

Efficient fleet management - now and in the future

White Paper DIGIA CONNECTE SUSTAINAB



"Our focus is on efficient tire management. Sustainability and digitalization are essential here."

Ralf Benack, Head of Conti360° Solutions, Continental

"Electrically powered trucks play an important role in reducing CO₂ emissions from road traffic – and therefore in achieving sustainable mobility."

Enno Straten, Head of Strategy, Analytics and Marketing at Continental Tires EMEA

"High mileage, long tire life and retreading contribute to sustainable fleet management."

Hinnerk Kaiser, Head of Product Development Bus and Truck Tires at Continental

DIGITAL CONNECTED SUSTAINABLE

These are the keywords currently dominating the daily lives of fleet managers across the transport and logistics industry. The goal: to protect our environment and resources, and reduce our carbon footprint and emissions – in a competitive market and against a backdrop of staff shortages, rising energy prices and fragile supply chains. Achieving success in the markets of the future requires investment in sustainable logistics today. And that means environmentally conscious fleet management for passenger cars, vans, buses and trucks.

The journey to achieving this goal takes in modern vehicle technology with its multitude of assistance systems, digitalization, emissions reduction, the switchover to battery-powered drive systems, fuel/energy savings, resource-efficient driving, optimization of transportation and route planning.

Europe-wide provisions like the EU taxonomy and Green Vehicles Directive mean vehicle manufacturers and suppliers are also on board and play their part in developing the green logistics of the future. Continental has grouped together its eco-friendly fleet management activities within its Conti360° Solutions package of services and Lowest Overall Driving Costs (LODC) holistic consultancy approach. Tires are a significant factor in the sustainability of a fleet and its costs. Indeed, tire-related costs account for around 53 percent of a truck fleet's overall costs.

Fleets Under Pressure

Transport doesn't work without vehicles - and logistics doesn't work without fleets. However, fleets are about more than just passenger cars, vans and trucks moving from A to B. Fleets operate across Europe, connect markets, form supply chains, lay the foundations for mobility. Fleet management is steered and influenced by a whole host of criteria and requirements.

Rising costs

HR costs have a major impact on the Total Cost of Ownership (TCO), significant competitive and price pressure; will increase further in the future.

Fuel costs

Prices of diesel and gasoline will continue to rise, also re. fossil fuel taxation plans in Europe; already a high proportion of TCO today.

Driver shortages

Increasing freight volume, demographic development, low wages, poor working conditions

Economic uncertainty

Political and economic upheaval, interruptions in supply chains

Inflation

Increasing energy and fuel prices, disruption of supply chains, currency fluctuations, driver shortages

Digitalization

Coordination of the array of data, system integration, essential for new forms of mobility, fleet efficiency

Electric mobility

Electric mobility Purchase costs, charging technology, operating range, TCO

Higher vehicle weights

Electric vehicles put a lot more weight on the road and on their tires.

EU taxonomy

A regulatory framework defining sustainability, including laws and regulations that promote progress towards sustainable business management.

Sustainability

Transport and logistics industry is under pressure to introduce sustainable processes due to its high CO₂ emissions.

VECTO

 $\begin{array}{l} \mbox{Commercial vehicles have to cut CO}_2 \\ \mbox{emissions by 15 percent by 2025 and} \\ \mbox{by 30 percent by 2030.} \end{array}$

New technologies

New technologies Technical progress, assistance systems, autonomous driving systems



EUROPE'S FLEETS IN FIGURES

European champion

Germany generates the highest logistics revenues in Europe - more than double the figure recorded by France and Great Britain. Indeed, according to the Logistics Performance Index, Germany is the leading logistics market worldwide. This is due to its central geographical location, high quality of logistics services and pool of expert knowledge.

Source: Statista



Age of vehicles

Passenger cars 12 years Vans 12 years Trucks 14,2 years Busse 12,7 years

Total volume of the logistics market in Europe:

1.115 trillion **Euro** (2021)

Source: Statista 2022







250 million 29.5 million



714,008





6.4 million



Connected cars Passenger cars: current and projected figures

	2019	2025	2030
Not connected	81 %	56%	51%
Connected (basic)	19%	41 %	38%
Connected (extended)	0%	3%	11%



Reasons given by purchasers for electrification of their fleet:

76% **Company's sustainability**

and environment goals

45% Current and future regulations

Source: ACEA 2023

Source: ACEA 2023

Source: Fleet Europe 2020



Proportion of electric vehicles (BEV)

Passenger cars	1.5 %
vans	0.6 %
trucks	0.1 %
buses	1.3 %

Source: ACEA 2023



Concerns about electrification of the fleet:



infrastructure and plant expansion



Source: Fleet Europe 2020

Our Goals, Our Vision

The Vision 2023 plan from Continental Tires spans the whole of the value chain: procurement of materials, tire production, service life and disposal.





OPERATIONS

SOURCING







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END OF LIFE
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Four focus areas for sustainability

Carbon neutrality, emission-free mobility and industry, circular economy and a responsible value chain are the four focus areas for sustainability set out by Continental. We are aiming to achieve these together with our partners by 2050. Almost one in three cars in Europe is delivered with tires from Continental. We are convinced that, with our LODC approach and Generation 5 tires, we have effective levers in place for the logistics sector that will help withstand rising cost pressures and increase the sustainability of fleets.



"Sustainability now plays a fundamental role in our company. Together with our customers, we are driving change in industry - towards greater protection of resources and a future-oriented transportation system. We see green fleet management as creating a harmonious blend of economy, environmental protection and safety. With the launch of our Generation 5 tires, we are shining the spotlight on our Lowest Overall Driving Costs (LODC) comprehensive consultancy approach."

Ralf Benack, Head of Conti360° Solutions, Continental

The right choice of tires

With high fuel costs, CO₂ taxation linked to the burning of fossil fuels and legal requirements to bear in mind, fleet operators need to invest heavily in vehicles with zero tailpipe emissions. It is therefore more crucial than ever to select the correct tires for the job at hand, which will in turn reduce operating costs. Our ContiLifeCycle concept, which is part of Conti360° Solutions contracts, provides an effective framework here.

Comprehensive expertise

Our holistic consultancy approach includes comprehensive expertise when it comes to tires, tire servicing, digitalization, data analysis and process mapping. The starting point is always the tires, as the core of our business model - complemented by retreading, casing management and digital solutions. In this way, we turn potential savings into reality and generate concrete results.







LODC as a success factor

Our aim is to use our full range of products to help our fleet customers reduce their tire-related costs. After all, tires also have a significant impact on fuel, maintenance and repair costs, which account for over 27 percent of total costs, depending on the vehicle class. Tires are therefore a key cost lever and LODC is a success factor for fleet customers in tough times.



Focus on Fleet Management

The levers and challenges involved in achieving green fleet management are as varied as the tasks and needs of fleets out there on Europe's roads every day. Technology company Continental offers solutions that enable fleet managers and haulage firms to be proactive rather than only reactive - solutions designed to make transport and logistics safer, smarter and more environmentally compatible.



straight to the chapter!





starting points for meeting the challenges of the fleet business and for being successful in the market.

