



11 July 2013, LowCVP Annual Conference, London.

# BMW i: ELECTROMOBILITY IS MORE THAN ZERO EMISSION.

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**BMW**  
GROUP



Rolls-Royce  
Motor Cars Limited

# THE FUTURE OF MOBILITY.



## Environment

Climate change and the subsequent effects



## Urbanisation

By 2030, over 60 % of world population will live in cities



## Politics and Regulations

CO2 - and fleet regulations,  
Restrictions on imports

## DRIVING FACTORS

## Economics

Shortage of resources, increase in the price of fossil fuels



## Culture

Sustainable mobility as part of a modern urban lifestyle;  
assumption of social responsibility



## Customer Expectations

Changing values



## THE BMW GROUP STRATEGY.

The BMW Group is the world's leading provider of premium products and premium services for individual mobility.



# MANAGING THE TECHNOLOGICAL CHANGE TO REMAIN FUTURE PROOF.

## Evolution

Efficient combustion engines  
Innovative technologies

## Revolution

Alternative drive trains  
Mobility services

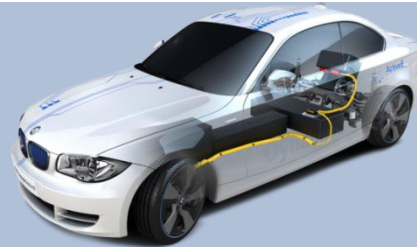


# ELECTRIC DRIVE TRAIN: FROM THE MINI E TO THE BMW i3. THREE-STEP ROADMAP LEADING TO SERIES INTRODUCTION.

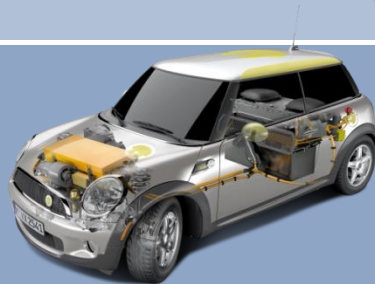
**BMW i3 (Megacity Vehicle)**  
“Purpose Design Electric Vehicle”.



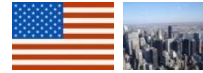
**BMW Active E**  
“Conversion Electric Vehicle”.



