

THE FUTURE OF LIGHTWEIGHT MATERIAL TECHNOLOGY & BMW'S PROCUREMENT POLICY.





BMW LIGHTWEIGHT STRATEGY. AGENDA.

1	BMW Purchasing Organization in Asia
2	Future Perspective & Challenges
3	BMW i
4	Carbon Fibre Technology at BMW
5	Summary Message

BMW PURCHASING ORGANIZATION IN ASIA. BCS STRUCTURE.



- Founded in 2011 as a 100% BMW owned company located in Beijing.
- Target: Build up supplier network and research & development in Asia.
- Approximately 600 associates by end of 2014.
- Purchasing Volume China: € 7 billion

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FUTURE PERSPECTIVE & CHALLENGES. THE FUTURE OF MOBILITY.



FUTURE PERSPECTIVE & CHALLENGES. LEGAL LIMITS FOR CO₂ EMISSIONS WILL BE TIGHTENED CONTINUOUSLY.



Electrification plus Lightweight Technology is the only solution to achieve those targets!

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NEW BRAND BMW I COMPLEMENTS THE BMW BRAND PORTFOLIO.



Thrilling Performance.

Striking Technology.

Unrivaled Experience.

Innovate Driving Pleasure.

Focus on Engaging Aesthetics.

Boost Joy.

Visionary Mobility. Inspiring Design. Next Premium.

TWO PARALLEL PATHS OF INDIVIDUAL SUSTAINABILITY.



BMW APPROACH. BMW i – BORN ELECTRIC.

New brand BMW i



New vehicle concepts



Sustainable production



Connectivity



Electromobility infrastructure



Electromobility Services



IMPLEMENTATION OF REVOLUTIONARY AND SUSTAINABLE MATERIALS.

PET recyclate



Renewable primary products



Recycled aluminium



PRODUCTION OF BMW i MODELS IN PLANT LEIPZIG IS SETTING BENCHMARKS IN THE AUTOMOTIVE INDUSTRY.







BOTH BMW I VEHICLES ARE EXTREMELY LIGHT DUE TO THE LIFE DRIVE ARCHITECTURE AND CARBON FIBRE MATERIAL.



Combustion engine

THE BMW i3. THE PURPOSE-BUILT MEGACITY VEHICLE FOR URBAN MOBILITY.



 - 0-100 km/h in 7,2 s (like the MINI Cooper S).

- **0-60 km/h in 3,7s** (like the BMW M3).

THE BMW i3. THE PURPOSE-BUILT MEGACITY VEHICLE FOR URBAN MOBILITY.



- Weight (DIN) = 1195 kg = 250-550 kg less than conventional electric vehicles.
- Stable range of up to 160
 km and up to 300 km with the optional Range Extender.

THE BMW i8. THE MOST PROGRESSIVE SPORTS CAR IN THE WORLD.



THE BMW i8. THE MOST PROGRESSIVE SPORTS CAR IN THE WORLD.



Top Speed:
250 km/h
Top Speed Electric:
120 km/h
Unladen Weight:
1.485 kg

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CARBON FIBRE TECHNOLOGY.



TECHNOLOGY CARBON FIBRE. MORE THAN TEN YEARS OF BMW EXPERIENCE IN DEVELOPMENT AND PRODUCTION OF CARBON.



BMW IS LEADING IN LIGHTWEIGHT TECHNOLOGIES. RECENT & NEW CF MODELS 2014 / 2015.





1520kg (-85kg) ^(*) 1497kg (-83kg) ^(*)

1195kg ^(*)

To be announced ^(*)



1485kg (*)

BMW i3. INHOUSE CARBON FIBRE PROCESS CHAIN.



BMW i. SUSTAINABLE PRODUCTION.



Hydro-electric power

supplies the energy used for the Carbon Fibre production in Moses Lake.

Wind power

supplies energy for the Carbon Fibre fabrication in the Leipzig, Landshut, and Wackersdorf plants.



BMW i3. CARBON FIBRE RECYCLING AND REUSE.



Dry waste material

- Roving/ Fabric
- Stack
- Preform waste

Fibre preparation

- Punching / cutting of the material
- Separating the fabric into fibres

Fleece production

- Generating maximum fibre orientation
- Fixation / stabilization

Multi-layer fleece

 Processing of the fleece to a multilayer complex

Return of the recycled carbon fibres into carbon fibre components

THE NEXT GENERATION. BMW 7 SERIES.



THE NEXT GENERATION. BMW 7 SERIES.



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SUMMARY & MESSAGE.

- BMW is leading in development, industrialization and application of lightweight technologies.
- BMW vehicles already contain a high percentage of advanced materials.
- The effect of lightweight on CO² reduction for BMW is substantial in order to achieve future Challenges.
- Carbon Fibre Technology for Lightweight Strategy opens the door for new suppliers.

THANK YOU VERY MUCH FOR YOUR ATTENTION.

