



# The new Citaro hybrid.

The benchmark.

**Mercedes-Benz**

The standard for buses.





## Experience the 'eco' in economics. The new Citaro hybrid.

Secure a decisive lead – and that great feeling of doing your best for your passengers, the environment and your company. With the Citaro hybrid, you can rely on a perfect combination of economy and sustainability. The compact hybrid system makes your city bus an economical and ecological all-rounder in urban centres.

# When you brake, you win.

With the new Citaro hybrid, Mercedes-Benz is launching a new drive chapter for city buses and intercity buses. It was specially developed to meet the needs of public transport in metropolitan areas and ideally embodies modern mobility with reduced consumption. The economical diesel or gas engine is supported by the additional driving force of a highly efficient, compact hybrid module. The 14 kW electric engine generates energy when coasting and braking. This way, it supports the diesel or gas engine when starting up. Depending on the application, this reduces fuel consumption by up to 8.5 per cent.

Thanks to space-saving design and low weight of the additional components, the model dimensions of this Citaro series have only changed minimally. Its height and transport capacity remain virtually unchanged. The hybrid technology is offered as a special equipment option for an exceptionally wide range of Citaro city buses with diesel and gas engines.



### Repairs & Maintenance

A bus only earns money when it's on the road. Unscheduled servicing increases downtime and generates high costs for your fleet organisation. For this reason Mercedes-Benz buses and coaches are designed to make repair and maintenance as infrequent and as short as possible. All components have a particularly long service life and are easily accessible. For example, all electrical cables have been relocated from the substructure to the ceiling midline. And: the OMNIplus Service Network with customised services and 24h SERVICE are available for you during the vehicle's entire service life.



### Residual value

A first-class bus is an investment in the next one, since the residual value of your bus is almost as important as the original investment. On request, *BusStore* will guarantee you the residual value, and buy back your vehicle at the end of a defined useful life. Additionally, with many vehicles you have an EU-wide 12-month guarantee on the complete power train, as well as individual leasing and financing offers via our partner, Mercedes-Benz Financial Services.



### Consumption

At 15%, energy consumption is an important cost factor for your Citaro hybrid. The environment, as well as your balance sheets, will thank you for every saving made. Through the perfect interplay between vehicle technology, intelligent driving style analysis and tailored driver training, you can selectively influence both factors.



### Investment

Investing in a new bus is a decision that needs to be planned with the utmost care. We will listen to you carefully, in order to satisfy your requirements and to find the perfect vehicle for you. Even the service package is coordinated to suit your particular purpose: with OMNIplus ExpertHandling Training\*, the OMNIplus Service Contracts, FleetBoard vehicle management and Mercedes-Benz Financial Services. With this complete service, we offer you the basis for the best possible availability and operational readiness of your new Citaro hybrid at an attractive fixed price.



\* Currently available in: AT, BE, CH, DE, ES, FR, GB, IT, PT, SE

\*\* Your vehicle's air-conditioning system and refrigerator are filled with the R-134a refrigerant and contain fluorinated greenhouse gas. The notice decals with detailed information on the type of refrigerant used can be found on the respective devices. Please refer to your vehicle's operating instructions. For more detailed information, please refer to the respective technical information brochure.

# Every bus costs money. The new Citaro hybrid saves money.

Many factors in the running of a bus generate costs. And you can contribute significantly to making your bus even more cost effective. In fact, close to a third of the cost factors can be actively influenced. We will be happy to show you how to maximise the economic advantages of our buses and service with regard to investment, consumption, repair & maintenance, and residual value.

**Cost-effectiveness is a matter of technology.** With every Citaro hybrid, you have a comprehensive economical solution in your fleet. Its drive is not a transitional technology towards entirely electric driving. On the contrary, with it, Mercedes-Benz is optimising the Euro VI combustion engines to maximum efficiency in a unique way. The result: the new Citaro hybrid with its favourable Total Cost of Ownership pays off.\*\*

**Thinking ahead from the word go.** Quality and longevity make the Citaro hybrid a very stable asset. With our OMNIplus Service Contracts, your accounts will run according to plan. Regular maintenance guarantees transparent costs at all times and a predictable residual value.