**MINI E**  
The first step.



# OVERVIEW OF MINI E RESEARCH PROJECTS WITH LEADING PARTNERS WORLDWIDE.



## Government



Agence de l'Environnement et de la Maîtrise de l'Énergie



NDRC MOST MIIT

## Scientific monitoring



China Automotive Technology and Research Center

## Field trial

90 Units,  
66 Private / 24 Fleet



40 Units,  
20 Private / 20 Fleet



50 Units,  
25 Private / 25 Fleet



450 Units,  
246 Private / 204 Fleet



20 Units since 03/2011



50 Units since 03/2011.



## Infrastructure and energy



Numerous energy partners

Numerous energy partners



# MINI E AND BMW ActiveE SERVE AS KEY LEARNING PROJECTS FOR BMW i.

## MINI E (2009-2012)



16 million kilometers  
~600 vehicles

**High satisfaction of mobility needs.**

**Range was rarely the limiting factor.**

**Most users charge 2-3 times per week and charging events decreased during usage.**

## BMW ActiveE (2011-2014)



5 million kilometers  
~1.000 vehicles

**Adequate vehicle.**

**High interest of purchase.**

**Joy of driving and one-pedal-feeling.**

## BMW i3 and BMW i8

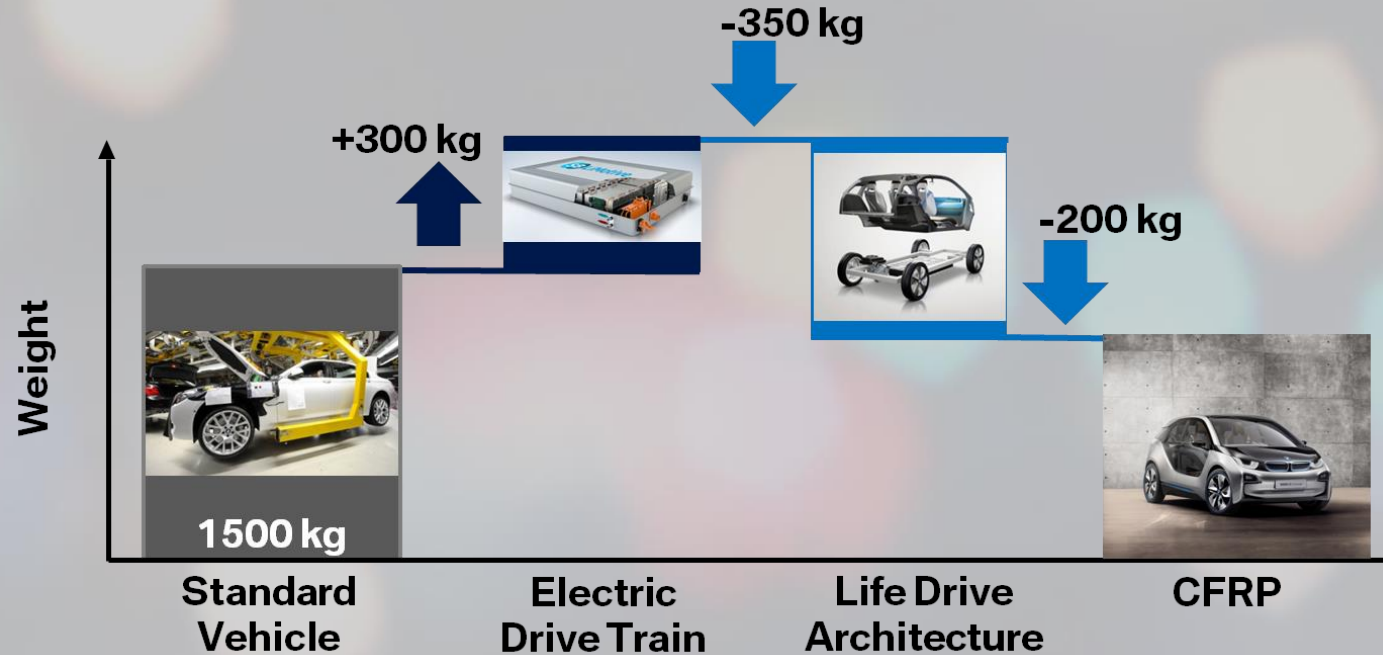


