichts getrunken und er fuhr vorsichtig, nur mit ca. 50 km/h. Die neue Musikanlage im Auto hatte einen tollen Sound. In einer starken Linkskurve kam der Lenker ins Schleudern und sah noch die Lichter des entgegenkommenden Autos. Ein Knall, danach wurde es plötzlich dunkel und es herrschte Totenstille. Leider hatte der Fahrzeughalter die rückwärtigen Kopfstützen abmontiert und auch die schwere Bassbox (Subwoofer) im Kofferraum nicht angeschraubt. Die Box wurde nach vorne geschleudert und sie war viel stärker gebaut als das Genick von Sarah und ihrer Freundin Melanie. Sie hatten nicht den Funken einer Chance und jede Hilfe kam zu spät. Die anderen Fahrzeuginsassen blieben unverletzt.



CASE STUDY: BRINGING ACCIDENT PREVENTION OUT OF THE SHADOWS

A particularly hard-hitting initiative is being run by Austria’s ÖAMTC club. Named ‘Schatten’ (Shadows), the campaign places lifesize wooden silhouettes of young people on display in schools throughout Austria. These shadows have been individually designed to each represent a young person killed on Austria’s roads. Along with the cutout, the display carries a description of the person, a photograph and the circumstances of their death. It aims to raise awareness of traffic accidents and the consequences of speeding.

Meanwhile, in the world of rallying, young drivers used the recent Rally GB event in Wales to team up with the Royal Society for the Prevention of Accidents (RoSPA) to raise awareness of the dangers of reckless driving on the roads.

Up and coming rally star Craig Breen is an ambassador for Motorsport Ireland’s road safety activities and also supports the ‘Keep the Race in its Place’ campaign. “I love driving. In or out of competition, I love it, but I also recognise that there’s a time and a place for everything and it’s more than possible to have fun and drive safely,” he says. “When I get out on the stages in a rally car it’s full attack, but equally I would never dream of letting that cross over to my driving off the stages. “Road safety measures are put in place to protect us and the risks we put ourselves at when we don’t respect them are terrifying,” he adds. “The FIA Action for Road Safety campaign reminds us that when we take risks on open public roads we endanger ourselves and everyone else.”



DRIVE SOBER

What is drugged driving? For the majority, it starts and ends at the warnings on packets of legal prescription medication not to use heavy machinery. But for a dangerous minority, it is driving after using illegal narcotics, in the knowledge that their driving may be impaired.

Research published in the British Medical Journal (BMJ) last month showed that drivers who used cannabis up to three hours before taking to the road were almost twice as likely to cause a collision as those not under the influence of drugs or alcohol. Researchers at Canada’s Dalhousie University reviewed nine studies of 50,000 people involved in serious or fatal road accidents around the world and concluded that the use of cannabis impairs brain and motor functions.

“This is the first review looking at observational studies concerned with the risk of vehicle collision after the recent consumption of cannabis,” said Dr Mark Asbridge, an associate professor in Dalhousie Medical School’s Department of Community Health & Epidemiology. “This research clearly shows that recent cannabis consumption impairs the skills required for safe driving and increases collision risk.”

#7 THE DRUGS DON’T WORK

The idea that drinking and driving do not mix is fixed in the minds of road users, but is a new scourge of drugged driving going unrecognised?

Ian Jack, spokesperson for the Canadian Automobile Association (CAA), says the research is major step in raising public awareness of drugged driving.

“Driving under the influence of drugs is an issue that is really coming to the fore in Canada and elsewhere,” he says. “Research like this gives road safety advocates the ammunition they need to engage the public about the seriousness of the issue. It’s been received wisdom among a certain set that doing drugs and driving isn’t as harmful as drinking and

driving. This is false, as research such as this study is increasingly proving.”

Statistics show worrying levels of drivers who admit to driving whilst under the influence of narcotics. British road safety charity Brake said its research from 2011 suggested more than 11 per cent of young people admitted taking to the wheel after having consumed illegal drugs.

In America, the 2009 National Survey on Drug Use and Health (NSDUH), reported an estimated 10.5 million people aged 12 or older who had driven under the influence of illicit drugs during the year prior to being surveyed.

The affects of drugs on a person can be numerous, from slower reaction times to erratic and aggressive behaviour and an inability to concentrate. Users may also suffer from nausea, hallucinations, paranoia, panic attacks, tremors, dizziness and fatigue – making them a serious danger to themselves, their passengers and other road users.

An erratic driver stopped by the police may show tell-tale signs of drug use – such as dilated pupils – and be subject to further tests. Depending upon the country, this can range from a ‘field impairment assessment’ (including tests such as walking the line) to roadside screening with a ‘drugalyser’, which will show if the person is doped. →



**CASE STUDY:
A DIFFERENT VIEW
ON DRINK DRIVING**

While sobriety behind the wheel has been a subject to which authorities all around the world have paid great attention over the past 30 years, drunk and drugged driving still causes a shockingly high percentage of road fatalities – frequently because drivers, while aware of the law, do not believe they are incapacitated. The Slovakian Automobile Club is seeking to better educate youngsters on the need for sobriety behind the wheel through the use of ‘drunk buster’ goggles that replicate inebriation. The goggles demonstrate how difficult it is to walk in a straight line when drunk, simulating the impairment to vision and equilibrium. Local broadcasts of the demonstrations and other special events are helping to reach an even wider audience.

Drunk busters have also been used by ACAFA, the French Automobile and Touring Club who set up a ‘Village of Responsible Mobility’ in Alsace during the running of the French round of the WRC last year. Working in cooperation with La Fédération Française du Sport Automobile (FFSA), ACAFA set up the village with the aim of boosting awareness of issues such as road safety, eco-driving, new mobility trends and new green technologies.

In order to get the message across, ACAFA made available driving simulators, drunk goggles and a range of other games for spectators to test.



036

10.5

MILLION PEOPLE AGED 12 OR OLDER ESTIMATED TO HAVE DRIVEN WHILE DRUGGED IN THE USA

→ In addition to identifying and punishing drugged drivers, police and health agencies are also campaigning to warn the public of the dangers. Such public information messages have been highly successful in raising awareness of the dangers of drink driving, but the issue of drug driving has yet to receive the same level of attention.

“As with other issues such as texting or drinking while driving, CAA believes enforcement and education go hand in hand,” says Jack. “A really important advance in this regard when it comes to drugs is the development of measurement devices police can use to establish whether someone is under the influence. These devices will allow for the first time for robust enforcement approaches to complement and reinforce public education messages.”

Countries including France, Germany and Australia run a zero-tolerance approach to drugged driving, with saliva tests that can be carried out at the roadside to detect narcotics. Heavy fines and the loss of licence are among the penalties for driving under the influence of drugs in those countries that have taken a hard line on the issue.

11%
OF YOUNG PEOPLE IN THE UK ADMIT TO DRIVING AFTER TAKING NARCOTICS

The Australian state of Victoria was the first to introduce roadside drug testing, in late 2004. It followed a report on the toxicology of drivers fatally injured on Australian roads, which showed that in Victoria in 2003, 31 per cent of drivers who died in crashes tested positive to drugs other than alcohol. Testing has been taken up by several other Australian states, and current figures state drug driving is the main cause in 7 per cent of deaths annually across the country.

Andrew McKellar, executive director of the Australian Automobile Association, says: “The AAA and its member clubs support a broad range of measures that lead to improved road safety outcomes, including roadside drug testing. Australia has embraced the Decade of Action for Road Safety and the AAA will continue to engage with governments, police and road authorities in order to see positive safety outcomes for all road users.”

In the Australian states implementing roadside testing, police can test any

driver, rider or supervising licence holder for three kinds of drugs: delta-9-tetrahydrocannabinol (THC), the active component of cannabis;

methylamphetamine, also known as speed, ice, crystal meth, or base; and methylenedioxymethylamphetamine (MDMA), also known as ecstasy.

“Given this is new technology there is a need to review its effectiveness,” says McKellar. “Roadside drug testing is much more time consuming for motorists than a test for drink-driving, with drivers delayed by the roadside for several minutes while they await the results. Improving the technology so that the testing is quicker and less expensive will provide the right balance between improving road safety and not hindering motorists getting about their day.”

For those countries yet to crack down on drugged driving, the issue is becoming an increasingly hot topic. In the UK, a drugged driver can only be prosecuted if drugs are proven to have impaired their driving – a difficult task, which currently means that conviction rates are low. With roadside testing kits not in use, it is often several hours an accident that a driver may be tested and in some cases this could be too late to identify the use of illegal narcotics.