"Continental is adapting to the requirements of businesses. That puts a smile on your face. You can see how Continental is not only about selling tires, it is also interested in seeing us progress as a company."

Klaus Altmann, Managing Director of haulage firm Spedition Altmann

Fleets and Future Trends

In view of the clear stipulations from the European Commission relating to the use of low-emission and emission-free commercial vehicles, pressure is growing on fleet operators to convert their vehicles accordingly. Time is short, the costs involved are huge and the market environment is very unsettled. When it comes to tires, there is much to be gained by using models with optimized rolling resistance that generate low noise levels and are designed for electrically powered vehicles, and by choosing professional tire management and digital solutions.

sustainability will drive us into the future. There is, after all, no alternative. We need to become more sustainable to have a future worth living," says Michael Koch, responsible for sustainability and electric mobility in the R & D department at Continental. Key themes in this context are electric mobility - which is already a visible presence today and will become significantly more prominent still over the coming years - and the EU taxonomy. "This taxonomy provides the framework within which we travel in Europe."

Legal framework increases pressure

The Clean Vehicles Directive and the EU taxonomy call on European countries to significantly reduce the emissions of vehicle fleets. Failure to meet the stipulations involved could result in substantial fines from the EU - which may be passed on to fleet operators directly or indirectly.

"This means that the pressure on the transport industry and the demands on our fleet customers will continue to increase," forecasts Koch. "With our LODC concept, we have a good solution for fleets when it comes to their tire-related costs and emissions."

Technological progress

Looking more closely at the forthcoming legal stipulations from the EU aimed at reducing CO₂ emissions, new technologies offer a certain amount of hope. "We are working on the basis that autonomous driving systems will come on stream from 2028 or 2029," says Michael Koch. "We think that this may really be one of the few ways out of the vicious circle of rising costs and increasing competitive pressure." Continental is involved in the development of autonomous vehicle concepts across various different projects.

Tires Generation 5

Presentation **Future & Trends**

Directive on clean vehicles

The **Clean Vehicles Directive** promotes clean mobility solutions in public tenders and gives a major boost to demand for low-emission & emission-free vehicles and their continued use. The Directive provides a definition of "clean vehicles" and sets out national targets for their public procurement. It applies for various types of public procurement, including purchasing, leasing, rental and relevant service contracts. The Directive was adopted by the European Parliament and Council in June 2019 and had to be transposed into national law by August 2, 2021.





- > Reduction in emissions
- > Total Cost of Ownership (TCO)
- > Optimized rolling resistance
- > Sustainability
- > Electric mobility
- > Long tire life
- > EU taxonomv
- > Clean Vehicle Directive
- > New technologies
- > Autonomous driving

E-Mobility Is Changing Tire Development

Enno Straten, Head of Strategy, Analytics and Marketing at Continental Tires EMEA, explains how Continental is shaping the transition to e-mobility with specially developed commercial vehicle tires and smart sensors.

E-mobility has hit the fast lane. The EU is predicting the number of electric vehicles on Europe's roads will reach 30 million by 2030. How far has electrification of commercial vehicles progressed to date?

Electrically powered trucks play an important role in reducing CO₂ emissions from road traffic - and therefore in achieving sustainable mobility. It is true that development has reached a more advanced stage with passenger cars - as well as with electric vans and electric buses - than with heavy-duty commercial vehicles. Electric vans are employed primarily by courier, express delivery and package delivery services; light electric trucks up to 7.5 metric tons are generally used for delivery purposes in urban areas to transport goods over the last mile. And an ever increasing number of local transport operators are running electric buses.

What do these changes to drive systems mean for the tire market?

The rapid development of electric mobility has been accompanied by a surge in demand for suitable tires in the commercial vehicle segment. The new drive system types and, in some cases, new vehicle concepts, are changing requirement profiles.

What are these new requirements?

First of all, tires for electrified commercial vehicles do not yet differ fundamentally from tires for commercial vehicles with diesel or gasoline engines. Having said that, certain parameters that play a major role for us in tire development are changing. Uppermost on this list are load capacity, rolling resistance and wear resistance. Vehicles with electric drive are heavier on account of the batteries they are carrying, but they also accelerate faster than vehicles with conventional engines. combined with low costs.

The driver can essentially call on maximum torque from a standstill. So greater forces are exerted on the tires of electrified vehicles.

Can you give us some specific examples of tire developments?

With the Conti Urban city bus tire, we have developed a tire with an increased load index specially for electric buses operating in urban areas. The load capacity of the tire is geared to the higher weight of electric buses. For example, the Conti Urban HA3 315/60 R22.5 can carry up to eight tons per axle.

You also mentioned rolling resistance as an influencing factor. What role does this parameter play?

Optimized rolling resistance allows the motor's energy consumption to be reduced, and that also applies for vehicles with combustion engines. Since the EU emissions directive came into force and the VECTO tool was introduced - if not before - commercial vehicle manufacturers have been concentrating on lowering CO₂ emissions. And tires have been one of their main points of focus.

Another trend are smart tires with sensors. What sort of developments are we seeing here? Yes, commercial vehicle tires are being increasingly incorporated into the vehicle architecture for connected and automated driving. We also offer this technology as a professional retrofit solution with ContiConnect 2. Sensors fitted in the tire provide information such as tire pressure, temperature, wheel load, tread depth, wheel speed, wheel slip, and structural damage in the tire. This information can be accessed and analyzed in real time. The result is improved handling properties, increased road safety and greater efficiency,



You mentioned working with commercial vehicle manufacturers. What do these partnerships look like in detail?

A good example here is VDL Bus & Coach, a leading manufacturer of electric buses based in the Netherlands. We have been running a partnership with the company since the end of 2020 and have worked with them to develop initial prototype tires for electric city buses. We have now tested these tires in depth at our Contidrom proving grounds. VDL has been offering electric city buses since 2013. The driving environment with these buses is a departure from the familiar. To start with, there is the higher torgue when pulling away and accelerating. And then you have the impact of recuperation - i.e. recovery of energy when braking. All of this subjects the tires to particularly significant forces. Our partnership with the Switzerland-based Designwerk Group's electric truck brand Futuricum works in a very similar way. In fall 2021, a Futuricum truck fitted with our EfficientPro tires set a new distance world record at the Contidrom: 1,099 kilometers on a single battery charge!

Those collaborations are with commercial vehicle manufacturers. Do you also have special partnerships with end customers - i.e. mobility providers?

One example here would be our partnership with MOIA, a ride-sharing company operating in Hamburg and Hanover. We developed a special all-season tire for MOIA, which offers even greater safety in combination with the Conti360° Solutions concept. Together with our service partner Vergölst we are working intensively on optimizing tire performance and breakdown service. This has seen us successfully carry over our established 360° Solutions approach from the commercial vehicle space into MOIA's new and innovative mobility concept.