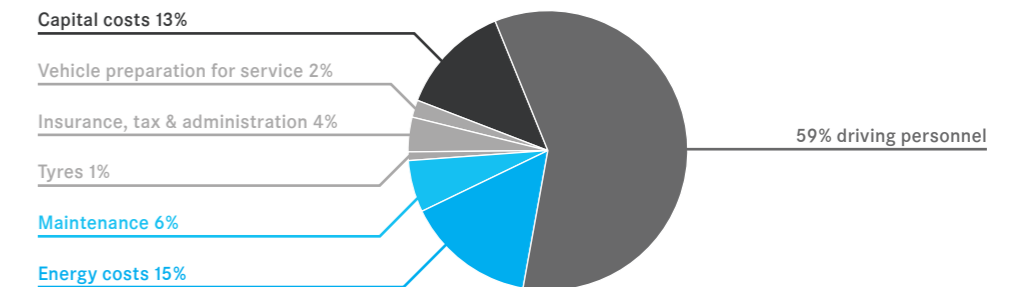
**Profitability through Financial Services.** With the Citaro hybrid, you benefit from attractive financing options and insurance solutions. Premiums calculated exactly according to your individual use ensure a clear economic advantage for you.

**Investments that pay off.** Our OMNIplus EcoTraining shows that fuel savings and respecting the timetable are not mutually exclusive. Together with Daimler FleetBoard Bus, the economic fleet handling can be sustainably increased. On request, *BusStore* will provide you with the residual value and will buy your vehicle at the end of the defined period of use.

**Service wherever you need it.** Mercedes buses are on the road practically everywhere in Europe. Reason enough for us to offer the most comprehensive bus-specific Service Network. This guarantees quick help and short downtimes in the case of an emergency. And, of course, around the clock with our reliable 24h SERVICE.

## Total Cost of Ownership

Example calculation using average values from the German market. TCO cost blocks using the example of Citaro hybrid, Euro VI. Premises: 10 years à 60,000 km, German market. Date: September 2017.



TCO at a glance: Find out more about the cost factors involved when operating your bus:  
<http://overall-economy.bus.mercedes-benz.com>

# A diversified offering – the Citaro hybrid.

The new Citaro hybrid is the first milestone of a completely new path which Mercedes-Benz is pursuing in the hybrid segment: hybrid technology is available as special equipment for an exceptionally wide range of city buses with diesel and gas engines. Instead of individual independent hybrid buses, numerous Citaro models with the 936 engine series benefit from the forward-looking hybrid module.

