

# E-MOBILITY IN FACTS

A REFRESHING APPROACH TO LOOK  
AT SOME DRY NUMBERS.

% emission

PM 10: AQI ≈ 29

1300°C

# HOW A VISION BECOMES REALITY.

“Back to the future” would have been the perfect rallying cry for the BMW i team. To solve tomorrow’s mobility challenges, simply equipping a conventional car with an electric motor was not enough. The team decided to start from scratch and tailored every single detail with e-mobility in mind. Follow the seven steps to the car of the future and see why the BMW i3 is truly “born electric”.

## THE FUTURE STARTS HERE.

The lighter, the more future-proof. Our solution: CFRP (carbon-fibre reinforced plastic). BMW is the first automotive manufacturer to industrialise this composite.



Moses Lake, USA



## SUSTAINABLE FROM END TO END.

For us, recycling is a priority across the board. One example: When a battery reaches the end of its life cycle in a car, one can reuse it or recycle nearly all of its raw materials.



## THE REVOLUTION FALLS INTO PLACE.

At the Leipzig plant, the BMW i3 is assembled from all its components. Two-thirds of the CFRP structural elements – for instance, the side frames or the roof – are produced here.



## AS SECRET AS THE COCA-COLA FORMULA.

In the USA, carbon specialist SGL Automotive Carbon Fibers manufactures carbon fibres from acrylic threads in a strictly confidential process, passing them through several ovens at temperatures between 400 and 1300 °C.



## HANDIWORKS 3.0.

The joint venture SGL Automotive Carbon Fibers in Wackersdorf turns the carbon fibers into fabrics, using acrylic thread on gigantic sewing machines. The resulting fabric mats will become CFRP components for the BMW i3.

Munich

Landshut

Dingolfing

## IN GOOD SHAPE.

At the Landshut plant, the fabric mats are made into body components. As hard as steel – at only half the weight.