**BMW i is more than just an electric car.**

**BMW i offers 360° ELECTRIC.**

**BMW i delivers joy of driving.**

# AN EXTREME LIGHTWEIGHT VEHICLE DUE TO ITS LIFEDRIVE ARCHITECTURE AND CFRP MATERIALS.





# PURPOSE-BUILT DESIGN – THE LIFEDRIVE CONCEPT.

Life-Modul with CFRP passenger compartment



Drive Modul



Body surfaces

Lithium-Ion Battery

Electric motor with Power Electronics

Life-Modul with CFRP passenger compartment



Drive Modul



Body surfaces

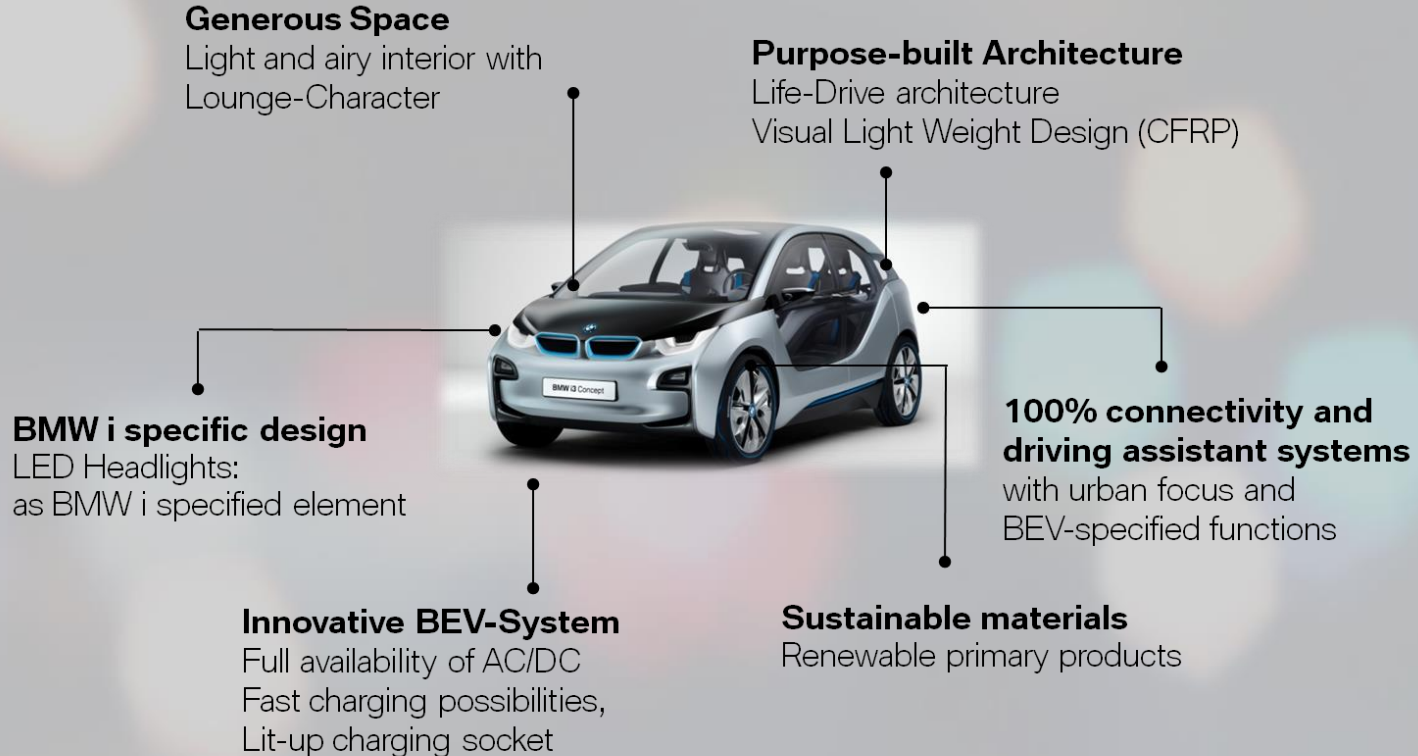
Lithium-Ion Battery

Fuel tank

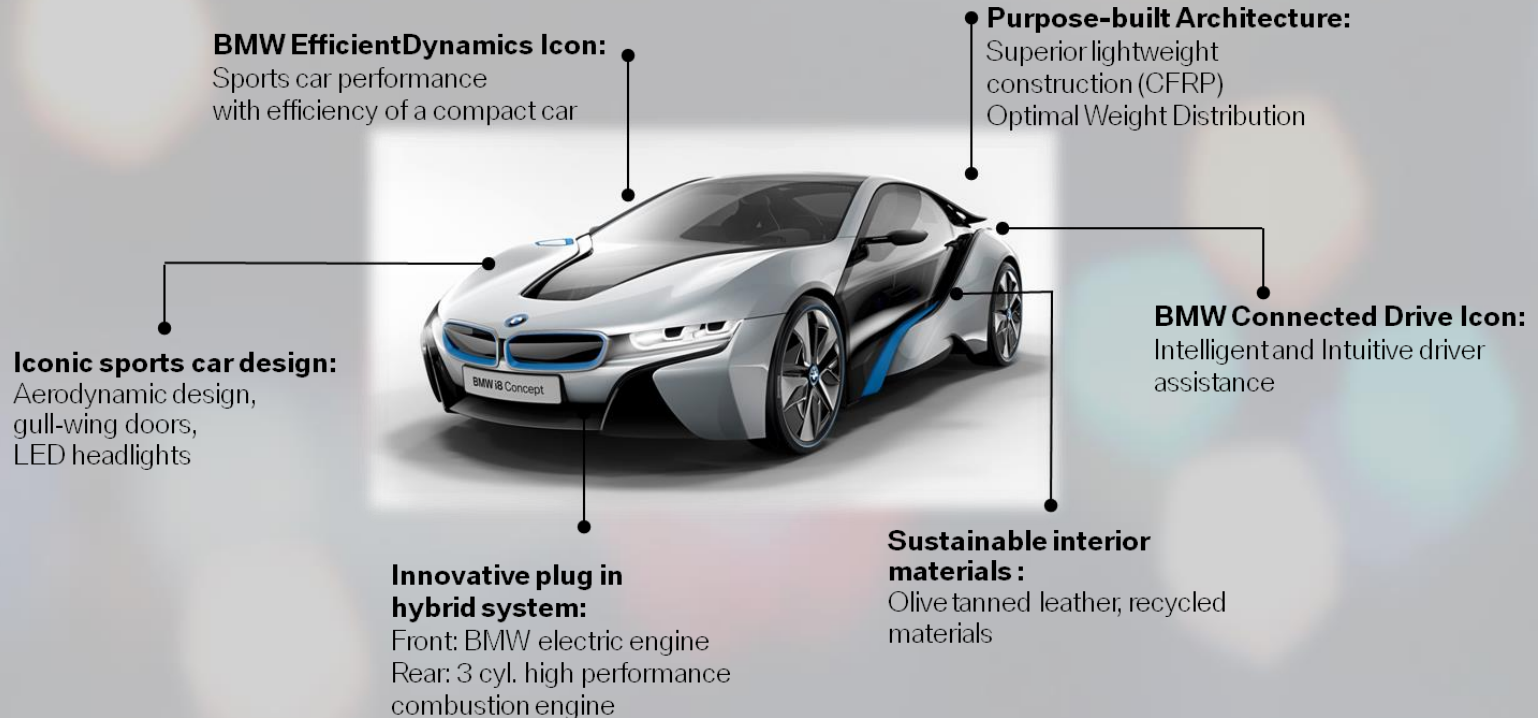
Electric motor with Power Electronics

Internal combustion engine with transmission

# THE BMW i3 – THE MAIN USP<sub>s</sub> AS A CLEAR DIFFERENTIATION.



# THE BMW i8 – THE MAIN USP<sub>s</sub> AS A CLEAR DIFFERENTIATION.



# BMW i3 CONCEPT COUPÉ.



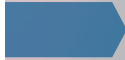
# 25% OF THE WEIGHT OF THERMOPLASTICS USED IS REPLACED BY RECYCLED/RENEWABLE RAW MATERIALS.

## Recycled materials



Savings  
80 kg CO<sub>2e</sub>

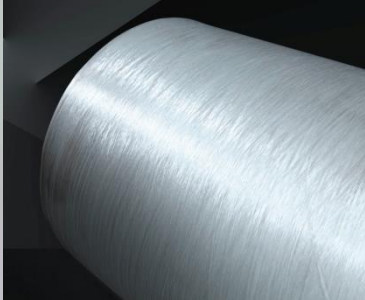
## Renewable raw materials



Savings  