Whatever the difficulties the governments faces in strengthening penalties against drug driving, they are under increasing pressure to act. “We would say that drugged driving is a huge problem,” says the RAC’s spokesman John Franklin. “The statistics for 2010 in the UK showed drugs were a contributory factor in 1094 accidents and 51 of those were fatalities, so it’s certainly an issue. The problem is being able to convict people because the police have to prove it has had an impact on their driving. Also we still do not have roadside drugs testing as in France, Australia and other countries.”

31%
OF DRIVERS WHO DIED IN ROAD TRAFFIC ACCIDENTS IN THE AUSTRALIAN STATE OF VICTORIA IN 2003 TESTED POSITIVE FOR DRUGS OTHER THAN ALCOHOL

Franklin adds that there is a long way to go until awareness of drugged driving matches that for drink driving.

“There has been a campaign against drink driving for the past 30 years and it is clear that if you do it you will get caught,” he says. “I think drivers probably do not feel they will get caught drug driving. But people are astute and I’m sure they realise that if they take drugs it’s likely to have an impact on their driving.”

WEAR A HELMET



#8 PROMOTING THE BIG COVER UP

Studies have shown that motorcycle riders without helmets are 42 per cent more likely to die if involved in an accident, yet the problem is endemic. The FIA and its members are helping to stop the killing

CASE STUDY:

One of the simplest but most effective ways FIA Action for Road Safety can save lives is through raising awareness of the number of deaths that can be avoided if motorcyclists wear helmets.

Helmet manufacturer Schuberth has joined the FIA’s campaign. It has donated a number of helmets styled with the Action for Road Safety logo for use by member clubs to promote it while also actively participating in the education process. It also donated a number of golden replica helmets copied from the design worn by Michael Schumacher at the 2011 Belgian Grand Prix. Schumacher, an FIA safety ambassador and long-time Schuberth customer wore the special golden helmet to promote Action for Road Safety on the 20th anniversary of his F1 debut. Schuberth and the FIA are also collaborating to share theoretical knowledge and practical research in the highly specialised field of protective headgear design.

Helmet safety is a particularly relevant in the developing world. The FIA Region I Legal & Consumer Affairs Commission recently presented the Nicaraguan Automobile Club with its Legal and Consumer Affairs award for 2011 after the club successfully campaigned for its government to introduce strict laws governing the wearing of helmets. Working under the framework of the Global Helmet Vaccine Initiative (GHVI) and with the National Police, the club engaged with local government, NGOs and private sector partners to promote higher helmet standards. This included the distribution of 1000 helmets to the local police force to serve as an example to the public. Before the campaign just one in ten motorcyclists wore helmets, but the club now believes that almost every rider wears a helmet.

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LOOK AFTER MY VEHICLE

Tyres are a vital element in the arsenal of safety equipment on any automobile and while advance warning systems and a host of other technologies will help drivers to anticipate heavy braking incidents, there's no substitute for grip when a skid does arrive.

It's a message Pascal Couasnon, Michelin's Director of Technical and Scientific Communication is more than keen to stress. A chemical engineer, who began his career at Michelin as a test driver and research engineer at the company's Ladoux circuit near Clermont-Ferrand in France 25 years ago, he knows rubber better than most and is sure that good tyre maintenance is a key factor in saving lives. And he reckons that drivers need to do their homework before investing in a new set.

"The first thing one needs to do when one looks at safety in relation to tyres is to remind people that the tyre is the unique point of contact between the vehicle and the ground," he says. "Each tyre has a contact patch with the road that is about the same size as your hand. So everything is dependent on an area that is just four times the size of a human hand. That is where the action is!"

So one of the most important things in terms of road safety is making the right choices when buying tyres?

"When you are looking at tyres as a consumer and you are considering the various elements that are important - such as safety, performance, economy and, perhaps, the environmental impact - it is vital that you look at the differences between tyres from the standpoint of technology and innovation," he says. "We realise it is very difficult for people to choose between different tyres, because they all basically the same - black and round. The tread patterns may not be quite the same, but that does not tell you very much."

"But the fact is that there are huge differences between the tyres that are available, particularly when you look at different constructions and tyre compounds. So we recommend that people think about the investment they are making, based on what the tyres are designed to do, rather than just going for the cheapest tyres on offer."

"In reality, when you sit down and work it all out, you may well find that you will get better value for money if you invest more and buy the right tyres at the start, rather than buying cheaper products and then having to replace

#9 STAY ON THESE ROADS

Cracked, worn and perishing, they're often the first thing to be neglected on a car but, says Michelin man Pascal Couasnon, if you look after them they will look after you

them later.

"As an example, these days we recommend that people use different tyres at different times of year. If you think about it, it's obvious. When you go out running you need to have the right shoes for the conditions, and so we change our shoes accordingly. It is best to have summer tyres in the summer and winter tyres in the winter."

"These days, thanks to improvements in technology, winter tyres are as good as summer ones. They do not wear out quickly as they used to do. This is because they have been designed to operate at lower temperatures and so they are more efficient

in such conditions than summer tyres would be. When you change tyres between the seasons you have to make a bigger investment, but at the same time you are not wearing out one set of tyres at the same rate, you are wearing out two sets but each of them is being used more slowly and so, inevitably, that is better for the longevity - and for the safety. It is also better in terms of driving pleasure and cost-effectiveness."

"Winter tyres are not the same as snow tyres. They are not studded, but they have a tread pattern that is deliberately designed to cope with slush

and cold rain, as well as snow and ice. They give the driver much more grip and control in the cold. They are also safer than a standard tyre in dry conditions at lower temperatures, because the tread compound heats up at lower rolling temperatures and thus offers better grip in the circumstances."

Inclement weather is most people's reason for changing tyres, believing that worn tyres and rain are a recipe for disaster, and while it's true, Pascal says good tyre management is just as much about dangers in the dry as in the wet.

"A lot of people think that tyre safety is just about braking in wet conditions," Couasnon says. "But that is not the case at all. We have done some very interesting work in partnership with VUFO, the traffic accident research department at the University of Dresden in Germany. This included a survey of the data from nearly 20,000 road accidents that have occurred in the Dresden region in the course of the last 13 years. The analysis of these statistics revealed some very surprising results, notably that around 70 percent of road accidents occur not only on dry road surfaces, but also within the speed limits of the city. They also revealed that only a quarter of the road accidents occur when cars are cornering on wet roads, although these do tend to be the most serious crashes. So Michelin took that

into account and designed tyres based on that research."

Choosing the right product is not the only important factor. It is vital to maintain the tyres throughout their working lifetime.

"Tyre pressure is the big thing," says Couasnon. "Unfortunately all the studies show that more than 60 per cent of the tyres on the roads are under-inflated, and that leads to bad things. It decreases stability, especially in emergency manoeuvres; it decreases the ability to restrict aquaplaning, it affects longevity and fuel economy."

"As an illustration, think about the tyres on a bicycle. When they are under-inflated it is much more difficult to pedal than when the tyre is properly blown up. It takes more

energy to move the bicycle. It is the same thing with a car. More energy means that a driver has to use more fuel, but it also means that the tyres are not being used as they are designed to be used. We recommend that you check the tyre pressures once a month and try to do that when the tyres are cold because hotter tyres will have higher pressures because the air inside expands, so if it is warm you need to decrease the reading by 0.2 bars in order to have the tyres at the right pressures, allowing for the heat."

When it comes to buying tyres Couasnon says that, if a customer is working to a budget and wants to buy only two tyres at a time, it is best to have

new tyres at the rear of the vehicle.

"You want the best grip at the rear," he explains. "This avoids over-steering, which is much more dramatic than under-steering in terms of safety."

How often should tyres be changed? "Some manufacturers are recommending changing the tyres before the legal limits," he explains. "They say that the tyres should be changed when there is 3mm of tread left. Each tyre has a wear bar. The legal limit for tread depth is 1.6mm and recommend sticking to that."

"As I mentioned, our surveys show that most accidents are in the dry. What we want people to focus on is respecting the legal limits and one should be careful when inspecting

70%
OF ROAD ACCIDENTS MONITORED IN DRESDEN OCCURRED ON DRY ROADS AND WITHIN THE SPEED LIMITS OF THE CITY

them because tyres do not necessarily wear evenly. One should look at the wear bars on both sides of the tyre. Very often people check only the outside but you may have more wear on the inside of the tyres, depending on the geometry of the suspension.