## The Citaro hybrid K Perfect for narrow inner cities.



Length:  
**10.6 m** | 2 doors

In total, 2 left- and 2 right-hand-drive models

## The Citaro hybrid (City and interurban) The basis of the bestseller.



Length:  
**12.1 m** | 2 doors

In total, 4 left- and 2 right-hand-drive models

## The Citaro hybrid NGT Our climate protector for your city.



Length:  
**12.1 m** | 2 doors / **18.1 m\*** | 3 doors

2 left-hand-drive models  
\* Also available as G NGT

## The Citaro hybrid LE (City and interurban) The clever connection.



Length:  
**12.1 m** / **13.2 m** | 2 doors

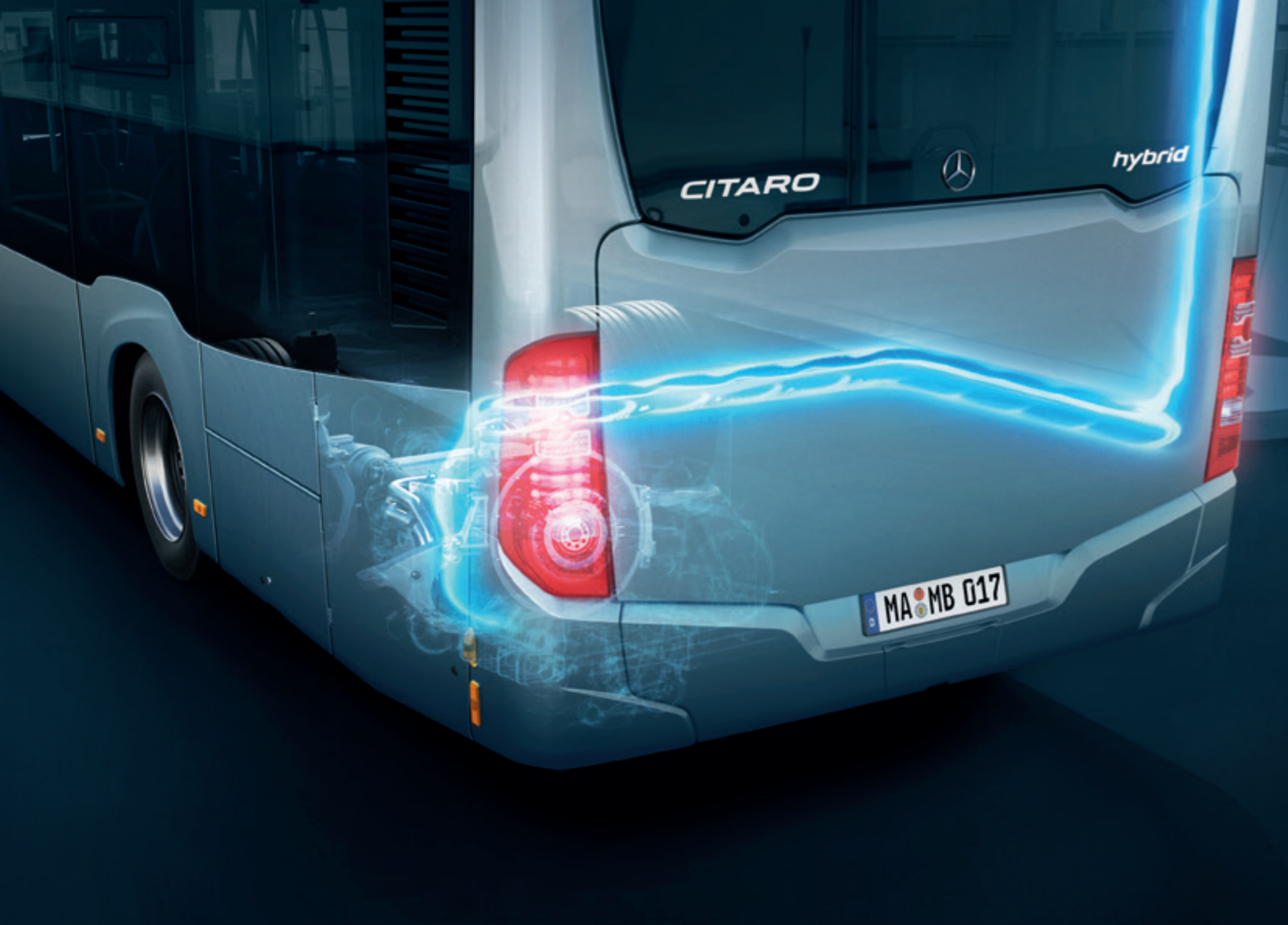
5 left-hand-drive models

## The Citaro hybrid G Capacity in public transportation.



Length:  
**18.1 m** | 3 doors

2 left-hand-drive models



## The intelligent use of kinetic energy.

The basic function of the new Citaro hybrid is very simple: the disc-shaped and very robust electric engine is integrated between the internal combustion engine and the automatic transmission. It works, among other things, as a generator when slowing down the bus and converts coasting energy into electricity – when braking and removing the gas. The generated electricity is stored as electrical energy. Without hybrid technology, this energy would be lost in the recuperation phase – the new Citaro hybrid uses and saves it: as soon as the bus starts up from a stationary position, the electric engine assists the diesel or gas unit with its torque – the so-called boost phase. In this way, the internal combustion engine can temporarily apply less power during start-up, therefore saving fuel. Additionally, the electric engine supports idling operation. This improves the efficiency of the internal combustion engine and contributes to significantly reduced fuel consumption and therefore reduced emissions.

The electric engine does not serve to increase the maximum performance. The performance and torque of the new Citaro hybrid therefore remain unchanged compared to a pure combustion engine of the same design. The speed of the internal combustion engine is not reduced during the boost phase. Only the peak power is imperceptibly reduced and supplemented by the electric engine.



# More efficiency, lower consumption.

The new Citaro hybrid fully capitalises on the efficiency potential of its drive. For this purpose, the electric engine is linked as standard with two other new and energy-saving components: the intelligent eco steering steering system and the innovative lightweight running axle\*. Both increase the cost-effectiveness of the new Citaro hybrid.

1

The interplay of the internal combustion engine for the base load and the electric engine for peak loads ensures a high degree of drive energy efficiency during driving. The components designed for heavily changing loads are very robust. Their long life is comparable to those of conventional combustion drives.