Fleets and Sustainability

Safer, smarter, sustainable: tires can make all the difference. Vehicle fleets are a large generator of CO_2 in a company. And Continental is helping transport companies and fleet operators to get their vehicles fit for the future. The focus is on topics such as fleet efficiency, Conti360° Solutions and retreading.

he aim is to make fleets more sustainable, more efficient and more digital. To this end, the technology company has brought out a range of solutions and technologies that conserve resources and improve the carbon footprint of vehicles. The focus here is on four strategic areas: climate protection, clean mobility, circular economy and sustainable supply chains.

Gaining a competitive edge through sustainability

"Efficiency awareness and sustainability have long since become vital competitive factors for transport companies too," says Ralf Benack, Head of Conti360° Solutions at Continental. "Consequently, low-rolling-resistance tires already form part of the basic specification in many fleets. These days, though, we are looking for more - namely, sustainability throughout a tire's life cycle." At Continental, sustainability begins back at the material sourcing phase, extends through its manufacturing processes and continues in the form of long-lasting, energy-efficient tires. It concludes with tire retreading and the company's efforts to make increased use in production of raw materials obtained from the recycling of old tires. The framework for this is provided by the Conti360° Solutions overall tire management package - i.e. selection of the right tire, permanent monitoring of tire data and a system to feed worn tires back into the ContiLifeCycle program, allowing tires to enjoy a second and even third life.

Smart solutions

Alongside ContiFitmentService, which helps customers make the right choice of tire for the application at hand, another key element of the fleet solutions from Continental is digital tire monitoring with ContiConnect, featuring various modules that can be selected by the customer to suit their individual requirements. Using sensors inside the tires, ContiConnect enables fleet managers to access real-time tire data, such as pressure and temperature, for the entire fleet. Tire damage is quickly detected, preventing punctures. The tires can be constantly kept at the optimum pressure, which lowers fuel consumption. Fleets reap the benefits of longer tire service life at the same time as minimizing reallife total costs for the vehicles. Continental makes it possible to take another step towards predictive maintenance with ContiConnect 2.0 and its next-generation sensors, which provide even more tire data.

Greener with retreading

Once the tread of premium tires has worn down, another Conti360° Solutions module for fleets can swing into action: the ContiLifeCycle retreading concept. "With our ContiCasing-Management program, tire casings can be returned to us to be given a new lease of life with our ContiRe and ContiTread premium retreading solutions," explains Ralf Benack. Management of the casings is carried out via the ContiCasingAccount online portal.

Retreads for the range

With the updated ContiRe EcoPlus HT3 385/65 R22.5, Continental is offering a retreaded tire model for the EMEA region whose properties in terms of mileage and rolling resistance are virtually the same as those of a new tire. The ContiRe EcoPlus HT3 boasts low rolling resistance, resulting in excellent fuel efficiency. "We have introduced the Conti EcoPlus Generation 3 to offer fleets improved fuel efficiency in long-distance operations," concludes Benack.

Vision 2030

"Sustainability, climate protection and carbon footprints have been key issues for the transport industry for many years now. We are seeking to help fleets tackle precisely these challenges with our solutions and support them on the road towards sustainable fleet management. This is also why our unerring focus on sustainability has been enshrined in our 'Vision 2030' strategic program," remarks Benack. "Sustainability is getting more important all the time due to legal requirements and higher fuel prices. There's still a lot to be gained in this area."

Marc Valetijn, Operations Director, Euromaster Netherlands & Belgium

Tires account for

53%

of a commercial vehicle fleet's operating costs.



Sustainability

Press release Sustainability



ContiLifeCycle



Future & Trends



Mobility study

- > Reduction of emissions
- > Total Cost of Ownership (TCO)
- > Optimized rolling resistance
- > Sustainability
- > Electric mobility
- Long tire life
- > EU taxonomy

LIFE CYCLE IN NUMBERS

The share of recycled and renewable materials is

UP TO

Source: internal tests 2023. Recycled and renewable proportion of the 3.25 m ContiTread HTR2 S 295 with a 385/65 R22.5 casing.



UP TO 50% co₂-ITTED

when making a new tire can be avoided by producing a retreaded tire instead.

Source: internal estimates (cradle-to-gate). Reference: 3.25 m ContiTread HTR2 S 295 with a 385/65 R22.5 casing compared to a new tyre.



 CO_2

0

CONTI CASING

ACCOUNT

0

Source: ContiCasingAccount. Comparison of the 2023 price of the ContiRe Hybrid HT3+ 385/65

ContiLifeCycle[™]

YRES

UP TO

EMEN

higher mileage with retreaded tires Source: internal laboratory tests 2022. Lifespan of a ContiRe Hybrid HT3+ 385/65 R 22.5 compared to a new tyre.

Retreading solutions with well-maintained Continental casings reduce tire costs by 30 - 40%

Source: internal tests 2023. Saved material during production of the 3.25 m ContiTread HTR2 S 295 with a 385/65 R22.5 casing compared to a new tyre.

UP TO TIRES

were sold in the EU replacement market. 26% of these were retreaded. Source: etrma.org 2021 R22.5 with that of a new tyre.







"Sustainability Can Be the Most Economical Solution"

Green fleet management is growing in importance all the time in the fleet business. Here, Aimo Schneider, Head of New Products & Innovations, Car Professional Management (CPM), gives us his thoughts and observations on green fleets, car subscriptions and circular economy.

Car Professional Fuhrparkmanagement (CPM) has been one of the largest manufacturer-independent specialist for fleet-related services for 30 years, with more than 230 customers and over 90,000 vehicle units. The company is part of ALD Automotive, one of the leading providers of manufacturer-independent full-service leasing and fleet management. With a fleet of 220,000 vehicles and locations in 43 countries, the company has deep insight into how fleets work and what customers need.

The issue of green fleet management is playing an increasingly central role here. "Sustainability is a huge topic," says Aimo Schneider, Head of New Products & Innovations. "There is a massive demand for lowering CO_2 emissions. This is no longer driven just by image concerns among fleet operators - it has become a cost issue."

Fuel costs are critical

"We are at a crucial turning point right now," adds Schneider. "Sustainability is no longer too expensive, it may also be the most economical solution." Around a third of fleet costs are fuel-related. So to get mobility at a sensible price you also have to bring down the costs of fuel consumption. "This will be achieved through the switchover to electric mobility and therefore carbon-neutral fleets," says Schneider.

Longer use reduces emissions

In addition to cutting direct emissions through consumption, there is also a trend towards reducing indirect emissions generated by the production of new cars. This means keeping vehicles in use for longer.

Taxonomy incentives have an effect

The taxonomy has a major influence on leasing fleets. "For a vehicle to be classified as sustainable under the taxonomy framework, its CO_2 emissions have to be so low that in practice it has to be powered by emission-free drive technologies – e.g. it has to be an electric vehicle," explains Aimo Schneider. The environmental sustainability of their business activities plays a major role for many companies. "And the taxonomy provides incentives for producing and using more climate-friendly vehicles."