"If you are not using the car very much we recommend that you change the tyres after about 10 years. It could be nine or 12 years depending on how you have stored and used the car, but it is best to change at 10 years. In any case, that allows you to catch up with the latest technology. Things are changing all the time. We are learning new ways to solve problems and so having new tyres is never a bad idea."



CASE STUDY: PREPARING FOR ROAD AND TRACK

The Confederation of Australian Motor Sport (CAMS) and the Royal Automobile Club of Queensland (RACQ), together with V8 Supercars Australia, joined forces to highlight the importance of good vehicle preparation through a Facebook game.

The game, called *V8 Supercars Heroes Challenge*, promotes road safety by raising awareness of the checks that a V8 team performs before a track session - checks that are equally useful for a road car. Meanwhile, together with FIA Action for Road Safety partner Michelin, the Mini WRC team had drivers Dani Sordo and Kris Meeke take part in an awareness drive to make sure people regularly check their tyre pressure. Former professional race engineer Meeke said: "Tyre pressures are important for us because if they are wrong the car reacts very differently. Obviously this translates to the public roads. In rallying we are on closed roads, but on the public roads if a car reacts badly then it is a serious road safety concern."

BE COURTEOUS & CONSIDERATE

#10 KEEP YOUR COOL

There's one more step to take on the road to safety and that's to step back from confrontation on the road

Everyone has done it. An inconsiderate driver cuts in front of you on a motorway and then brakes hard, forcing you to take evasive action. Your response is to pull out, speed up and cut back in, giving the offender a taste of his or her own medicine. But is that justice or jeopardy? The answer is, of course, the latter and road rage is an increasing cause of danger on roads across the world.

A survey conducted in the UK in 2008 revealed that 65 per cent of respondents admitted to using threatening behaviour towards other road users and that a staggering 77 per cent of those polled felt that this kind of behaviour was acceptable. Another survey suggested that a third of fatal accidents in the UK had road rage as a cause.

The problem is no less severe in other countries. In the US a poll of law enforcement departments showed that 39 per cent felt road rage had become a serious problem in their jurisdiction.

So, how to avoid episodes of road rage? Well, a further poll showed that four types of driving behaviour were most likely to induce aggressive behaviour in other road users: using a mobile phone while driving; tailgating, speeding and cutting up other drivers. If those can be avoided then road rage would cease to be a major problem. Ultimately, the answer is simple, slow down, take a deep breath and enjoy the ride, in safety. 🚗

ENDURING PASSION

The FIA World Endurance Championship has pulled together the classic long distance races under one banner and the blend of technical test bed and true world championship is proving irresistible to the globe's biggest motor manufacturers, Toyota included



IT USED TO BE THAT RACING SERIES DEMANDED A CERTAIN LEVEL OF ORTHODOXY FROM ITS ENTRANTS

That is no longer the case. This month the newly constituted FIA World Endurance Championship gets under way featuring gasoline V8s and diesel V6s. It has both petrol and diesel hybrids. It has flywheels and supercapacitors. In the past this would have been Formula Libre, for the moment it's just LMP1 - and arguably this could be the most fascinating sportscar racing season for a great many years.

One reason is the return of Toyota. When the Japanese marque pulled out of F1 at the end of 2009 the decision didn't raise too many eyebrows. Eight seasons and an eye-watering investment in resources both financial and human had failed to replicate the successes the manufacturer enjoyed in WRC during the 1990s. Faced with an economic downturn, a bare trophy cabinet and lacking a nemesis with which to do battle, Toyota's withdrawal was almost inevitable.

More surprising was Toyota Motorsport GmbH (TMG) being retained as a going concern despite the lack of a works programme, the operation instead being turned into a hired gun for high performance testing and development.

With world-class facilities and a core of highly experienced staff, Toyota's return to the top table of motor sport was always a when, not an if. The enticement of the resurrected FIA World Endurance Championship determined that when would be 2012. →

PHOTOGRAPHY THOMAS BUTLER



Toyota's TS030 being put through its paces by Alex Wurz at Paul Ricard in January.

“TOYOTA HAS HYBRID TECHNOLOGIES THAT WE WOULD LIKE TO TEST UNDER EXTREME CIRCUMSTANCES”

Rob Leupen, TMG's Director of Business Operations is very clear that the primary reason for Toyota to emerge from hibernation was the hybrid regulations now codified for LMP1. They make the World Endurance Championship a very attractive proposition for a manufacturer whose commitment to alternative energy technology is unequalled.

“To put it very simply, Toyota has hybrid technologies that we would like to test under extreme circumstances,” he says. “These are also technologies that we would like to display to the public and so, after two years out of professional motor racing, the WEC is a very good opportunity for us to come back. The nature of endurance racing, the high level of competition and the excitement of the events make is a good fit for what we want to showcase.”

Keeping faith with the TS010 and TS020 (GT-One) of the 1990s, Toyota named their new car TS030. It broke cover in January, testing at Paul Ricard and features a 3.4l 90° normally-aspirated V8. Toyota have announced that their electrical storage solution of choice is a supercapacitor, though at the time of writing the team is still coy on the issue of whether the THS-R (Toyota Hybrid System - Racing) powertrain will use recovered energy on the front or rear axle. It has tested both and will make a final decision on specification during the c.40,000km of testing in plans to conduct before making its WEC debut at the Six Hours of Spa-Francorchamps in May.

Over the past few years technology transfer has become a hot item for racing teams keen to justify their social credentials against a backdrop of industrial austerity. In many instances the capacity of motor sport to offer anything of value to the outside world appears superficial, though endurance racing has always had concrete results to back up its →



PHOTOGRAPHY THOMAS BUTLER

Technology transfer in areas such as batteries and energy recovery will be key to Toyota's involvement, says TMG's Rob Leupen.

THE TEAM TO BEAT

The arrival of a world championship for endurance racing is a matter of great satisfaction for Audi's head of motor sport Dr Wolfgang Ullrich (pictured). "For me this is brilliant. I think endurance racing has the value to become an official world championship. Personally, since 2000, I've always been pushing for there to be a worldwide championship for prototypes in combination with GT cars. "Endurance, I think, has great history. It creates great motor racing, it's something very special, and, for a manufacturer like Audi, which tries to use motor sport to support new technologies, endurance racing is the best place to go. It's a place where we can prove our ideas and demonstrate that they bring a clear advantage to performance or emissions or consumption, and in parallel demonstrate their reliability. For a manufacturer like Audi it's a key factor."

The withdrawal of Peugeot makes the Audi R18s strong favourites for the inaugural WEC title but Audi's decision to have a mixed entry of conventional diesel and diesel-hybrid cars (including two of each for Le Mans) will spice things up. Not only will the new hybrids be racing head-to-head with the Toyota hybrids but also against their conventional TDI cousins. Minimum weight limits are the same for hybrid and non-hybrid alike, requiring hybrid designers to do some serious thinking to get their motor generator units and storage into a car that still hits the minimum. The hybrids will also have to run with two fewer litres of fuel – just to make it interesting. With Toyota favouring a gasoline-hybrid with supercapacitor storage and Audi using a diesel-hybrid with a flywheel, it promises to be a battle not just between famous racing marques but also between vastly different alternative fuel philosophies. The differences, says Ullrich, are fascinating. "It's something very positive and very interesting,

because right down to basic concepts these are different ideas competing against each other. "It's good that the LMP rules have been written to allow us this degree of freedom and, in my opinion, it's why manufacturers are coming into this category. There is so much possibility to push future-oriented technologies and make them work in a very harsh, very competitive environment. I think it's the best invitation to a manufacturer that wants to prove it's ready to go with advanced technology and develop stuff that can be used on the road. "It's what we've been doing since we started racing at Le Mans.



Technologies come through our race department and then are passed on to our customers. First we had the direct injection petrol engine, which very successfully transferred to the road, then the first diesel going into the endurance racing which is now showing benefits for customers. "Now we have the first diesel-hybrid car in endurance racing. This again will be something we do that a little bit further down the line will be valuable to our road car customers." When Audi launched the R18 at the beginning of last year, observers noted it seemed to have been built with hybridisation in mind. The company agreed that the day might come when the R18 evolved into a hybrid racer. "We weren't ready," says Ullrich. "We said we would go with the most efficient concept and last year the diesel was still the better option. But with another year of development on the hybrid and a lot of testing we expect it to be as efficient and reliable as it needs to be to go for overall victory."