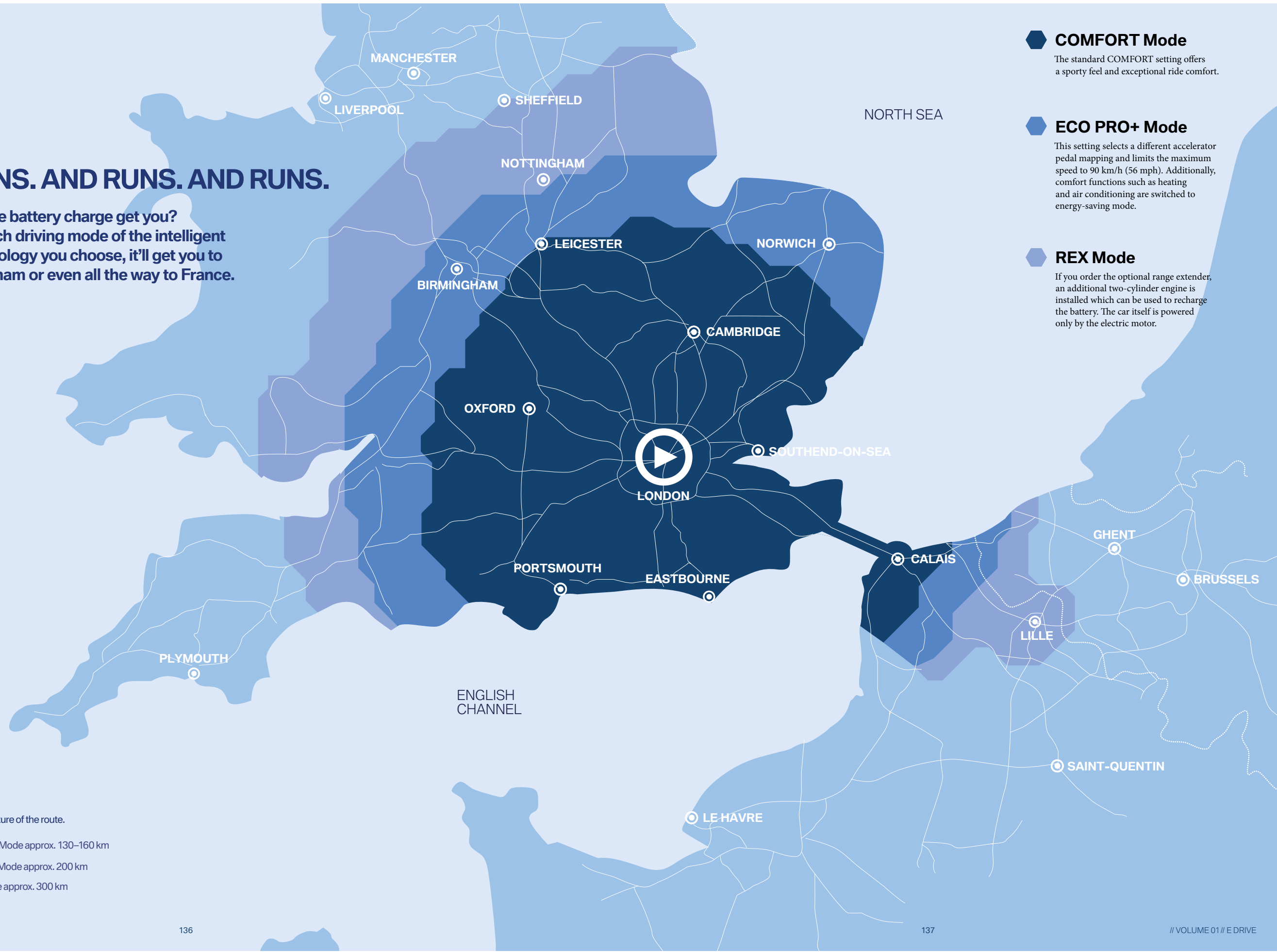


## THE HEART BEATS BAVARIAN.

In Dingolfing, 22 robots assemble battery cells into battery modules – each as large as a standard car battery. Later, the modules are assembled by hand to create a high-voltage battery: the 100% electric drive for the BMW i3.

# AND IT RUNS. AND RUNS. AND RUNS.

How far can a single battery charge get you? Depending on which driving mode of the intelligent BMW eDrive technology you choose, it'll get you to Leicester, Nottingham or even all the way to France.



**COMFORT Mode**  
The standard COMFORT setting offers a sporty feel and exceptional ride comfort.

**ECO PRO+ Mode**  
This setting selects a different accelerator pedal mapping and limits the maximum speed to 90 km/h (56 mph). Additionally, comfort functions such as heating and air conditioning are switched to energy-saving mode.

**REX Mode**  
If you order the optional range extender, an additional two-cylinder engine is installed which can be used to recharge the battery. The car itself is powered only by the electric motor.

**RANGE LEGEND**  
Range depends on the nature of the route.

- BMW i3 BEV COMFORT Mode approx. 130–160 km
- BMW i3 BEV ECO PRO+ Mode approx. 200 km
- BMW i3 BEV in REX Mode approx. 300 km

DESCRIBE THE BMW i3 IN ONE WORD.

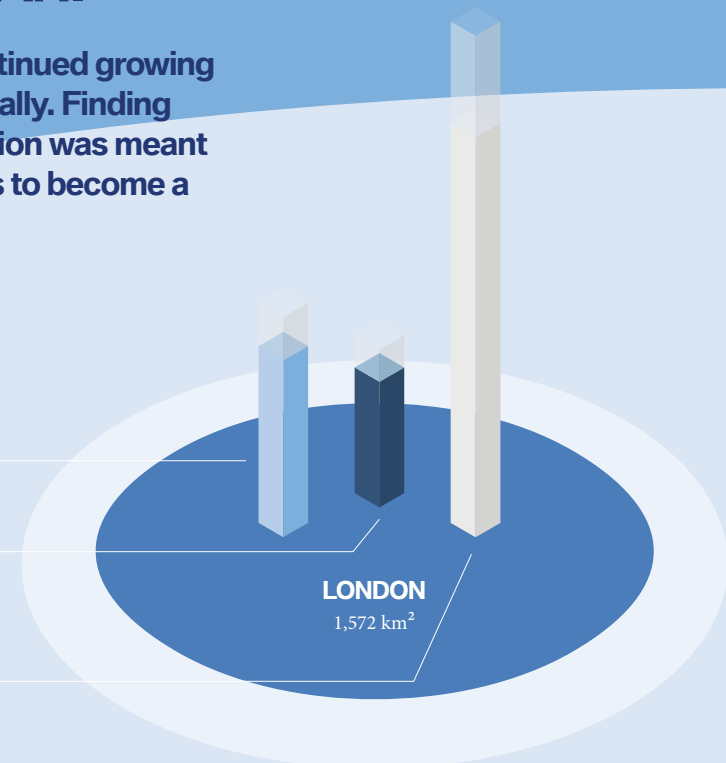
SLICK  
YES  
WOW  
DAMN  
FUTURISTIC  
DREAM  
WANT  
SUPER  
AMAZING  
SEXY  
MINNE