40 kg CO<sub>2e</sub>

# 50% LESS CO<sub>2</sub> (EQUIVALENT) EMISSIONS IN BMW i CFRP PRODUCTION COMPARED TO CONVENTIONAL CFPR PRODUCTION.

Sourcing



Precursor

Joint venture SGL ACF



Moses Lake  
Carbon fibre



Wackersdorf  
Fabric

BMW  
production network



Landshut and Leipzig  
CFRP components

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

– 50% energy



– 70% water



100%  
renewable energy



# BMW i WILL PROVIDE FLEXIBLE MOBILITY.

## ASSISTANCE SERVICES

Provide Assurance



## HOME CHARGING

Convenient charging at home



360° ELECTRIC.

## FLEXIBLE MOBILITY

A new mobile lifestyle



## PUBLIC CHARGING

On the road





# VERY POSITIVE RESULTS FROM THE TESTDRIVES WITH JOURNALISTS IN ARJEPLOG.



**Auto  
Bild**

„ The BMW i3 makes everything differently and many things better. He is as quiet as a cat on a mantelpiece, stiff as cast iron, precise on the track like a rack railway and weighs without the batteries even below 1.000 kg. All that makes the BMW i3 an automobile revolution.”



„BMW’s pioneering i3 electric car is one of the most exciting cars of 2013.”