THE PRIVATEER

While the manufacturers agonise over the future of internal combustion, things are much simpler for the privateers who just want bathe in glory. Strakke Racing has the unique distinction of having taken overall victory in an LMS race with an LMP2 car and after successful campaigns in LMP2 the Silverstone-based team has moved up to LMP1, swapping their Honda-developed HPD ARX-01C for the new HPD ARX-03a. Team principal and technical director Piers Phillips hails the creation of the WEC as 'perfect timing'. "With this level of global appeal, the fantastic countries in which we're competing and the legendary circuits at which we'll race, anyone with the chance to race in the new championship is very fortunate. We should be very grateful to the FIA and the Automobile Club de l'Ouest for putting it together. "From our personal point of view, having had three years

in prototype racing and two incredibly successful seasons in LMP2 with our partners at HPD, Wirth Research and Michelin, it's the perfect time to step up into LMP1 with Honda's new car. There are many challenges involved in that, but they're all things we're looking forward to."

For the privateers a big part of that challenge is adjusting to a different sponsorship marketplace. In the case of Strakke that means stepping onto the world stage after racing mostly in Europe. "Sebring, Spa, Le Mans, Silverstone, Fuji, Interlagos, what fantastic places to go, getting back to the great days of the Group C era," says Phillips. "Add in stops in China and the Middle East and it really emphasises the global strength of the series. That's going to make talking to some sponsors much easier - but harder with others. A lot of European firms are going to only be interested in advertising in Europe, which means we have to aim higher and at bigger companies. When we

talk about competing at a higher level it isn't just on track where that applies."

Constructed by Honda Performance Development in California the HPD ARX-03a is a new chassis with a familiar Honda V8 normally-aspirated engine that will be raced by both Strakke and JRM Racing. Facing stiff direct competition from the Pescarolo Lola/Judds and Rebellion Racing's Lola/Toyotas, Phillips doesn't view the lack of an 'alternative' powertrain as a barrier.

"It's nice to have the same proven powertrain when you're racing with a car that is brand new from the tub upwards. I'm sure Honda has a development plan for it now that it's competing against manufacturer teams but this is endurance racing and what you need most of all is reliability, so it makes sense to stick with a proven engine. And it is a great engine in terms of its power delivery, driveability and torque. Plus it sounds amazing - and motor sport hasn't changed to the extent that this isn't still a big plus!"

→claims. Toyota are very keen to continue the line of innovative endurance racers with crossover potential, albeit in the cutting-edge hybrid technology.

"There is definitely going to be technology-sharing at some point, based around technologies such as the battery storage and energy recovery," continues Leupen. "I think this a big issue where we, as TMG, are strongly invested and have already come up with some ideas - for instance, we recently broke the electric lap record on the Nordschleife - and that technology has already been fed back to TMC."

Toyota's willingness - indeed, eagerness - to commit to a hybrid programme in WEC is in part also driven by a belief that the new format for endurance racing will entice more manufacturers into the sport over the next few years and give it serious competition to race against, thus accelerating the pace of development. The loss of Peugeot's entry is obviously a blow, but with Porsche expected to return with a works team in 2014 and others presumed to follow, the innovation war at the front is likely to be stepped up.

"We expect other manufacturers are also working on this, because it is the right ballpark and the right framework for the technology we all want to use," confirms Leupen. "F1 is history for TMG, that isn't an area in which we want to compete and other race series I don't think are quite on that same level yet - although we are very interested in what the FIA is doing with Formula E and we are very interested in involving our EV powertrain technology in that race series - but nothing else really has the right mix."

"With WEC, I think we are able to say there's a big opportunity to enhance the name of Toyota. We are still the world's largest automotive manufacturer and we have suffered by having no presence in motor sport. We have a reputation, and part of our DNA to be in motor sport. Therefore I think this move into endurance racing will strongly support the Toyota brand."

Brand awareness if a fine impetus for a manufacturer but for fans the real draw of this new season is the opportunity

to witness drivers battling to become a true world champion. The opportunity isn't lost on the drivers either. The first signed to Toyota's WEC programme was Alex Wurz. It's 16 years since a young Alex Wurz, driving a Joest Porsche, first won Le Mans. He's added a long F1 career and another victory in the forests of Sarthe to that - but Wurz confesses that even for a driver of his experience, having a world championship up for grabs changes the game.

"It's a big thing," he admits. "Racing to win an event is one thing - racing to win a world championship is something else. When I heard the news I was still with Peugeot and certainly all nine of the factory drivers thought it was very cool. In the past Le Mans has always been the focus but I think now everyone will be thinking 'yeah, Le Mans... but the world championship is the really important thing.'"

On the subject of Le Mans specifically and endurance racing in general, Wurz thinks it will be the perfect place for a hybrid to stand out.



"THE HIGH LEVEL OF COMPETITION AND THE EXCITEMENT OF THE EVENTS MAKE IT A GOOD FIT FOR WHAT WE WANT TO SHOWCASE."



PHOTOGRAPHY THOMAS BUTLER

"In motor sport we've really got into the discussion about alternative energy, and new technology and more efficient engines," he says. "The rules for endurance racing really open that up. 15 years ago no one would have thought you could win Le Mans with a diesel. Now that's been disproved and the advancement in technology that's come from it has been significant. There's probably still more to come from diesel but in parallel to that we have hybrids and Le Mans will be the perfect place to show that off because it's a fast track with lots of braking and lots of opportunities to recover energy."

"It's the perfect proving ground because endurance racing is about performance, fuel economy and reliability and this is perfectly in tune with what's required of a normal road car."

"Obviously Toyota is a leader in hybrid technology on the road and everything we can do for R&D in racing - whether it's making components lighter or improving packaging or making them more robust - is going to be of benefit. It's a beautiful example of where cutting edge technology comes into sport, is further optimised, and then goes back out to the road."

Toyota will race most of the season with just one car - with a second appearing at Le Mans. It will miss the first race of the season at Sebring, joining the field for the second at Spa. Eleventh hour amendments to the regulations for WEC mean they have a fighting chance of battling for the title at the end of the season: each squad's six best results will count, but only the team's first car across the finish line will score. If Toyota can go the distance, they will have an fascinating reintroduction to endurance racing.

WEC 2012

Launched last June, the World Endurance Championship kicks off at Sebring, USA on March 17th. From there, the series will see teams compete at Spa in Belgium, Le Mans in France, Silverstone in Britain, Sao Paulo's Interlagos circuit in Brazil, Bahrain's Sakhir circuit, with the finale at Japan's Fuji circuit. For more information see: www.fiawec.com

THE UNIVERSITY CHALLENGE

Last December, the federation launched a new initiative aimed at helping member mobility clubs develop to their full potential - an FIA University. InMotion goes back to college to find out how the project is progressing

The FIA University made its full debut during the Membership Benefits Forum at the FIA Annual General Assembly in New Delhi, last December. Earlier, at the FIA's World Council for Automobile Mobility and Tourism, the 2012 business plan for the FIA University was approved, the federation endorsing its goal to strengthen the capabilities of automobile clubs around the world through an educational programme. A grant from the FIA Foundation to the FIA Strategic Programme on Road Safety and Capacity Building means that the idea can now be turned into a reality.

The question is, what exactly is the FIA University? What does the new programme hope to achieve and how will it operate?

