

BMW SUSTAINABILITY

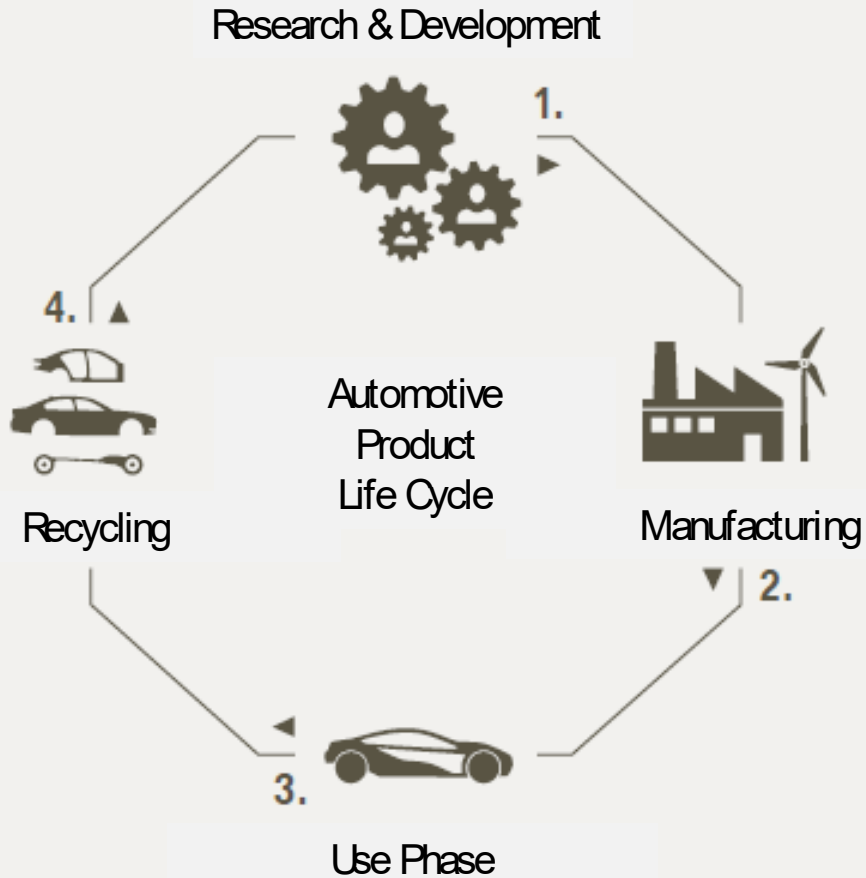
RECYCLING AND TIRES



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BMW Manufacturing Co. LLC
Plant Spartanburg
December 4, 2019



OVERVIEW



Sustainable Mobility

Plant Spartanburg

Life Cycle Assessment

Waste and Recycling Management BMW
Group

GLOBAL TRENDS DRIVING THE FUTURE OF SUSTAINABLE MOBILITY.