2

The new, efficiency-optimised lightweight running axle also contributes to increased efficiency in the new Citaro hybrid: on the one hand, through fuel savings due to the lower running resistance, and on the other, through less maintenance and a prolonged maintenance interval – from 180,000 to 240,000 km.

3

In the new Citaro hybrid, the new intelligent eco steering electrohydraulic steering system also contributes to enhanced energy efficiency. It works in a way that is requirements-optimised, while contributing to reduced fuel consumption in public service applications.

1 Electro-engine



2 Lightweight running axle\*



3 intelligent eco steering



Up to an **8.5%**  
reduction in fuel consumption

\* Not in the case of Low Entry variants.



## A new drive system. The same great handling.

On the inside, the new Citaro hybrid is practically indistinguishable from the same variant with an internal combustion engine. This is especially beneficial for the driver – everything remains the same in his workspace when he transfers from a Citaro with an internal combustion engine to the new Citaro hybrid. The instrument panel, ergonomically arranged controls and multifunction steering wheel are unchanged – there are no additional switches or indicators. The new Citaro hybrid can be controlled and operated from the heightened driver's seat with optimum all-round visibility as comfortably as any other Citaro. It is therefore not necessary to incorporate a transition phase or to re-train the driver.

All the best remains. The new Citaro hybrid offers its passengers all the comfort that the tried and tested Citaro models offer. No interior fittings are compromised by the hybrid technology, which is invisible to passengers and drivers. Even on boarding, you'll know you're in good hands. Among other things, the spacious interior concept, comfortable seats, ergonomically optimised support bars and comfortable standing height ensure this. Individual equipment variants can be selected for each intended application. You are bound to find exactly the right vehicle for your application. Depending on the equipment variant, a powerful air-conditioning system\*, the integrated roof heating and side wall heaters can make the journey even more pleasant.

The only difference between the new Citaro hybrid and the vehicles in its series with pure combustion engines is the fact that up to three standing places are missing in the theoretical maximum capacity, due to the comparatively lightweight 156-kg hybrid components. In everyday operation, however, this is rarely an issue.

\* See comment \*\* on page 6.







## Safe. Safer. Mercedes-Benz.

For years, Mercedes-Benz has been pursuing the vision of accident-free driving. The integral safety concept developed for this purpose covers all phases of automotive safety – from safety when driving, through safety in hazardous situations, protection in the event of an accident, to the reduction of the impacts of collisions. Safety is also integrated in the new Citaro hybrid as standard. Even the vehicle's body protects the passengers in the case of side impact. In the event of a rear-end collision, the reinforced front part minimises the impact of the collision and protects the driver.

The optional equipment with long-life LED headlights ensures, for example, increased safety thanks to optimum driver visibility. They offer an especially good illumination of the road through precisely adjustable light cones. The light colour corresponds approximately to daylight and therefore the driver's eyes tire less quickly.

Numerous assistance systems also support the driver – for example, the anti-lock braking system (ABS) and the Electronic Stability Programme (ESP®), which Mercedes-Benz

deployed in buses as the world's first manufacturer. The acceleration skid control (ASR) also prevents the drive wheels from spinning. The Electropneumatic Brake System (EBS) also offers additional support in terms of safety. With it, the stopping distance is significantly reduced since the brakes respond more quickly and precisely. The Citaro G hybrid is equipped with an Articulation Turntable Controller (ATC). This advanced articulation angle control enables optimum steering behaviour during driving and regulates the hydraulic damping of the joint quickly and in accordance with the requirements.

The safety aspect was also taken into account in the development and implementation of the hybrid technology: the close to maintenance-free hybrid storage module is located outside the crash area – at the rear of the roof. High-voltage technology is dispensed with; through the use of the innovative 48-volt low-voltage technology, the new Citaro hybrid does not present an increased safety risk and, moreover, the low-voltage technology does not require a change in service and maintenance, which saves additional costs.

# Outstanding down to the smallest detail.

Since the invention of the automobile drive by Gottlieb Daimler and Carl Benz, our developers have always led new drive innovations to success. All around the globe, urban spaces are becoming increasingly dense; and we want to ensure mobility in metropolitan areas for future generations as well – with economical, clean and efficient vehicles such as the new Citaro hybrid.

## Electric engine

On the one hand, it supports the internal combustion engine at idling speed as well as at when starting. On the other hand, as a generator, it produces electrical energy during braking and coasting when the gas is withdrawn. The electric engine is water cooled, provides up to 14 kW and can provide a torque of up to 220 Nm.