Potential of life cycle analysis

"In addition, the automotive industry is calling for a change to the measurement parameter away from tailpipe emissions and towards life cycle analysis, which will in turn impact on leasing behaviors." The taxonomy has also had an effect on the price of fuel and energy provision.

Car Professional Management (CPM) Vehicles: 90,000 Employees: 150 Locations: Branches in Hamburg







Fleets and **Electric Mobility**

The European Commission has made clear stipulations regarding the use of low- and zero-emission commercial vehicles, meaning there is growing pressure on fleet operators to upgrade their vehicles accordingly. Time is running out, the costs are enormous and the market very unsettled. As far as the tires are concerned, considerable gains can be made by using low-rolling-resistance, low-noise tires designed for electric drive systems, professional tire management, and digital solutions.

obility is currently undergoing a rethink. Electric mobility and sustainability are the most important elements and hold the key to a more climate-friendly, future-proof form of mobility worldwide. Electric vehicles produce fewer carbon dioxide (CO₂) greenhouse emissions, especially when they run on electricity from renewable resources. For years now, demand for electric vehicles has been steadily increasing - for cars, trucks, buses and vans alike. Sustainable and safe electric vehicles call for tires offering exactly the same qualities.

When it comes to tires, the same essentially applies for an efficient electric vehicle as for a low-emission combustionengined vehicle: lower energy consumption equates to a

higher level of sustainability - regardless of the type of drive system. For an electric vehicle, achieving a greater range while using less power is the measure of particularly high sustainability. Energy consumption can be reduced by minimizing rolling resistance, but also by giving the tires good aerodynamics. There is particularly strong demand for zero-emission electric fleets from municipalities and transport operators. The EU's revised 'Clean Vehicle Directive' from 2019 is one of the factors driving the switch to electric. With electric mobility evolving at such a rapid pace, there is also a growing demand for suitable tires in the commercial vehicle segment. Manufacturers have been focusing their efforts on reducing CO₂ emissions ever since the EU regulation governing emissions came into force and the VECTO tool was introduced, if not before.

"EU-wide and international stipulations are obliging manufacturers and fleet operators to implement climate measures in order to establish a sustainable form of mobility. The market will follow this trend accordingly."

Ömer Köksal, Allane SE/ Allane Mobility Consulting GmbH

"Automakers such as Daimler are driving the switch to electrically powered vehicles. The company wants 40 to 60 percent of the vehicles it builds to be fully electric by 2030."

Dennis Schneider, Designwerk, innovation partner of Continental Tires

"Decarbonization requires closed loops"

As far as the efficiency factor is concerned, the answer is obvious: with its 80 percent efficiency, the electric motor has an unassailable lead over fuel cells, hybrid solutions and conventional internal combustion engines. There's more to it than that though. We're not just interested in evaluating the different drive technologies in terms of their efficiency factor, power output and overall energy footprint. Rather it's a question of clarifying whether battery cells, fuel cells or even e-fuels offer the best solution for electric driving in different applications. In other words, we need a technology mix. There also remains the major task of closing the raw materials loop for the materials required for the batteries. Real decarbonization requires closed loops for the raw materials.



Prof. Raoul Zöllner, Vice Rector Research, Transfer, Innovation, Heilbronn University of Applied Sciences





"The market is going to change drastically in the next two to five years as a result of EU regulations and alternative drive systems."

Marc Valentijn, Operations Director at Euromaster Nederland, Belgium

Keywords

- > RoRolling resistance
- > Innovative technology
- >LODC
- > Fuel-saving tires
- > Tire selection
- Tires

Presentation **Future & Trends**



Whitepaper

"A Firm Believer in Embracing All Technologies"

For years now, Sascha Hähnke has been promoting the use of alternative drive systems for the circular economy and the logistics industry. Since early 2023, he has been able to truly focus his attention on BEVs, CNG and the like at Remondis. We talk to him about the current state of affairs.

Since February 2023, you have been chiefly responsible for alternative drive systems in your role as managing director of Remondis Sustainable Services GmbH. How important is this topic area for Remondis?

We operate just over 10,000 vehicles. With a fleet of this size, it would be negligent of us not to deal with the issue of alternative drive systems in good time. In my new post, I will continue to drive forward the use of alternative drive systems – something that Remondis has been forging ahead with for a long time now.

What experience has Remondis already gained with alternative drive systems?

In the early 2000s, we began to refuel the majority of the Remondis fleet with biodiesel fuels from our own subsidiary Saria, such as rapeseed methyl ester and fatty acid methyl ester. Our first experience of electric driving was in 2011 with a hybrid diesel truck. The vehicle at that time originated from a Daimler test fleet.

Which alternative drive systems has Remondis already tested out or adopted?

The process is an ongoing one. In general, it can be said that we have already made really good progress in Germany with the switch to renewable drive systems. We are about to take delivery of our seventh hydrogen-powered municipal waste collection vehicle in Freiburg. We already have several BEV vehicles operating in Frankfurt. In the greater Cologne area and in Münster, we already have waste collection vehicles running on self-produced biogas obtained from biogenic waste. This represents a perfect circular economy at work, as the vehicles basically collect the input material for manufacturing their own, climate-neutral fuel.

Many of our vehicles in Poland are also powered by gas. But there are many more examples too. Our affiliate Rhenus has vehicles running under the overhead line on the A5 motorway. We have added the first BEV vehicles to our fleet in Sweden. And in 2019, we put our first hydrogen-powered waste collection vehicle in the Netherlands into service - a prototype model developed with the help of a local grant. This means all the different drive systems can already be found in our vehicles. I myself have been advocating alternative drive systems since as long ago as 2018, when I still worked for our affiliate company, Rhenus Logistics.

What is the significance of sustainability for you as a company?

In our role as a recycling specialist, sustainability is our business model. It forms the basis for our

actions. So, we always examine the entire value chain and make a point of maximizing the recovery of resources while causing minimal or, ideally, zero pollution of the environment. Operating a fleet that is as climate-neutral as possible is an essential part of this, especially with the waste collection vehicles that account for a large part of our vehicle line-up. We're certain that it's city centers where we will be put under pressure first rather than on the motorways; there, we have a little more time to adopt alternative drive systems.

What is important for the switch to alternative fuels?

We must deal with it by embracing all technologies. This is what we have done in the past at Remondis and continue to do today. Today, our vehicles run not just on battery electric power, but on hydrogen and bio-CNG too. And we have already taken the next step with gas fuels. At Remondis in the Rhineland region and soon in the Münsterland region too, our vehicles are refueled with bio-CNG at a filling station in Cologne. In Münsterland, we are planning to collect organic waste bins and take them to the plant for making biogas, which then goes to the filling station and back to our vehicles. We embrace all technologies because we are convinced that one drive system alone can't do it all.