ENVIRONMENT

Climate change and the subsequent effects



Urbanization

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

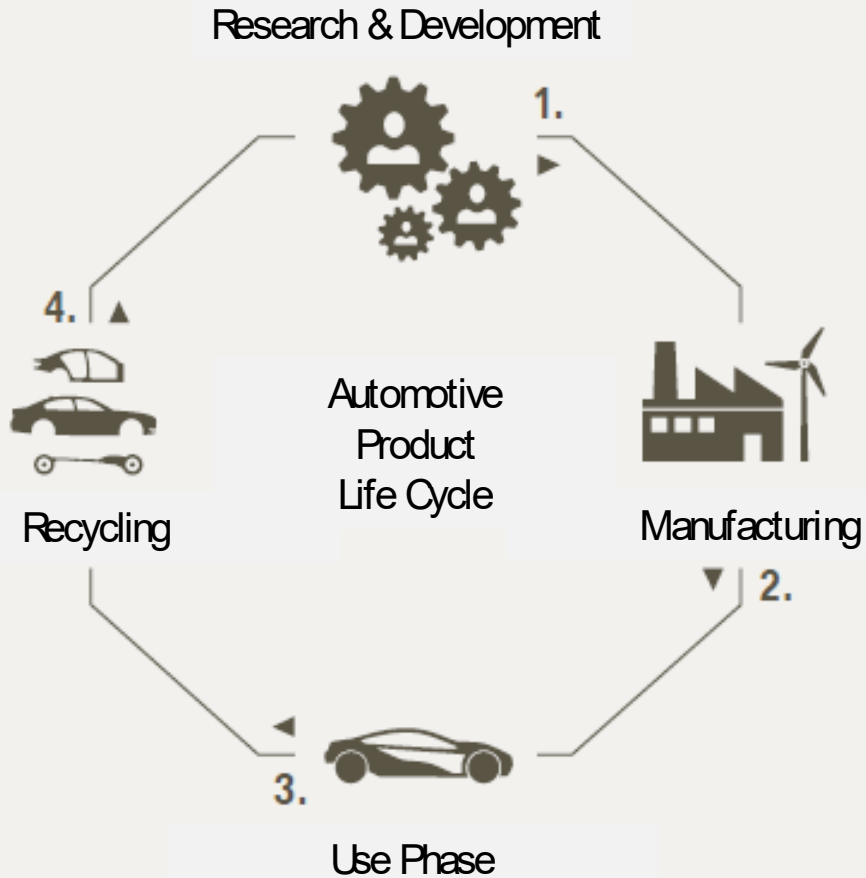


Customer Expectations

Changing values



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From the beginning to the Present



1.2 MILLION SQUARE FEET



600 JOBS ONSITE



**FIRST BMW PRODUCED IN
NORTH AMERICA (BMW 318i)**



7 MILLION SQUARE FEET



11,000 JOBS ONSITE



1400 VEHICLES/DAY

**WE ARE THE LEADING MANUFACTURER OF PREMIUM AUTOMOBILES.
BUILDING QUALITY FOR THE WORLD.**



BMW X7



BMW X6



BMW X6 M



BMW X5



BMW X5 M



BMW X4



BMW X4 M



BMW X3



BMW X3 M

**BMW
PRODUCTION**  **NEXT**

RESOURCE EFFICIENCY. THE BMW GROUP'S CLEAN PRODUCTION PHILOSOPHY.

Certified Environmental Management Systems (ISO 14001/EMAS) at all Sites
Worldwide