**car**  
THE WORLD'S BEST CAR MAGAZINE



„Its (BMW i3) carbon fiber body is wrapped in layers of electronic services and smartphone apps designed to make life simpler and save time for the owner. ”

The World’s Most Admired Companies **FORTUNE**

# BMW i AND MOBILITY SERVICES.



# BMW iVENTURES. MOBILITY SERVICES.

## DriveNow



Premium car sharing  
independent of hire points

## MyCityWay



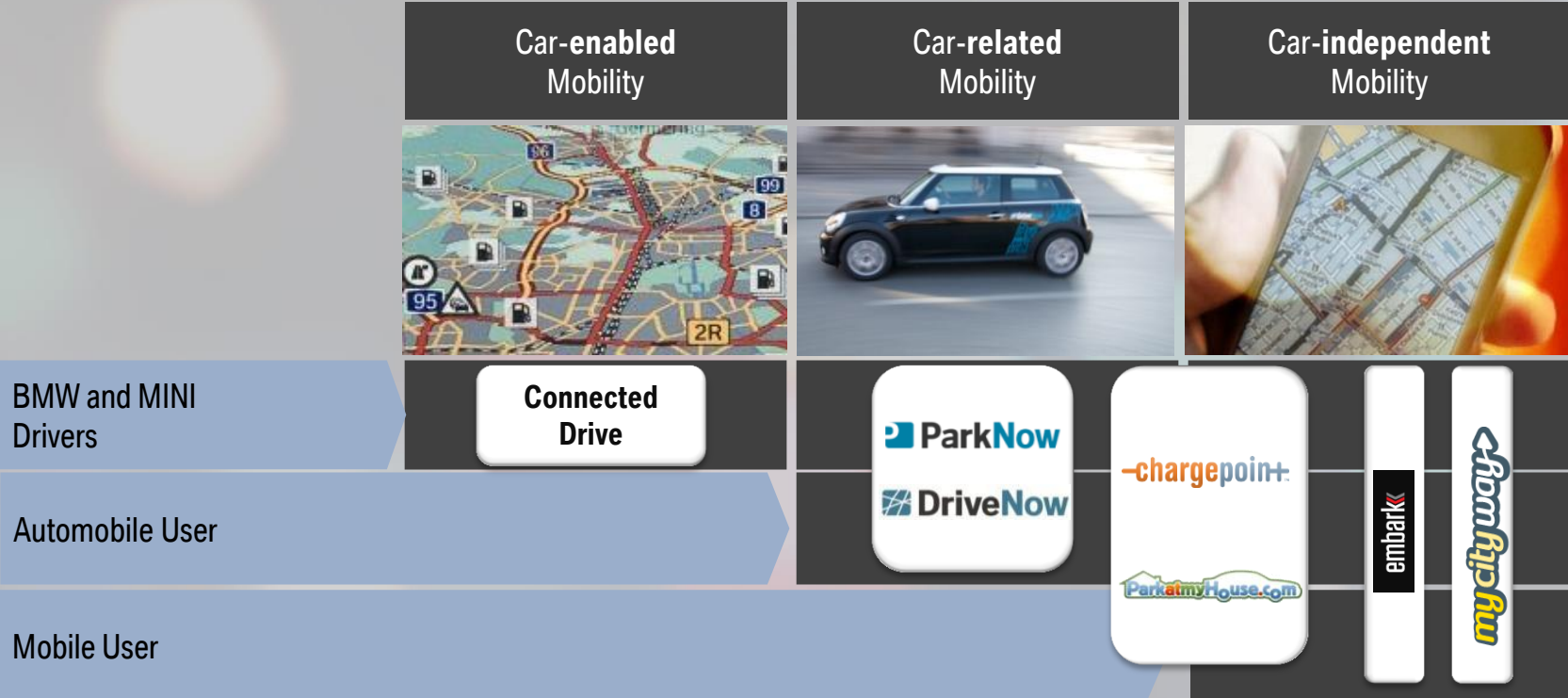
Local real time information  
on cities

## ParkatmyHouse



Marketplace for parking

# BMW i A SUSTAINABLE MOBILITY PORTFOLIO COVERS CAR USER AND NON CAR USER, FOCUSING ON URBAN MOBILITY.



**E-MOBILITY IS FAR MORE THAN JUST ZERO EMISSION.**



THANK YOU VERY MUCH.