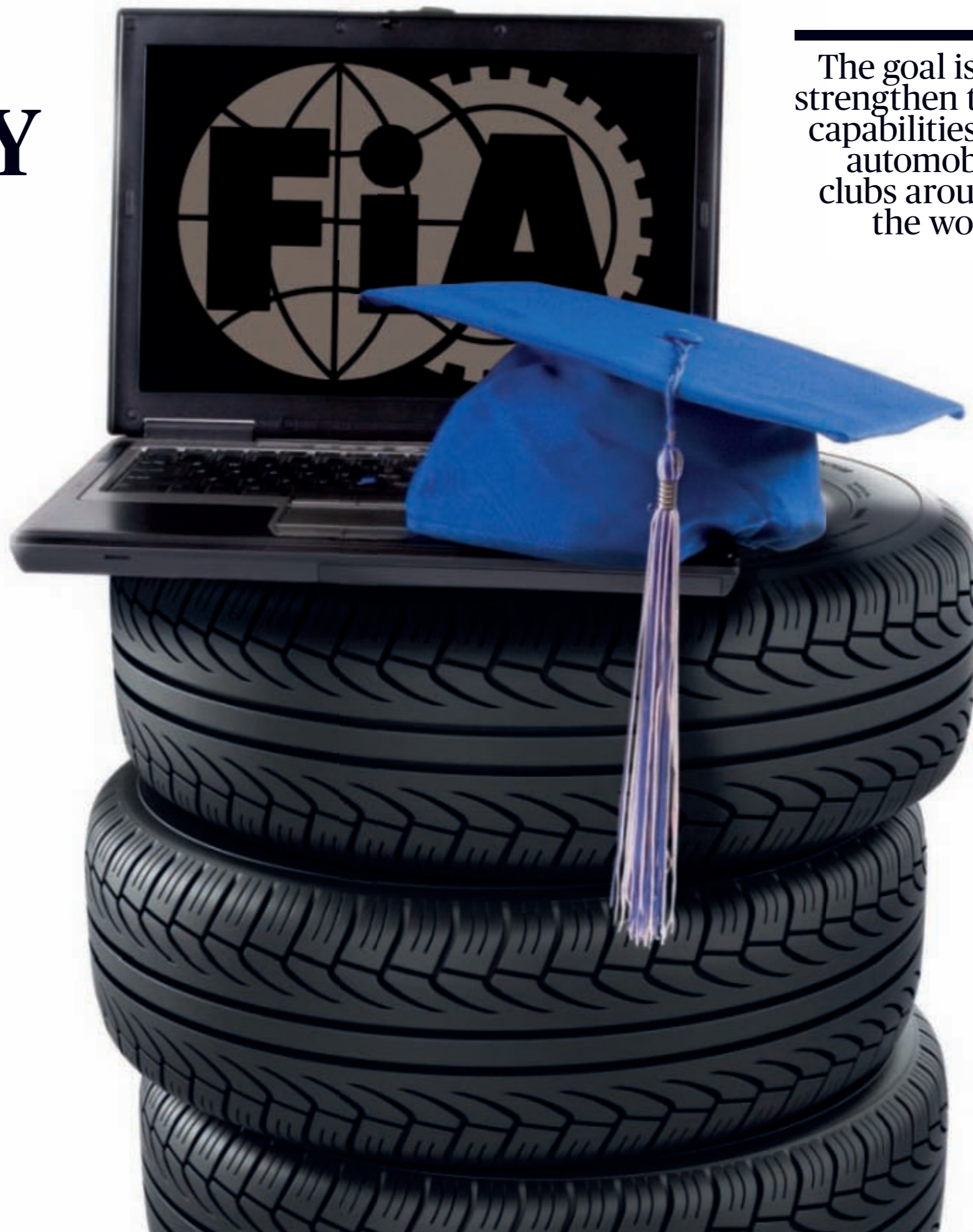
"It is a bit like the corporate universities that a lot of companies now have," says Agustí Milà, the FIA's manager of Membership Services and Business Development. "These are not like traditional universities, where students go to attend courses. Corporate universities are structures within companies that recognise that training is a key part of what it needs

to do to achieve its strategic goals."

Such corporate educational establishments go back at least 200 years, with one of the first, the East India College in Hertfordshire in England, being set up in 1806 to train young gentlemen who would later go on to work as colonial administrators with the British East India Company.

However, the idea of having internal units inside big corporations began in the 1940s, though the idea did not really take off until the 1980s, when global corporations, finding themselves in constant need of greater efficiency, recognised that these training departments could become strategic tools to help employees to better reflect the company's culture, values and philosophies, in addition to fostering the skills that were being taught.

On top of that, such programmes allowed executives to learn about concepts such as leadership, creative thinking and problem-solving. It also helped them to develop their own careers, which then had the knock-on effect of keeping them happier in their work. The end result was that companies were able to focus on what was important and were better able to develop the business in a desired direction. →



The goal is to strengthen the capabilities of automobile clubs around the world



FAST TRACK TO A MOTOR SPORT EDUCATION

The world's first university motor sport degree was a course called Motor Racing Engineering and Design, launched by the Swansea Institute (now the Swansea Metropolitan University) in Wales in 1998. This proved to be a great success and the university now has extensive facilities to train youngsters who are keen to break into the industry, including the use of the local Pembrey racing circuit and on campus workshops where students build and engineer racing machinery.

Since then many other educational establishments have followed Swansea's lead and have introduced motor sport courses, aimed at various different levels, from pre-apprenticeship courses to post-graduate doctoral studies. The best known are at Cranfield University, where Masters degrees are offered in Motorsport Engineering and Management, plus similar qualifications in a range of more specific areas, such as lightweight structures, aerodynamics, computational fluid dynamics and computer aided engineering.

The majority of the universities involved in motor sport are in the industry clusters in Britain and in NASCAR country in the United States, although a course is now also available at France's Ecole Supérieure des Techniques Aéronautiques et de Construction Automobile (ESTACA), which has campuses in Paris and Laval.

A number of the British courses are accredited by the Institution of Mechanical Engineers (IMechE), while the American courses tend to feed the NASCAR need for young engineers. There are also a number of motor sport marketing and management programmes available.

To date, however, the development of online motor sport courses is limited as the existing courses are generally of the traditional teaching model, with students attending classes. In part, this is due to the practical nature of some of the courses.

The first online course relating to the commercial side of motor sport has been launched, designed for students with ambitions to one day become Formula One personnel. This is run by Swiss-based SMC University, which offers a Motorsport Management Certificate for graduates. The course looks at the background and history of motor sport, the principles of race team organisation, management, sponsorship acquisition, marketing and PR, the logistics of the sport and the business lessons to be learned from the sport.

ROB MITCHELL/SMU



TAKING LEARNING OUT OF THE CLASSROOM

The idea of an FIA University might suggest the need for a solid educational building which students attend for classes, but much has changed in recent years in the way people are educated. The FIA University is a reflection of these developments and will feature a blended learning model, with traditional face-to-face methods, allied to modern Internet-based programmes. This means that not only will the students be able to interact with their professors, they will also be able to share ideas among themselves, while also being able to work independently wherever they are in the world.

The concept of distance learning is not new, although technology has revolutionised things over the past 15 years.

The first known reference to what used to be called correspondence classes dates back to 1728, when an advertisement appeared in the Boston Gazette, offering students weekly dispatches in order to learn shorthand. The postal service was relied upon for such ideas for the next 200 years and the University of London claims to have been the first such establishment to offer an "external programme" in 1858.

The development of radio led to the first broadcasting of lessons. As early as 1926 the BBC's first Director of Education JC Stobart suggested that it was possible to establish a "wireless university", but efforts to achieve this remained piecemeal, although universities in the United States did begin teaching classes over the airwaves.

It was not until the 1960s that serious steps began to be taken to embrace television. In 1963 the BBC and the British Ministry of Education discussed plans for a College of the Air, while the country's Labour Party, keen to expand education to lower income groups, proposed a University of the Air.

In the United States, Charles Wedemeyer of the University of Wisconsin was sponsored by the Carnegie Foundation to look into possible developments in education. He

concluded that the student of the future "will probably not 'attend' classes; rather, the opportunities and processes of learning will come to him. He will learn at home, at the office, on the job, in the factory, store, or salesroom, or on the farm". He argued that the methods employed "will remove barriers of space and time in learning".

The Open University, which relied on radio and television broadcasts, was launched in Britain in 1971.

The development of the Internet in the 1990s accelerated the process, with courses quickly being offered online. The impact of that change is still being felt today, with more sophisticated ideas becoming viable as bandwidth increases. This means that not only can students watch live lectures (known as synchronous learning), they can also access course material as they wish (asynchronous learning), including webcasts and podcasts of lectures.

The two methods of learning can be combined and a number of courses also include residential sessions, in order for there to be a better understanding between teacher and pupil and better interaction between students. The days of the old exclusive universities may be coming to an end as more democratic means of learning develop, but the major universities are embracing the technology as they see it as a possible source of revenues in the future, as it frees them from having a limited number of students.

The Open University today has more than 250,000 students, and offers 600 different courses, which count towards towards 250 different qualifications.

The academic world's embrace of new technologies has been aided in part by Apple Inc, which announced an initiative called iTunes U in 2007. This is a service that manages, distributes, and controls access to educational audio and video content and portable document format (PDF) files for students. Academic institutions are able to use Apple's iTunes store infrastructure and can control the level of student access using passwords. Those enrolled in classes have access to material not generally available, but other content is provided free, as a means of both spreading knowledge and also advertising the establishments in question. There are now more than 350,000 files available to download from iTunes U, with the world's best universities offering content. Oxford University in England, which became involved in 2008 says it had 168,000 visitors in its first week of operation. The university says it now has an audience in 185 countries. Thirty-eight percent of the audience is in the United States, but 29 percent comes from China.