Reducing Solvent Emissions



Reducing water usage and
process wastewater



Saving energy and
reducing CO₂ emissions



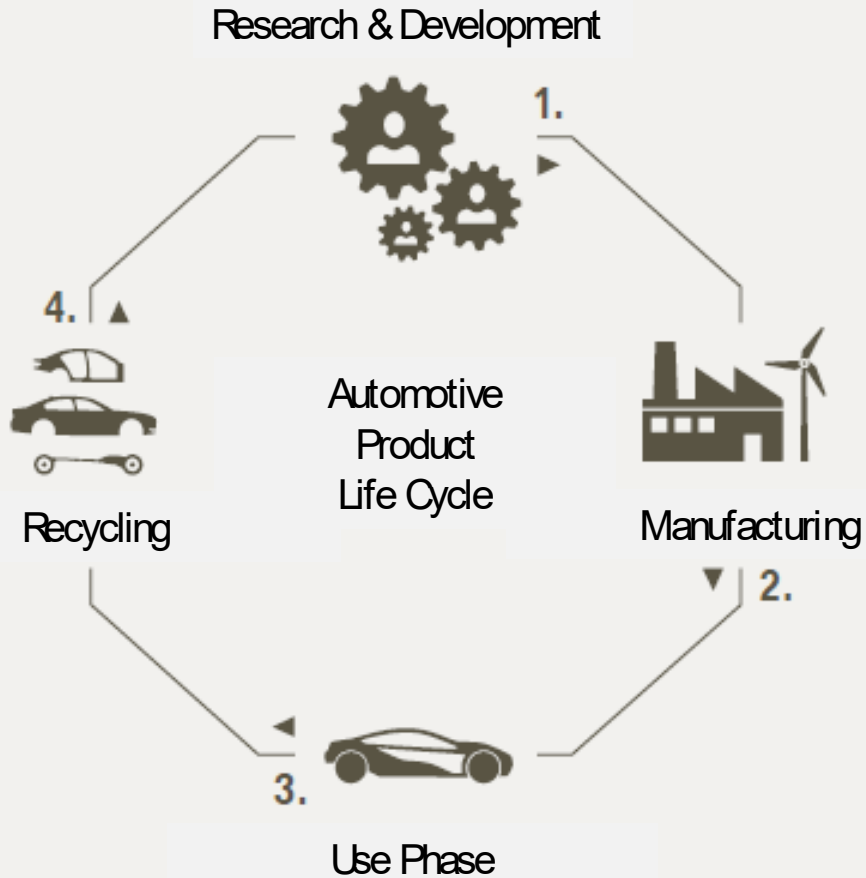
Avoiding or recycling
waste



Targeted management of environmental performance:

- Target: 45% reduction in emissions/resource usage from 2006-2020
- Average improvement in resource efficiency 2006 - 2019: 41%