## Inverter

Its electronics convert the electrical energy stored as direct current into alternating current to drive the electric engine. Its separate water cooling ensures high operational safety.

## Energy storage

With their high power density, the innovative Supercaps in capacitor technology save the electrical energy from and for the electric engine in a way that is very space-saving and safe. They are designed for continuous, fast changeover between charge and discharge in the typical city bus cycle – and they have a long service life as well.

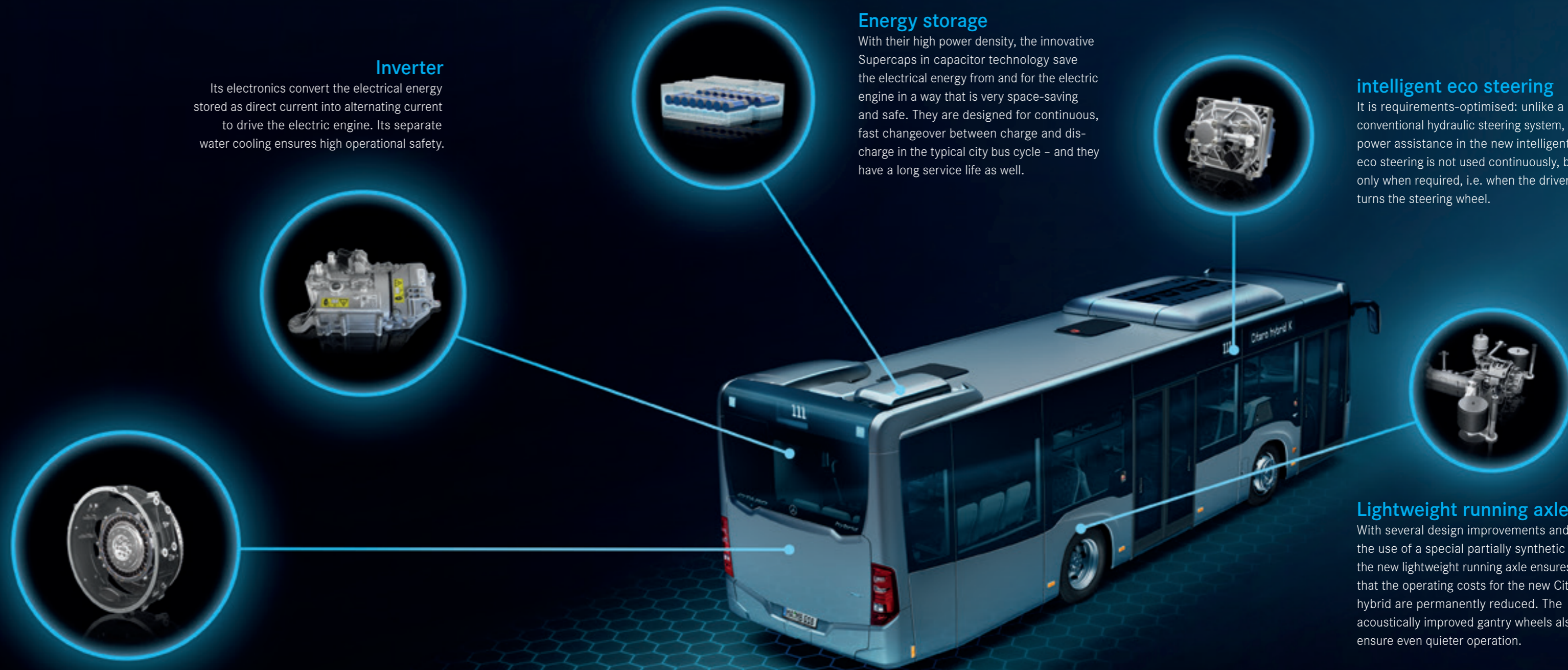
## intelligent eco steering

It is requirements-optimised: unlike a conventional hydraulic steering system, the power assistance in the new intelligent eco steering is not used continuously, but only when required, i.e. when the driver turns the steering wheel.

## Lightweight running axle\*

With several design improvements and the use of a special partially synthetic oil, the new lightweight running axle ensures that the operating costs for the new Citaro hybrid are permanently reduced. The acoustically improved gantry wheels also ensure even quieter operation.