# HOW CITIES GROW. AND WHAT IT COULD MEAN.

Imagine if the populations of mega cities continued growing and the number of cars increased proportionally. Finding out how this would influence fine dust pollution was meant to be a simple maths exercise. The result was to become a huge motivation for launching the BMW i3.

**KEY**

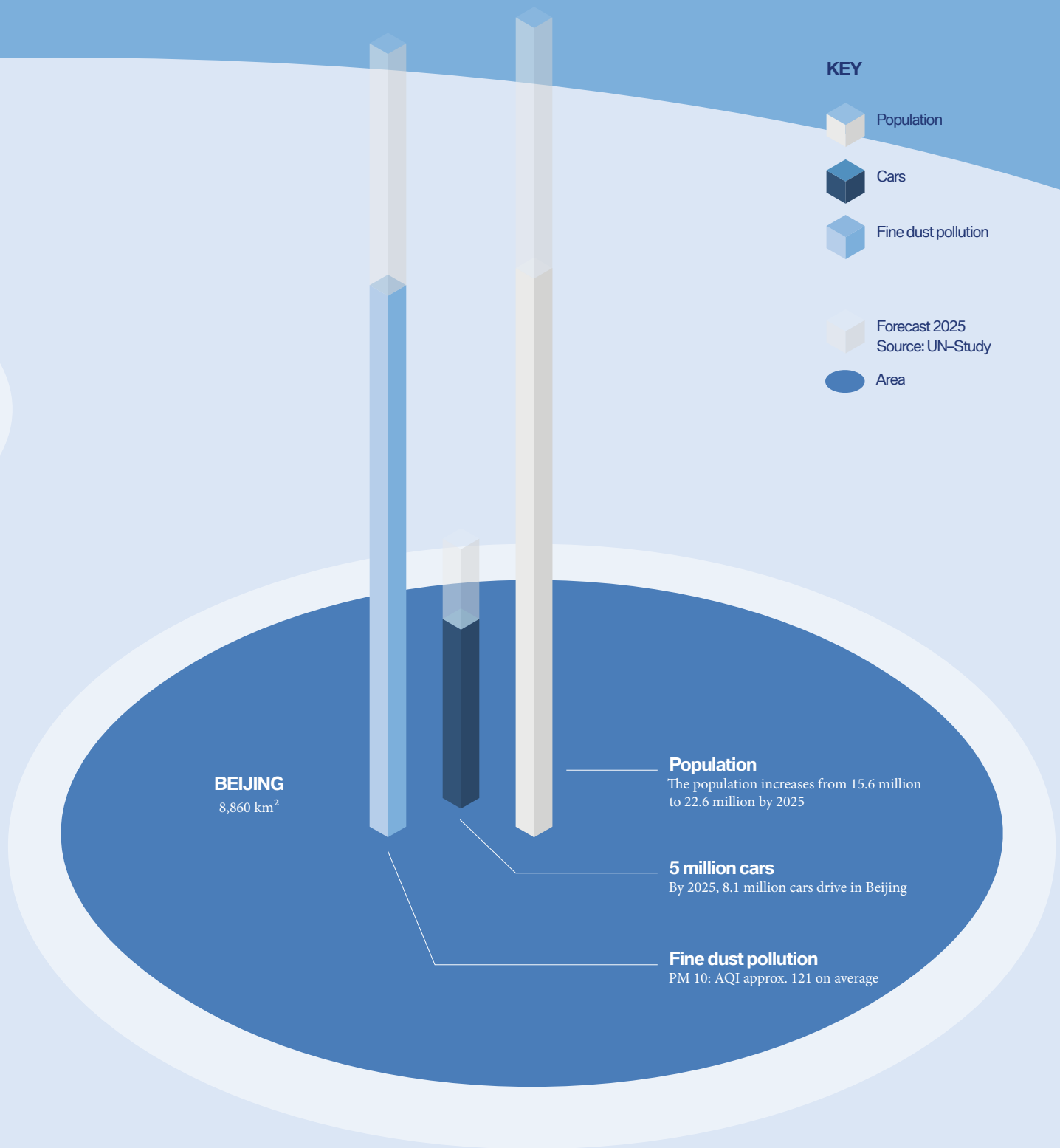
- Population
- Cars
- Fine dust pollution
- Forecast 2025
- Source: UN-Study
- Area