Other universities such as Cambridge, Harvard, Yale and MIT have had similar experiences and today more than 1,000 universities in 123 countries are involved in iTunes U with over 600 millions downloads since the scheme began.

→ "These companies mixed training and educational programmes in a new way, in order to respond to the needs of their organisation," says Milà. "That is what we are trying to do with the FIA University."

The fundamental difference between the FIA and a multinational corporation is that the federation is not one homogenous unit, but rather a far looser collection of diverse automobile clubs and federations, with different goals, different levels of development and leadership, and different operating environments.

"We really want to aim high with the FIA University," says Ortrud Birk, the FIA's Director of Public Policy and Services. "The FIA is fully focused on saving lives and preventing injuries as part of the Decade of Action for Road Safety. Through our Action for Road Safety initiative, the FIA is engaging clubs around the world in being effective road safety advocates so we can stop this scourge. The FIA University is where we can build or enhance the capability of clubs everywhere to take a leadership role on this initiative in their countries. We want to share knowledge and best

"We want to make all of the clubs more successful in all respects"
Ortrud Birk



practice, but we also want to make sure that it is something for all clubs at different stages of development.

"In Dr Luis Vives, Strategy Professor and expert in Corporate Universities from ESADE Business School, we have an excellent external partner and in Thierry Willemarck, CEO of the Touring Club Belgium and World Council Member, we have a strong project mentor. Both were instrumental in manning the very successful Membership Benefit Forum in New Delhi, which was attended by 80 clubs.

"We have since looked at the elements that could appeal to all the clubs, and leadership was one central theme," she adds. "There is also strategy at an organisational governance level, so it really is an effort to raise standards across all the clubs, and that will then impact on their ability to be strong, credible and visible promoters of road safety in their countries. These skills will also help them be effective partners in future campaigns."

Milà adds that although the clubs are very diverse there are certain things they all need.

"We are trying to tailor-make a state-of-the-art, world-class, educational programme that will provide the clubs with something that most of them cannot do on their own," he says. "We need to gather the interested parties, bring together developed and developing clubs, and provide them with information from top line universities, as well as from experts in their own ranks."

The FIA University will start out with a number of face-to-face gatherings, in different places around the world.

"It is good to have a structure with a physical presence as it helps to bind representatives of the clubs together," says Milà. "There will also be some Internet devices to help them prepare for the courses and which will also deliver part of the content. It will be a blended learning model and networking is an important part of that.

"We do not expect to have long academic courses," he stresses. "We are thinking more of short periods of activity, depending on the content and the number of likely attendance. Global ambitions are not always the same as regional ones, and so we really want to bring the courses closer to where the people are."

The FIA University will not have a campus, at least not initially.



"We are trying to tailor-make a state-of-the-art educational programme"
Agustí Milà

"We are not going to be building a building," admits Milà, "but rather we will be seeking to use venues that are already being employed when FIA people are meeting. This means we will use the facilities to the maximum.

"It is a step-by-step process," he adds. "We need to make sure that people are getting the things they expect, and then they can start spreading the word. At the beginning of its life it will be more of an internal operation for FIA member clubs. We will have top professors coming in to teach specific subjects, but also experts from within club structures. This will permit us to customise courses to our road safety goals, while making use of external and club management and leadership expertise. We would like to see the participants being willing to invite as many people as possible, as a sign of success."

The university's organisers also hope to forge links with other teaching institutions.

"The project is still very new at this point," says Milà, "but we will look outside of the FIA to find the best colleges and universities and to

find the right expertise. It will not be restricted to just people within the Federation."

Initially the project will focus on road safety but the project developers believe that motor sport applications could be organised in the future.

"Ultimately, we would like to see the FIA University become an overall FIA project that will be of benefit to all the clubs, whether they are mobility or motor sport. That is definitely the vision. We want to make all of the clubs more successful in all respects," insists Birk.

"We are starting in mobility and we will develop from there. It is open to all the FIA family," says Milà.

The idea of a corporate university is clearly a useful one for the FIA in terms of strategic and developmental thinking, but there is also the prospect that it could in time have commercial possibilities, given the global interest in the automobile, including public policy related to motor vehicles, and in motor sport.

This does not mean that in the longer term there could not be courses to teach customers how to be prepared to work in the automobile or motor sport industries.

"We just happen to be the ones who are starting the project," says Birk. "Once our little world is successful, we would be happy to see the principle being used in sport as well and who knows what beyond that. But we want to reach the goals that we have set for ourselves.

"I think our most important focus at this point, though, is helping clubs develop and more effectively deploy their leadership opportunities and strategic planning to achieve our collective road safety goals."

Milà says that the project has in reality already started.

"We presented the concept in the Membership Benefits Forum at the General Assembly," he says. "At the same time we gave them an idea of the kind of activities we would be doing. We also asked them to provide their ideas and what they expect from such an organisation. We are now compiling what the contents will be in the future.

"That is a process that will take some months and in the meantime we are looking for suitable meetings at which to present the concept to others and maybe have some taster courses, to show people what we are planning. Then the aim is to run the first full course later this year." 🗨️

INPERSON

TALKING TO THE PEOPLE WHO HELP TO
KEEP THE WORLD OF THE FIA TURNING

As President of the Turkish auto federation, **MÜMTAZ TAHINCIOĞLU** has a history of bringing big events to the country. Now, as he prepares to leave office, he's delivered yet another, in the shape of the 2012 FIA Annual General Assembly

The FIA Annual General Assembly and Prize Giving Gala always used to take place in Monte Carlo in early December. It was just how things were done. However, when Jean Todt was elected FIA President in 2009 he decided that an international federation should be a little more international and so proposed that the event be moved annually, thus giving member clubs the opportunity to host the big event.

The first such truly international event took place last December in New Delhi, India and was branded a major success by all who attended. Afterwards, the FIA instituted a consultation process to decide the destination of the 2012 AGA, with the result that at the end of this year we will travel to Istanbul, Turkey, where the Türkiye Otomobil Sporları Federasyonu (TOSFED) will pay host to delegates from around the world.

Spanning two continents, with half the city in Europe and the other in Asia, the city embodies the internationalism the FIA is seeking for the event and it should provide an ideal backdrop for the AGA and the awards ceremony. However, the man who led the country's successful bid together, TOSFED president, Mümtaz Tahincioğlu admits that the hard work has just begun.

"The concept of a different venue each year is still new for everybody," he says.



One of Tahincioğlu's major achievements was in convincing Formula One commercial rights holder Bernie Ecclestone to bring the series to Turkey at a purpose-built facility, Istanbul Park. The race was run from 2005 to 2011.

PHOTOGRAPHY HANS HOCHSTÜBER



"We are all still learning what is required. The only experience we have is with the Indian event last year but we have a very strong project for this year and we are working hard with the FIA to make it happen.

"Although all the details and venues have still to be finalised, we will be having the General Assembly in one of the one of the palaces on the waterfront of the Bosphorus," he adds. "There will be social events and activities for guests and those not involved in meetings. Later in the week we will have the Gala. There will be around 700-800 people involved so there is a lot to be organised, but we are working on all of that.

"There will be a number of different venues but all of them will be close to the Bosphorus. That will be the theme, if you like. Hopefully the weather will be good to us, but, in any case, the Bosphorus is still a beautiful location."

For Tahincioğlu the event will mark the final chapter in what has been a very fruitful career at TOSFED. He will retire as the club's president after the event, after five three-year terms of office.

"I hope the end-of-year events will be a good way to say goodbye," he says. "I will stay in motor sport after that. It is my hobby and I have spent a lot of time and money on it over the years, but I am standing down as the president of TOSFED. Perhaps I will be involved in other ways in the future. I do not know."

Tahincioğlu's passion for motor sport was somewhat unusual for a country without any tradition in racing. His interest developed when he was studying in England in the 1970s. He remained in the UK when he began working for his family's confectionery business and did not return to Turkey until 1989, when he immediately became involved in developing karting series in the country. This led to a role in the national motor sport federation and in 1997 he was elected head of the club.

It was the start of an ambitious programme of expansion as Tahincioğlu sought to not only grow domestic motor sport but also to bring both the World Rally Championship and Formula One to the country.

The first hurdle was to train officials to be capable of running international events, but once this was achieved Tahincioğlu's plans moved rapidly. In 1999, the Rally of Turkey made its first appearance on the European Rally Championship calendar. The aim was to lay the groundwork for a world championship event and that goal was finally achieved in 2003 when Carlos Sainz won the country's first WRC event at the wheel of a Citroën Xsara WRC. →

→ By that time Tahincioglu had become a member of the World Motor Sport Council and had managed to convince the Turkish government to fund the construction of a Formula One circuit near Istanbul. The first Turkish Grand Prix, won by Ferrari's Felipe Massa, followed soon after, in 2005.