Remondis Vehicles: >10.000 Employees: 42.000 Locations: about 900 worldwide





Fleet and Costs

LODC, standing for Lowest Overall Driving Costs, is the key. In these times of crisis, this is Continental's comprehensive consultancy approach for fleet customers that is designed to bring down fleet operating costs and keep them low in the face of a gloomy economic outlook, high fuel and AdBlue prices, disrupted supply chains and driver shortages. Tires have a significant impact on fuel, maintenance and repair costs, which account for over 35 percent of total costs.

he aim of technology company Continental is to minimize tire-related operational costs. "At first glance, tires would only seem to make up around five percent of a truck's total operating costs," explains Ralf Benack, who is responsible for fleet solutions for the EMEA region at Continental. However, tires also have a significant impact on fuel, maintenance and repair costs, which account for over 27 percent of total costs. "This makes them a key cost lever, meaning LODC is a genuine success factor for fleet customers in tough times."

Transformation of fleets

And there is another challenge facing the industry too - the European carbon tax on fossil fuels. "Various European and national regulations will force fleet operators to invest heavily in zero-emission vehicles if they wish to avoid toll charges and restrictions or benefit from incentives," Benack points out, saying this means many companies are going to experience high cost pressures for the foreseeable future.

Added value for the customer

With the LODC approach, the tire experts at Continental are seeking to work closely together with customers in order to minimize their costs - and that applies to fleets of any size and via a broad spectrum of individual solutions. "The basic premise is that our after-sales advice will provide fleet operators with clear added value, so they will want to work with us again in future," says Benack. Optimum tire selection and data-driven servicing management resulting in tire checks at exactly the right time are just two of the aspects that generate added value. A 24/7 breakdown service and optimization of the customer's ordering, administrative and invoicing processes are further key elements.

Economy, environmental protection and safety in perfect harmony

The overall LODC concept is collaborative in nature and is based on mutual trust and transparency: the fleet customer provides telemetry data and Continental uses this to derive proposals for cutting costs before rigorously implementing the measures together with the customer. To fully capitalize on the available potential, a sound LifeCycle solution is needed complete with casing management and a high level of tire usage transparency based on digital solutions. Fleet expert Benack sums up the concept by saying: "We are the experts when it comes to tires, tire servicing, digitalization, data analysis and process mapping. So we are now using LODC to create a harmony of economy, environmental protection and safety."

"By reusing casings and taking advantage of our retreaded tires, fleets can reduce their tire costs by up to 35 percent."

Annika Lorenz, Head of Fleet Solutions Germany, Continental

"Within just 13 months the investment paid for itself for us." Ran Gordon, Fleet Manager at Gor Oz

38,256 Euro

potential savings following the switch to ContiConnect Live at haulage company Gor Oz



Keywords

- > Cost reduction
- >LODC
- > Tire selection
- > Retreading
- > Tire life
- > Process optimization
- > Carbon savings
- >24/7 breakdown service
- > Fuel efficiency
- > Maintenance



Presentation





Long version of the interview

Reduce Tire-related Costs

Ralf Benack, Head of Fleet Solutions EMEA at Continental, explains what the technology company is doing to help fleets minimize costs and discusses the benefits offered by retreaded truck tires.

Together with the arrival of the new Generation 5 commercial vehicle tires, you are also placing the spotlight on your LODC approach. What does LODC stand for?

LODC stands for Lowest Overall Driving Costs. It lies at the heart of our comprehensive consultancy approach that helps fleet customers reduce their tire-related costs.

What do you mean by 'comprehensive'?

For us, 'comprehensive' means that we apply our full expertise in the field of tires, tire servicing, digitalization, data analysis and process mapping. Needless to say, we always start off with the core of our business model, the tires themselves. But it's not long before we also take aspects such as retreading, casing management and digital solutions into consideration. In this way, LODC strikes the perfect balance between economy, ecology and safety.

What role does the customer play in LODC?

Our approach has been designed deliberately to be collaborative in nature, meaning we need trust and transparency on both sides. For example, the fleet customer provides us with telemetry data and we use this data to deliver proposals for cutting costs - which we then focus squarely on implementing together. Rather than simply calculating

the potential savings, we get actively involved together with our network of service partners and achieve tangible results.

Now, let's be honest - is it about giving advice or making a sale?

LODC is clearly a method for cost optimization rather than a way of selling tires. Destination on the result of the analysis, it paves the way for a combination of products, services and solutions intended to minimize customer costs. We understand sustainability to also mean a very close customer relationship. It's not a short-term sales strategy; it's about building a long-lasting partnership.

What type of fleet customer is your consultancy approach aimed at?

Generally speaking it is applicable to fleets of any size, spanning all sorts of different applications and configurations. When offering LODC under the umbrella of the Continental organization, we are mainly focusing on medium to large national and international fleets for freight and passenger transport, as well as those owned by rental and leasing firms. However, our ContiTrade organization also applies the LODC approach. Our partners with a strong regional presence, such as BestDrive or Vergölst, concentrate on small to medium-sized local and regional vehicle fleets.

Let's go into a little more detail: what are the key levers in the LODC methodology?

The most important levers are without doubt optimum tire selection, maximization of uptime, measures for increasing tire mileage and fuel efficiency, data-driven servicing management resulting in tire checks at exactly the right time, a 24/7 breakdown service, and optimization of ordering, administrative and invoicing processes.

How can uptime, for example, be maximized? We use intelligent digital solutions to optimize tire maintenance and pressure. This extends tire life, increases uptime and saves fuel.

You have said that tire retreading also plays an important role in your comprehensive approach. Could you explain that in more detail?

Of course. When looking at the most suitable tire for a particular application profile with the LODC method, we always give careful consideration to the appropriate retread solution - i.e. which ContiRe tire - at the same time. In fact, this all starts even further back at the tire development stage, with our teams of engineers for new tires and retreads working hand in hand with one another. Our ContiLifeCycle plant in Hanover, where the ContiRe tires are made, is just a stone's throw away from our Research and Development department.

Fleet and **Tire Development**

"We have been working together with Continental for over ten years now. They help us improve our processes and give us advice on the correct choice of tire."

Bertil ter Maat, Fleet Manager at Mainfreight Transport Netherlands B. V.

The launch of the Generation 5 tires creates a product range brimming with cutting-edge technology that provides a sound basis for green fleet management. Thanks to their improved treads, rubber compounds and casing designs, the new premium commercial vehicle tires offer outstanding mileage, excellent durability and superb traction, together with lower rolling resistance. These criteria are all of fundamental importance for a green, resource-efficient fleet. Generation 5 also forms a key element of Continental's comprehensive consultancy concept for Lowest Overall Driving Costs (LODC).

Gen 5 in commercial vehicles

Consequently, the new Conti Hybrid for combined use on regional and long-distance haulage routes - the tire that marked the arrival of Generation 5 - promises reliable performance throughout its lifetime. Compared to the preceding generation, the new Conti Hybrid Generation 5 tire line boasts an increase in mileage of as much as 20 percent. depending on the individual tire size.

High mileages in vans

Also forming part of the Generation 5 launch event were a summer and an all-season tire from the Continental Van Ultra line. "The growth in mail order business and the corona- the whole family.

virus pandemic have led to a further increase in demand for delivery vans," explains Alexander Stanger, Head of Product Management Commercial Mobility EMEA at Continental. The van tires are likewise geared toward the LODC concept with their high mileage and fuel-saving rolling resistance.