**Fine dust pollution**  
PM 10: AQI approx. 29 on average

**Approx. 2.6 million cars in 2025**  
Every third London citizen has a car today. No further increase expected until 2025 due to Congestion Charging

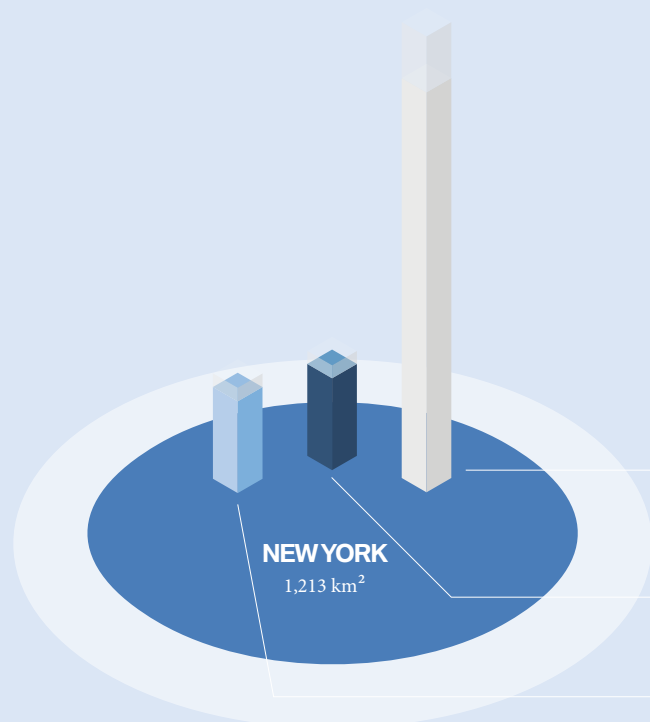
**Population**  
The population increases from 8.2 million to 10.3 million by 2025



**Population**  
The population increases from 15.6 million to 22.6 million by 2025

**5 million cars**  
By 2025, 8.1 million cars drive in Beijing

**Fine dust pollution**  
PM 10: AQI approx. 121 on average



**Population**  
The population increases from 8.2 million to 9.4 million by 2025

**1.9 million cars**  
23% of New Yorkers have a car

**Fine dust pollution**  
PM 10: AQI (Air Quality Index) approx. 21 on average

# FACTS

**50%**

lower CO<sub>2</sub> emissions than a highly efficient car from the same segment? Absolutely realistic for the BMW i3 – if driven with green electricity and calculated over its entire life cycle.

# 2

bath mats – that's the size of CFRP scrap produced by each BMW i3. A very small amount, unmatched in the automotive industry.

# FIGURES

**0.007 mm**

is how thick the carbon fibres are. Their energy-intensive production in the USA is driven by eco-friendly hydroelectric power.

# THAT

**04**

wind turbines generate all of the electricity needed to manufacture the BMW i3 – on site at the Leipzig plant.

# MAKE

**70%**

less water and only half the energy required for previous vehicles – that's what the Leipzig plant consumes to produce the BMW i3.

# THE

**O**

of the accessories in the BMW i3 are petroleum-based – even the ignition key mainly consists of castor seeds.

# WORLD

**100%**

renewable resources inside, too – e.g. door panels made from natural fibres, a dashboard made from certified European eucalyptus wood and leather that's tanned using olive leaves.

# SMILE

**2013**

is the year the BMW i3 will hit the streets. And we've already made sure that the battery's raw materials can be almost completely recycled at the end of its life cycle.