\* Not in the case of Low Entry variants.





Citaro hybrid



MA MB G17

# Contact us today if you want to set standards for tomorrow.

## OMNIplus Service for your pit stop.

OMNIplus ensures you save time and money. Increase the operational readiness of your fleet with the comprehensive BusDepot Management service, or take advantage of the flexible BasicPlus and Premium Service Contracts for repair and maintenance. Choose from the various annual mileages, and combine these with the term that fits your company's requirements. OMNIplus is also your point of contact for original parts and accessories, as well as reconditioned parts with certified quality. Whether you need a Vbelt, blower or brake discs – OMNIplus has the right original part for your MercedesBenz bus or coach.

## OMNIplus Service for all routes.

OMNIplus makes sure that your fleet keeps moving – for example, with the most extensive bus-specific service network in Europe, with more than 600 authorised Service Points, and the advantageous ServiceCard. The reliable 24h SERVICE is further optimised by telediagnosics. With TireService and Germany-wide BusPool\*, OMNIplus is also your reliable partner in the event of breakdowns.

\* Applies only to Germany.

## It's safe to say you'll get the right training.

Our experienced OMNIplus training specialists offer practical solutions for current training, be it safety, environmental, vehicle or emergency training, the latest technical knowledge for repair and servicing work, or training for drivers or workshop staff. OMNIplus provides the right training for every requirement.

[www.omniplus.com](http://www.omniplus.com)

## The partner for your used vehicle.

BusStore, the brand for pre-owned vehicles in Europe, is your reliable partner for the sale of your bus. If you decide to buy a new MercedesBenz bus, you can trade in your used vehicle at a price in line with market conditions.\*\* Your Mercedes-Benz contact person will handle the details and process the entire transaction with BusStore.

[www.bus-store.com](http://www.bus-store.com)

## Efficiency and economy on the road with FleetBoard Bus.

Discover unexploited potential on your bus tours with the modular telematics system from Daimler FleetBoard. The bus-specific fleet management system encompasses numerous functions for optimising driving and procedures. FleetBoard therefore contributes to a reduction in vehicle wear and fuel consumption as well as lower costs, while enhancing your service quality.

[www.fleetboard.com](http://www.fleetboard.com)

## Financial services for buses and coaches.

The Mercedes-Benz Bank is the specialist for high-performance finance solutions\*\* for Mercedes-Benz coaches and buses. Because we know the industry and its requirements inside out, you can count on extremely competitive financing, leasing and insurance services. Our experts will advise you personally and develop highly attractive offers for you. For instance, over and above standard financing, we also offer seasonal rates or final instalment financing to enable you to remain financially flexible, or even a fully customised financing strategy to meet your individual needs.

[www.mercedes-benz-bank.de](http://www.mercedes-benz-bank.de)



**Important for you. Important for us. Technical data stored in the vehicle.**

Electronic vehicle components (e.g. Airbag Control Unit, Engine Control Unit) contain data storage for vehicle technical data, including but not limited to: Diagnostic Trouble Codes in the event of a malfunction; vehicle speed, braking force, or operating conditions of the Restraint System and Driver Assistance Systems in case of an accident (no audio and no video data recording). This data is either stored in volatile form e.g. Diagnostic Trouble Codes, over a short period of time (a few seconds only) e.g. in case of an accident, or in aggregated form e.g. for component load evaluation. The data can be read using interfaces connected to the vehicle. Trained technicians can process and utilise the data to diagnose and repair possible malfunctions. The manufacturer can use the data to analyse and improve vehicle functions. When requested by the customer, technical data can form the basis of additional optional services. In general, data from the vehicle is transferred to the manufacturer or a third party only where legally allowed, or based on a contractual customer consent in accordance with data protection laws. Further information regarding storage of vehicle technical data is provided in the vehicle owner's manual. Mercedes-Benz Buses and Coaches naturally handles customer data confidentially.

**About the information in this brochure.**

Information about the product is subject to change after this brochure went to press (09/17). The manufacturer reserves the right to make changes in the design or form, deviations in colour, and changes to the scope of supply during the delivery period, insofar as the changes or deviations are reasonable for the customer, having regard to the interests of the seller. The illustrations may also show accessories and special equipment optional extras that do not form part of the standard scope of supply. Colours may vary for typographical reasons.

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[www.mercedes-benz.com/omnibus](http://www.mercedes-benz.com/omnibus)

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