Next-generation premium car tires

After several years of development, the PremiumContact 7 the seventh generation of Continental's successful premium tire - is here. While working on the new summer tire, the developers paid particular attention to the most important customer requests: maximum safety and peace of mind for

"The Generation 5 tires provide a great combination of optimized rolling resistance and high mileage."

Marc Valentijn, Operations Director at Euromaster Nederland, Belgium

The new

RedChili

compound makes the PremiumContact 7 the safest tire on the car market.

Denise Sperl, Director Research & Development

Car Tires EMEA, Continental Tires

Mark of excellence: Red Dot Award 2023 for Gen 5

The Continental Hybrid HS5 and Hybrid HD5 tires beat stiff competition to win the Red Dot Award 2023 in the Product Design category. This annual design competition for product and industrial design, brand and communication design as well as design concepts awards the Red Dot guality label to the best entries. "We are particularly delighted to receive the award for the first two models in our new generation of tires," says Hinnerk Kaiser, Head of Product Development Bus and Truck Tires at Continental. "It is an endorsement of the quality and strength of our development work, which involved bringing together concept and operating characteristics with design and performance."







Whitepaper



- > Fuel-saving tires
- Trucks, vans, cars
- Tire selection
- > Optimum tire pressure
- > Breakdown service
- > LODC
-) Long tire life
- > Predictive maintenance
- > Retreadability

Innovative Technologies and Peace of Mind

Safety in every situation: after several years of development, the PremiumContact 7 - the seventh generation of Continental's successful premium tire - is here. While working on the new summer tire, the developers paid particular attention to the most important customer requirement. Denise Sperl, Director Research & Development Car Tires EMEA at Continental Tires, talks about the PremiumContact 7 tire for cars.

Maximum safety continues to be a priority for most of our customers when choosing tires. The new generation is our brand's flagship product. Our aim was to develop the safest tire on the market, one that would offer our customers a consistently comfortable and carefree journey - we deliver peace of mind for the whole family with the PremiumContact 7.

Significant safety advances

We have improved the car tire in all safety-related aspects. Over its production lifetime, the outgoing PremiumContact 6 model recorded a total of 34 wins in tests conducted by renowned international motoring magazines. We are convinced that we will build on this success with the PremiumContact 7. Three technologies have paved the way for significant safety advances with the PremiumContact 7: size-specific tailoring of its design, the innovative RedChili compound for the tread and the adaptive tread design.

Tailored design

As with the SportContact 7, the PremiumContact 7 is also customized for a wide range of vehicle concepts, according to weight, size and drive system. Since heavy vehicles require different tire solutions than light cars, the specifications of the PremiumContact 7 are adapted for each vehicle class.

The safety factor with electric cars

We had such a positive experience with customized design with the SportContact 7 that we are rolling out this technology again for the PremiumContact 7. The growing number of long-range and high-performance electric vehicles means the safety factor is increasingly gaining in importance in this segment. Besides improvements in terms of rolling resistance and mileage, customization of the PremiumContact 7 design also offers excellent grip and short braking distances for vehicles with any type of drive system.

RedChili - optimum adhesion

Another new feature of the PremiumContact 7 is the innovative RedChili compound. With the new compound for the PremiumContact 7, we have succeeded in ensuring optimum performance across the widest possible temperature range. This allows the tire to generate high levels of grip even at low temperatures in everyday traffic without a warm-up phase beforehand. This is of particular benefit to customers during the transitional spring and fall months.

Adaptive tread design

The adaptive tread design of the PremiumContact 7 ensures even greater stability and ride comfort on both wet and dry roads. Wide lateral openings in the outer areas of the tread pattern provide optimum drainage when driving straight ahead because the ground contact patch ends precisely at the point where the opening is widest. When cornering, the contact patch shifts outward and the lateral openings close again, providing more rubber and better grip on the road. In this way, we have resolved the trade-off between optimum water discharge and flawless dry handling. The result is excellent handling stability on wet surfaces when braking, cornering and accelerating



Press release PremiumContact 7



Fleet and Digitalization

Connected solutions will enable future mobility to adapt to tougher demands. Digitalization offers a great opportunity. Fleet managers are therefore becoming increasingly interested in connected solutions for their vehicle fleets. This paves the way for an even more efficient, straightforward, sustainable and forward-looking form of fleet management.

More and more goods are being transported on our roads, and the number of distribution vehicles in our cities continues to rise. More and more people are commuting to work and using more distant shopping and leisure facilities. Tackling these trends in an environmentally friendly, cost-efficient way in the face of spiraling energy costs represents a real challenge.

Potential of tire pressure monitoring systems

Manufacturer apps for producing status reports are considered highly useful and are already used by many. And no wonder, as they help to get the biggest cost drivers in the fleet under control. Tires have an important role to play here. Integrated tire pressure monitoring systems (TPMS) improve fleet efficiency, enabling predictive maintenance, reducing costs, minimizing energy consumption and lowering emissions. TPMS systems also increase safety and comfort for drivers and optimize vehicle availability. This safety aspect means they are mandatory in many countries for passenger cars and light commercial vehicles. Corresponding EU regulations for trucks came into force in July 2022 for new vehicle homologations and will be extended to all newly registered vehicles from July 2024.

Essential for new forms of mobility

TPMS are important for new forms of mobility such as carpooling and car-sharing services, which are leading to a growing number of shared vehicles. Here, smart tires collect data that benefits drivers and owners alike. In future, smart tires could even maintain themselves by adjusting tire pressure and tread to driving conditions.

System Offering Added Value

The ContiConnect[™] digital tire management system offers haulage and fleet companies a modular product that can be individually tailored to their specific needs. The system

seeks to maximize a fleet's cost effectiveness in order to successfully withstand cost pressures, while also driving fleet digitalization and connectivity as well as predictive maintenance.

Ongoing refinement

Continental is continuously enhancing its ContiConnect 2.0 tire management solution. The Advanced package makes it possible to record additional data, including tread depth and tire condition. This marks the next step for the technology company as it progresses from pure tire monitoring to asset management, with the integrative ContiConnect platform now detailing all data on a tire's condition and history within one system.

All the benefits of tire monitoring

The standard version of ContiConnect already enables comprehensive tire monitoring with its customized tools. "And the Advanced package now lets customers capitalize on all the benefits of tire tracking," explains Dushyanth Rajagopal, Product Manager Digital Solutions at Continental. With ContiConnect 2.0 Advanced, every tire can be tracked individually, whether it is on the vehicle or in the warehouse. Each tire has a digital twin in the system complete with article number, meaning the customer always knows which tire is fitted on which vehicle and in which position. As well as pressure and temperature, tread depth and tire condition can also now be recorded and monitored. The newly developed second-generation ContiConnect sensor additionally relays information on distance traveled, making it possible to keep an eye on tire mileage at all times. The charge level of the sensor battery is likewise indicated in the system. In addition to the exact data readings, ContiConnect 2.0 Advanced users also receive alerts and recommendations for tire pressure, temperature and tread depth as well as when vehicle inspections are due.