"We did all of the things we promised to do," he says. "But it is not just about bringing big events to a country. I think that the most successful thing we did was to create a really good marshal development programme. Lots of



It now seems unlikely that Felipe Massa (above) will ever score a fourth Turkish GP win. "Turkey did not want to pay the price being asked," says Tahincioglu.



countries suffer from not having well-trained marshals, which can cause serious problems. We decided to go to the universities and started training marshals from these establishments. Now we have got 3,000-4,000 marshals who are doctors, lawyers, engineers and so on. We have everything working very well, and that is very important."

Turkey is a country with a culture of football but Mümtaz says that he feels that motor sport is at least recognised and understood these days.

"Rallying is really the country's motor sport heritage," he says, "but we have managed to create championships here that are growing all the time. We run a lot of karting and we have a lot of new drivers coming through. There is much more of a racing culture now. We are always trying to add more, but we are limited by the economic situation. We all suffer from this but we keep working and we have built motor sport from almost nothing to a reasonable level."

Tahincioglu still hopes to be able to get the World Rally Championship and Formula One back one day, but he understands that it is not easy.

"Jean Todt wants the World Rally Championship to be just that, a world championship, and there were too many European rallies in the WRC," he says. "As the latecomer we were the first to suffer, but we are now working on a project to try to join the Greek and Turkish rallies together to create one big event, starting in Athens and finishing in Istanbul, or vice versa. We are still a candidate for the WRC."

"Formula One is very simple. It is a matter of paying the right money. Turkey did not want to pay the price being asked. The problem was that after the first couple of years there was no promotion and so people did not go."

"Turkey has to move away from the soccer culture and this takes time," he concludes. "The crowds at F1 were not bad in the first three years but no money was spent to advertise the race or to help develop a racing culture. And then the economic crisis came along which did not help, but we have a good track in a good location so we have not given up."

MÜMTAZ TAHINCIOLU Born in the southeastern Turkish city of Mardin in 1952, Mümtaz emigrated to the UK in the last 1960s, remaining there until 1989. While in the UK he developed an interest in motor sports and in a short racing career became a three-time Turkish kart champion. His true calling though was in administration of the sport and as head of TOSFED he has presided over the most successful period of Turkey's motor sport history, bringing both Formula One and World Rally Championship rounds to the country.

Communicating the FIA's message has just become a lot more efficient, according to the organisation's Head of Print and Shipping, MICHEL MEYNET



It's become a Formula One tradition that at the end of qualifying the top three drivers gather in Parc Fermé to pose for the world's media and to salute the fans in the main grandstand.

Last year though, the celebrations were slightly different, the occasion being used by the FIA and F1's drivers to broadcast the Federation's message of road safety by posing in front of a large Action for Road Safety banner. The highly visible backdrop is the creation of Michel Meynet, the FIA's Head of Print and Shipping.

"This Action for Road Safety banner in Formula One is a good example of

what the Print department now delivers," he says. "We have invested in a lot of new technology that allows us to develop new products such as posters, roll-ups and visuals for publicising the image of the FIA at events and for promoting the Action for Road Safety campaign."

Meynet joined the FIA at the beginning of last year after seven years at the European Broadcasting Union, where for the past two years he worked in a similar position to that he now holds in Geneva. However, when he moved into his new role he found a department lagging behind in what could be achieved in print.

"We decided to invest in new finishing machines and to change our ageing stock of printers, as they no longer met the specific demands of the various departments in terms of quality and time," he says. "Numerous tasks were subcontracted externally at far higher cost than we are now proposing."

Specifically, Meynet's department bought in a Xerox CP1000 colour printer, a Xerox Nuvera 144 black and white printer and a Canon iPF8300 large format printer. Together, the three machines mean the FIA now has a much improved print resource.

"There are a number of benefits associated with the machines we brought in," Meynet explains. "We can now meet the demands of the FIA across all its offices, and we can respond to their needs rapidly. There are no more intermediaries and we are not affected by the lead times or schedules of any outside agencies."

"Because everything is in-house it means we can interact directly with each office or department and deliver what they want. It doesn't matter if the job is as small as printing business cards or if it's as large as printing brochures, posters or banners, we can meet their demands and do it quickly."

"For example, with the backdrops we made for our partnership with Michelin, we had a request to prepare banners and we were able to complete them within an hour. Before now that would not have been possible."

Perhaps the major benefit, however, is the reduction in cost to the FIA.

"Previously, a lot of this print work would have been outsourced and this is very expensive," says Meynet. "We have reduced the cost significantly, not only because of the new machines but because we are also in control of buying paper and materials. We can also guarantee quality control, so there is not so much wastage."

Meynet sums up the new resources by saying it is the first time the FIA has had the ability to generate material to order, in house, no matter from which department the request comes.

"We work for all FIA staff, but we work most closely with the marketing and communications departments, as they have a high demand for products that allow them to properly get the FIA's message across."

MICHEL MEYNET A Master of the Alpine Geography Institut, Michel began his career in a private society in Geneva as a Cartography Engineer before moving on to the European Broadcast Union, where he stayed for seven years before joining the FIA.



With the FIA striving to connect with new audiences, the federation's new Head of Content **MATHIAS BARBERA** and Content Officer **MALAIKA COCO** are harnessing the power of the Internet to reach out to clubs and fans in exciting new ways

The job of a modern international federation is a lot more complicated than it used to be, thanks largely to the opportunities (and challenges) created by developments in all areas of content, especially in online media and social networks. Having opted for a small digital footprint in the past, the FIA is moving with the times and is busy building a much bigger presence in the digital world. To manage this, and all other content requirements, a new department was recently set up in Paris.

The new team will help to spread information more quickly among the member clubs, as they too embrace the information revolution. These are exciting times and there is no shortage of energy in the new department where Mathias Barbera, the Head of Content, and Malaika Coco, the Content Officer, are preparing the groundwork and taking the first steps towards giving the FIA a stronger presence online.

"Our department is new and content is a big word," says Mathias, "so we have a lot of things to do. This job feels a bit like how it must be for an air traffic controller. There are lots of things happening all over the world - all at the same time. The FIA is also a big network, with many different branches in many different locations, and our first priority is to understand how it all works! As we

are doing that, we are trying to see what are the best answers to create a stronger online media presence.

"We have had to meet everyone and talk to them to try to understand their needs, so we have been very busy in the last few weeks. At the same time we are in the process of building a new fia.com website, which we are doing with the IT department in Geneva, and with web designers in England. It is a challenge, but we are having fun."

Barbera is used to challenges as he has spent the past 10 years in a demanding role with one of Europe's biggest football clubs, Paris St Germain. Originally from Perpignan in France, he grew up in a family passionate about sport, especially football and as a youngster, Mathias was keen to be involved in sports.

"I went to university in Montpellier," he says. "There they had an exchange agreement with the University of Colorado in Denver and I thought it would be good to study in the United States, to improve my English and to see another culture.

"I applied and was accepted, so I spent a year in Denver and then decided to stay for another year to take advantage of an opportunity to work - unpaid - with the Denver Nuggets basketball team, which plays in the National Basketball Association (NBA). It was really just to gain experience in sports marketing but it proved to be very useful. I supported myself by giving French lessons, while I worked on a marketing project for the Nuggets."

He then heard about an opportunity in Paris, where PSG needed someone to work in its communications department. "That was great," he says. "I am really passionate about soccer and PSG is such a big team. I started working there when I was 23 years old and I spent 10 years there, becoming the media manager.

"In that role I was the main point of contact between the French media and the star players and their management. I was dealing with players such as Nicolas Anelka and Ronaldinho. It was exciting and helped me build up a very good network of contacts in the French press.

"This is very useful as it fits well with the other staff in the Communications Department. Communications Director Norman Howell is well-connected in England and in other countries in Europe and F1 Head of Communications Matteo Bonciani knows a lot of people in Italy and in Asia, and, of course, in Formula One as well. So between us we have a very good network."

Mathias is joined in the new endeavour by Malaika Coco. She has had a career all about networking of a different kind,

specialising in electronic media and social networks.

A native of Guadeloupe, she grew up in a cosmopolitan environment. The island is French, but has close links to nearby islands with long-established links to Britain. As such, when she visited Antigua, Montserrat and similar islands she learned English. The process was helped by the fact that some of her family were living in the United States.