Press release ContiConnect







"ContiConnect 2.0 represents the next step toward predictive maintenance."

Paul Broker, Fleet Engineering Director at G.Webb Haul

Smart tires and AI

Interview with sensor developer Niklas Vauth

"In 2022, we brought out an upgraded version of ContiConnect with next-generation tire sensors. The technical advances over the first generation include firstly the Bluetooth functionality that now connects our sensors directly to our customers' smart devices, allowing tire inspections to be carried out even more efficiently. Then there is the update function, which will enables us to provide customers with added features

> in future. Our development team has also implemented a Mileage Estimator function."

- Connected fleet
- ContiConnect 2.0
- Digitalized fleet
- > Predictive maintenance
- Electric mobility
- New forms of mobility

More Efficient Fleets

Five questions for Dr. Christian Lerner, Vice President Connected Tires - Technologies & Analytics at Continental.

What is tire management all about?

Using sensor technology and data transmission, we integrate the tire into the overall vehicle network so as to allow fleet operators to make the right decision at the right time. So, when to replace a tire, for instance, and combine that with other upcoming vehicle servicing work. We provide the relevant information and an overview of the fleet's general status in the form of any necessary alerts and graphical summaries.

And why does this matter so much?

Tires are consumables and generate considerable costs. Mileage and lifespan have a major economic impact. Rolling resistance affects fuel consumption, while worn tires are more susceptible to tread punctures, resulting in both breakdowns and downtimes. Checking tires, however, requires a lot of personnel resources. Tire management systems such as Conti360° Solutions are able to take over this entire task, allowing fleets to focus on their core business.

How is the data recorded?

Using sensors on the vehicle or inside the actual tire. While tire-mounted systems are costlier, they have increased capabilities and are more accurate. A wealth of reliable data is needed for optimum tire management, so we combine the two solutions.

Besides this, more and more data is available about the tire itself thanks to e.g. QR codes on the sidewall or RFID chips inside the tire.

What is all this data needed for?

We use it as a basis for developing services that increase the efficiency of fleets. Brand new business models are quite conceivable here: for example, instead of selling tires, a fee could be charged for using them when the truck is actually on the road. But that would only work once we are able to reliably delineate many different influencing factors.

What is Continental conducting research into for the future?

Load fluctuations, uneven wear and individually specified tire pressures are all intriguing topics. We are expecting further progress to be made here with regard to optimizing tire usage and minimizing environmental impact.

Fleet and New Forms of Mobility

Faced by climate change, a shift in awareness, escalating energy prices and strict climate protection targets, there's an increasingly urgent need for significant and sustained action from the transport industry. The focus here is on new forms of mobility including innovative leasing concepts, shared mobility schemes and infrastructural measures. Efficient, safe tires with comprehensive digital solutions for tire management are an essential requirement for future forms of mobility.

Propositions for the future of new forms of mobility Germany's Zukunftsinstitut (Future Institute) identifies four factors affecting the "Mobility Megatrend" in its Future Report 2023. According to the institute, these are the emergence of a mobile global culture, changes brought about by new products and services and the use of means of transport in future. More than ever before, mobility is at the heart of change in space and society. In the context of the connected (knowledge-based) society, a new mobility paradigm is forming that is steadily diminishing the car's importance as a status symbol: in future, it will be nothing more than one of many integral parts within a seamless system – and, at the same time, increasingly post-fossil, connected and (semi-) autonomous. The four propositions for the future of the mobility megatrend:

- > Cars leave our cities.
- > Seamless mobility integrates private and public means of transport.
- > Autonomous driving transforms the role of the car.
- > Experiencing becomes more important than owning.

EUREF-Campus Berlin think tank

The EUREF-Campus Berlin ranks as one of the leading centers for Germany's energy transition. It is home to over 150 companies, startups and small and mediumsized firms from industry, science and research, whose 5,000 or so employees work on future issues, such as energy management, mobility and climate protection. It is the only real-world energy transition laboratory anywhere in Germany and serves as a model district for the climate-neutral, resource-efficient and smart city of tomorrow's world. This think tank brings together an innovative business and scientific community that acts as a test platform on the road to the future of mobility and a feasible and affordable energy transition. The EUREF-Campus Berlin develops technologies and investigates their use. Serving as an international showcase for the energy and mobility transition, in 2014 the EUREF-Campus already met the carbon climate targets set by the German government for 2045.

Press release ContiConnect Live

"The EUREF-Campus is a very special place because there are so many companies and startups here working on the issues of climate action and energy transition."

Prof. Dr. Ottmar Edenhofer, Direktor des Mercator Research Institute on Global Commons and Climate Change (MCC)

"ContiConnect Live makes it possible to track the location of every vehicle. This gives certainty, makes vehicle scheduling easier and optimizes our customers' internal processes."

Annika Lorenz, Head of Fleet Business Germany, Continental



Digitalization of the tire

Our ContiConnect 2.0 tire management system provides the necessary infrastructure for the all-encompassing, digital tire management of the future. For this, we have consistently refined our system environment to keep it perfectly in line with the specific requirements of our fleet customers around the world. ContiConnect 2.0 is focused on digitalization of the tire and paves the way for intelligent tire management combined with a tailored selection of digital, service-based tire solutions. Ongoing analysis of the extensive tire data creates a wide pool of data.





Tansu Isik, Head of Business Development and Global Marketing at Continental Tires

- Connected fleet
- ContiConnect 2.0
- > Digitalized fleet
- > Predictive maintenance
- > Electric mobility
- > Leasing

"Encourage Green Mobility Solutions"

The Allane Mobility Group (formerly Sixt Leasing SE) is a leading force in the field of direct online sales of new cars in Germany, as well as specializing in management and full-service leasing of large fleets. The company additionally operates business models that have been geared toward future customer requirements. A talk with Ömer Köksal about trends, sustainable mobility solutions and digitalized fleets.



What trends have you noticed for fleet management today?

There is a growing trend to internationalization of the purchasing policy and standardization of fleet management. Digital mobility management including, for example, managing your own mobility budget via an app, will be one of the requirements of fleet users in future. We improve the customer experience with the expert, comprehensive advice we offer. Trends in fleet management, on both a national and an international level, depend to a great extent on the actions of various stakeholders, so there is a delay before they start to emerge.

For instance, a market or customer need could be created when lawmakers stimulate innovations and trends by introducing bonus and/or penalty systems in order to attain their own goals. Trends are also triggered by competitors and market dynamics. The principal intention here is to monetize innovative products and services that are designed to offer fleet management customers different types of added value. Unlike before, when

company cars were only made available to certain employees, companies are now seeking to provide all employees with access to means of mobility. This is increasingly leading to solutions that address the individual needs of the heterogeneous group of employees in the best way possible.

What role do the aspects of sustainability and green fleet management play?