After university she began a career as a freelance journalist but found that there was more work to be found in the Web sector and began to specialise, initially with content for the website of French television channel TF1. She then moved on to a job with the Canal+ TV channel, as a website section editor, managing content relating to news and documentaries, while at the same time administering the Canal+ pages on Facebook. Like many Internet professionals, she has learned to deal with the software as she has gone along.

"At the FIA I am working mainly with the Internet and social networks," she explains. "We are creating a new fia.com website and I have already created social networks for the FIA on Facebook. There are two pages: one for the FIA itself (facebook.com/fia); and the other for Action For Road Safety (facebook.com/FIAActionForRoadSafety). This means that people and clubs can keep up to date with what we are doing on a day-to-day basis, rather than finding out much later about new initiatives.

"I have also created a Twitter account for the FIA (www.twitter.com/fia) and an FIA Channel on YouTube (www.youtube.com/FIAOfficialVideo), where people can see videos of what we are doing. There is a lot more that we can do to make these more active and we are now looking at all the possibilities and deciding what is the best way to get the FIA's messages across, not only to the member clubs, but also to new generations.

"It has been pretty busy so far and there is still a lot to do, but it is great fun and a real challenge."

MATHIAS BARBERA Born in Perpignan, Mathias spent the past 10 years as media manager at Paris St Germain, looking after some of the world's highest-profile football stars. Despite the myriad challenges of the web he still has time to devote to the four elements of his motto: 'life, sports, media, and a good glass of wine.'

MALAIKA COCO gained a Masters degree in history at the Sorbonne in Paris before gaining a second Masters degree at the Ecole Supérieure de Journalisme in Paris. She also has a degree in media management from the ESCP Europe business school. 

Club Profile

Canadian Automobile Association

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www.caa.ca

President: Tim Shearman



It was founded when? The first automobile clubs in Canada can be traced back to as early as 1903, but the founding meeting of what is now known as the Canadian Automobile Association (CAA) took place in the offices of the Ontario Motor League in Toronto on 3 September, 1913. From the beginning, safety has been in the DNA of the organisation and some of its earliest efforts were to lobby for the installation of that newfangled safety device, the stop sign. Today, the CAA has over 5.6 million members – one in four Canadian drivers – and over 300 offices from coast to coast. It continues to advocate in favour of its members' safety concerns, on issues such as texting while driving to the bike-car relationship. It also provides roadside assistance, travel, insurance and member rewards programmes that are class leaders in Canada.

Who's in charge? The current CAA President is Tim Shearman (pictured), who was elected in December 2007. An MBA in International Business from McMaster University, Shearman started his career as a financial analyst with Nortel Networks, before moving into banking and later finance. He joined CAA in 2004 as Vice President – Corporate Affairs, and

remained in that role until he became president. He is the director of the Traffic Injury Research Foundation and the AAA Foundation for Traffic Safety, while in his spare time he volunteers as a hockey and soccer coach. He is also a past director of the Boys and Girls Club of Ottawa.

What are the club's primary achievements? Canada is a highly diverse country and there is much potential for competing interests. The club has worked hard to create collaborative relationships with its members, the board, and external stakeholders, and to find a middle ground in order to move forward. The particular challenge is to remain meaningful to its membership in a world where vehicles break down less and the Internet is king. The CAA has been pro-active in developing an app to allow its members to access all of the club's services, no matter where they are or which portable device they use. The other achievement of which the club is very proud is that it continues to grow, by approximately 100,000 members each year, despite a very difficult economy over the past few years. To have 5.6 million members as part of a thriving, growing business after 100 years, is a great achievement.

FIA CALENDAR

→ MARCH

- 07 Manufacturer's Commission
Geneva
- 08 World Motor Sport Council *Milan*
- 14 Working group: New
Energy Championships
- 23 Euroboard *Munich*
- 27 CIK Safety Seminar *Geneva*
Historic Technical Working Group

→ APRIL

- 17 Technical Working Group
Brussels
- 18 Transport & Mobility Working
Group *Brussels*
- 19 Legal & Consumer Affairs
Working Group *Brussels*
- 23 Touring Cars TWG
Engine TWG
- 24 Volunteers & Officials Commission

→ MAY

- 02 Truck Racing Commission
Electric and New Energy
Championships Commission
Frankfurt
- 03 Offroad Commission
- 03-04 Eurotest and Euro TAP
Meetings *Geneva*
- 04 Single Seater Commission
- 05 Medical Commission
- 08-11 Spring Meeting:
FIA Region I International Club
Conference (ICC) *Belgrade*
- 09 WRC Commission
GT Commission
- 10 Touring Car Commission
Hillclimb Commission

*All meetings Paris unless
otherwise specified*

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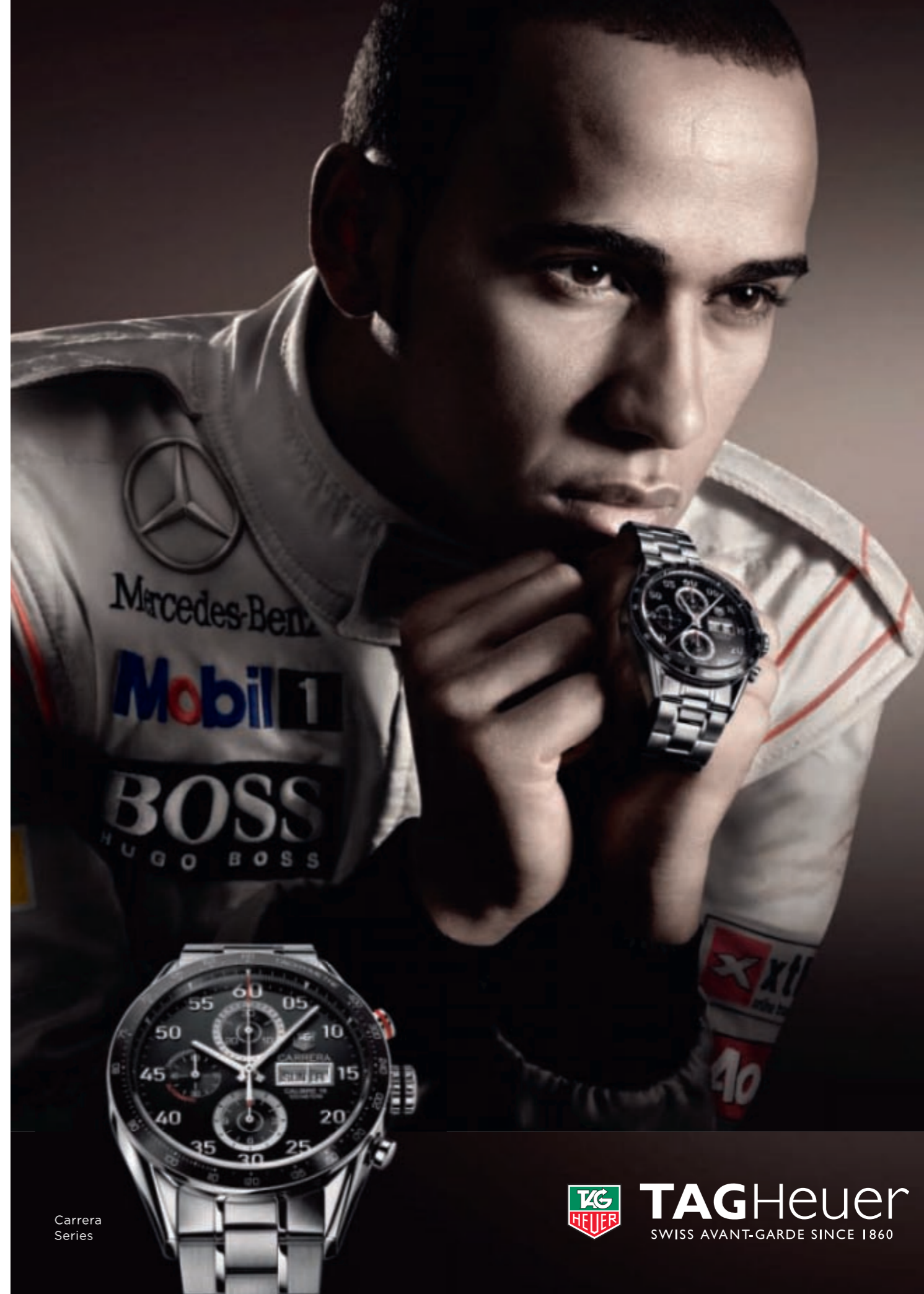


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