Sustainability is playing an ever greater role. The Allane Mobility Group's management model is therefore aimed at responsible and long-term value creation. Throughout the company's value added chain - from the purchase of vehicles through leasing to vehicle marketing - we take both economic factors and various sustainability issues into consideration. As a result of the subsidies available from the German government and the different solutions offered by manufacturers and service providers, customers have increasingly been asking for our advice on how to make their fleets more sustainable for some time now. We are therefore playing an active role in shaping this process. As a provider of mobility solutions,

we are also aware of our responsibility to the environment, which is why we are constantly expanding our portfolio of electric and hybrid vehicles for leasing. To encourage green mobility solutions, we have entered into various collaborations with manufacturers that also attract state funding. For example, we are currently receiving subsidies amounting to tens of millions of euros to help sell hydrogen-powered Hyundai Nexo models.

Allane Mobility Group

Vehicles: 119,000 Allane SE vehicles, 51,000 management vehicles Employees: 745 for Allane SE Germany, 63 for Sixt Mobility Consulting Locations: headquarters in Pullach + three sites in Germany and one each in Austria and Switzerland



What is the demand like for electric vehicles? The specialists at the Allane Mobility Group have been following the development of both electric mobility and other alternative vehicle drive systems for a long time now. We further progress in this field by e.g. organizing events for employees, fleet managers and media representatives, working together with manufacturers, dealers and distributors, and bringing out promotional offers for private customers. We also offer solid expertise in the selection and usage of hybrid and electric vehicles, enabling us to provide interested customers with professional advice and optimize the sustainability of company fleets.



ContiLifeCvcle

Interview with the Retreads

Who are these retreaded tires really? What makes them different from new tires? Why are they good for the environment? And what exactly is the difference between a cold-retreaded and a hot-retreaded tire? We met up with a ContiTread and a ContiRe tire for a talk.

Who are you?

We're retreaded commercial vehicle tires. In other words, used tires whose tread has been replaced. This involves applying new tread and sidewall rubber to a worn-out tire casing that is still of sound structural quality. We then undergo a curing process to vulcanize the new rubber to the original casing. The result is a new tire with a new tread pattern.

What is the point of all that work?

We save 80 percent of the materials required for manufacturing a new tire, greatly reducing both the environmental impact and costs.

Does it really work?

A worn-out Continental tire that has been professionally retreaded using Continental's hot or cold retreading solutions delivers exactly the same performance as a new Continental tire. All retreading solutions from Continental are developed in accordance with the same criteria as new tires. Indeed, the same technologies are employed for manufacturing a ContiRe retread as for new tires. Only casings that have been carefully inspected are used for retreading, and every tire undergoes a thorough quality check and is covered by a comprehensive warranty. So, there's no need to worry.

I simply cannot believe that you're just as safe.

Professionally retreaded tires are completely safe. Even airlines usually renew aircraft tires using the retreading technique. ContiTread cold treading is based on new tire technology and is carried out by selected ContiTread partners to ensure the highest standards of product and process quality.

Hot or cold? What's the difference between hot and cold retreading?

Hot retreading and cold retreading are the main techniques used for extending tire life. I'm a ContiRe, a hot-retreaded tire. I was first retreaded in our ContiLifeCycle-plant. Exactly the same technologies are applied as for new tires

ContiTread, you, on the other hand, are a cold

retreaded tire. What's different about you? In cold retreading, the carcass is provided with a new pre-cured tread from bead to bead, including the sidewall, in our retreading plants. Vulcanization then usually follows at a temperature between 99 °C and 115 °C. But rest assured that we are subject to thorough quality checks with both methods and come with a comprehensive warranty. .

So, let's talk numbers. How much can I save if I opt for you retreads instead of low-cost tires? We're obviously great for your wallet! By using

retread solutions, you can lower your tire costs by 30 to 40 percent. Retreading your worn-out Continental tires is a cost-efficient way of obtaining a full new tire life and continued top-class performance. New Continental tires are therefore a lasting investment, as the outstanding structural stability of our casings means they are extremely durable and last long beyond one service life. A worn-out Continental tire that has been professionally retreaded using Continental's hot or cold retreading solutions delivers exactly the same performance as a new Continental tire. Are you telling me you're sustainable? Yes, absolutely. By making use of the retreading option instead of simply buying new tires, you help to conserve resources and produce fewer CO₂ emissions. More and more private and public companies are setting their own sustainability targets and implementing sustainable procurement methods, so resource-efficient tire purchasing is something that can give transport companies an edge over the competition.

Why are you and your retreaded solutions preferable to those of the competition? Well, our retreads benefit from the futurefocused research and development approach of Continental, which ensures technological expertise, premium quality, state-of-the-art engineering and the highest safety standards. In addition to premium product performance, our highly skilled sales force offers you services to further minimize your tire-related costs and workload, such as ContiCasingManagement and the ContiFitmentService.

You've certainly won me over! Thanks for the interview!





Testimonials from Fleet Customers

At the launch of the new Generation 5 tires in Seville in 2022, we spoke to numerous customers about current issues affecting fleet management. What are the biggest challenges? How does having Continental as a partner help them deal with the tremendous pressures of rising costs, EU regulations and shortages of skilled workers? Here's a selection of their responses.

"Buying tires offering ten or twenty percent more mileage is a big advantage for me. That ultimately means a big saving for us. Partly because we don't have to change the tires as often."

Maciej Góralski, Managing Director of GTI Logistik, Poland

"We use retreaded tires because I think it's important – it's a waste to only use a product once when it's perfectly possible to use it a second time."

Marc Valentijn, Operations Director at Euromaster Nederland, Belgium

"Our entire fleet of cars, vans and trucks uses tires from Continental. Mileage and uptime are the most important things for us. We transport food, so it's crucial that our trucks are always available."

Wim Boydens, Managing Director of 4D Trans, Belgium

"Fleet operability is particularly important for us as the oversized loads we transport mean our trucks are often escorted by police vehicles. Breaking down on the motorway with a load measuring five meters in width would be a disaster. Thanks to our Conti360° contract, I know I can rely on the mobility of my vehicles."

Klaus Altmann, Managing Director of Spedition Altmann, Germany

"Our partnership with Continental dates back more than ten years now. Continental helps us improve our processes and give us advice on the correct choice of tire for our work."

Bertil ter Maat, Fleet Manager at Mainfraight, Netherlands

EUROPEAN ROADSHOW

YOUR BUSINESS, OUR SOLUTIONS.

On the Road with Conti

In mid-2023, the Continental show truck embarked on a two-year journey that will see it travel the length and breadth of Europe. The yellow and black truck will be making appearances at any events, shows and fairs with a fleet, tires or technology theme. There it will exhibit our complete portfolio of products and services along with all other Generation 5 tires due to be launched by 2025.

A blog will report on the truck's travels and let everyone share in the experience. The blog includes fun facts and information on the various countries, as well as all the lowdown on logistics, road transport and tire technology.

Contacts

On request, we can put you in touch with our colleagues from the various departments at Continental, who will provide expert information and answers to your questions.

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