OVERVIEW



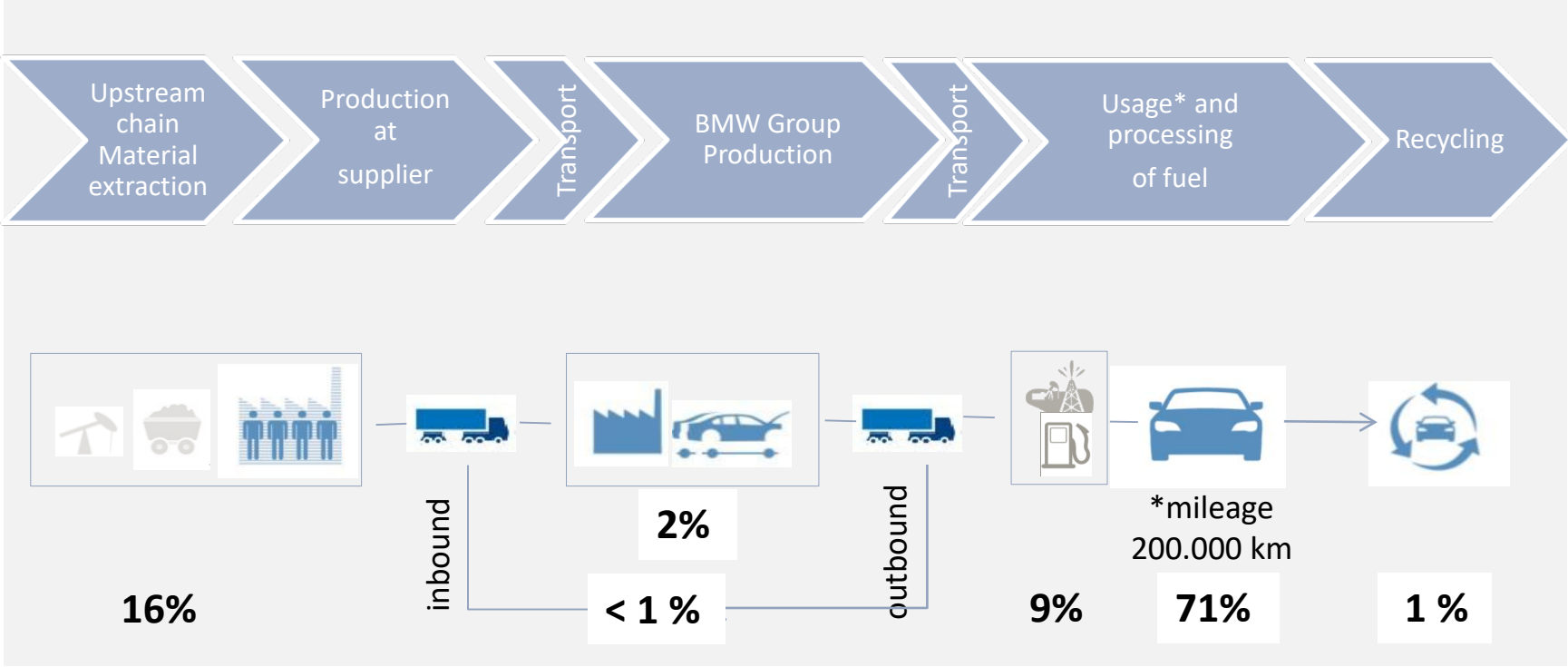
Sustainable Mobility

Production Network BMW Group

Life Cycle Assessment

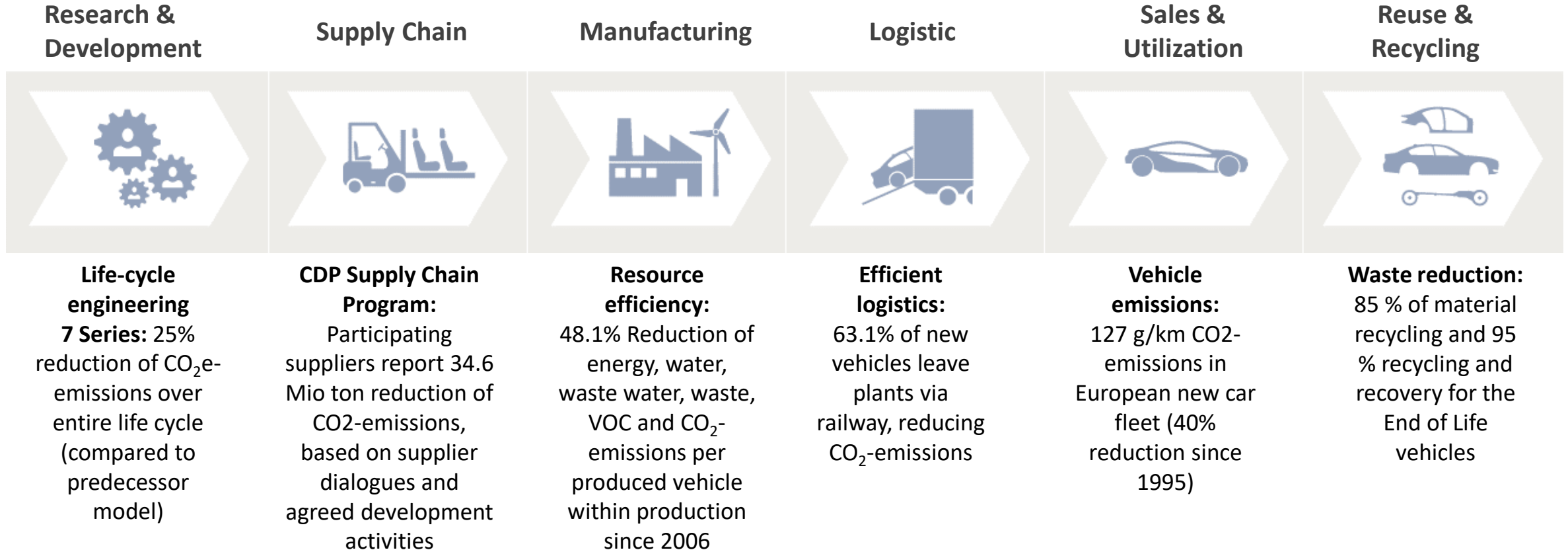
Waste and Recycling Management BMW Group

BMW GROUP LIFE CYCLE ASSESSMENT

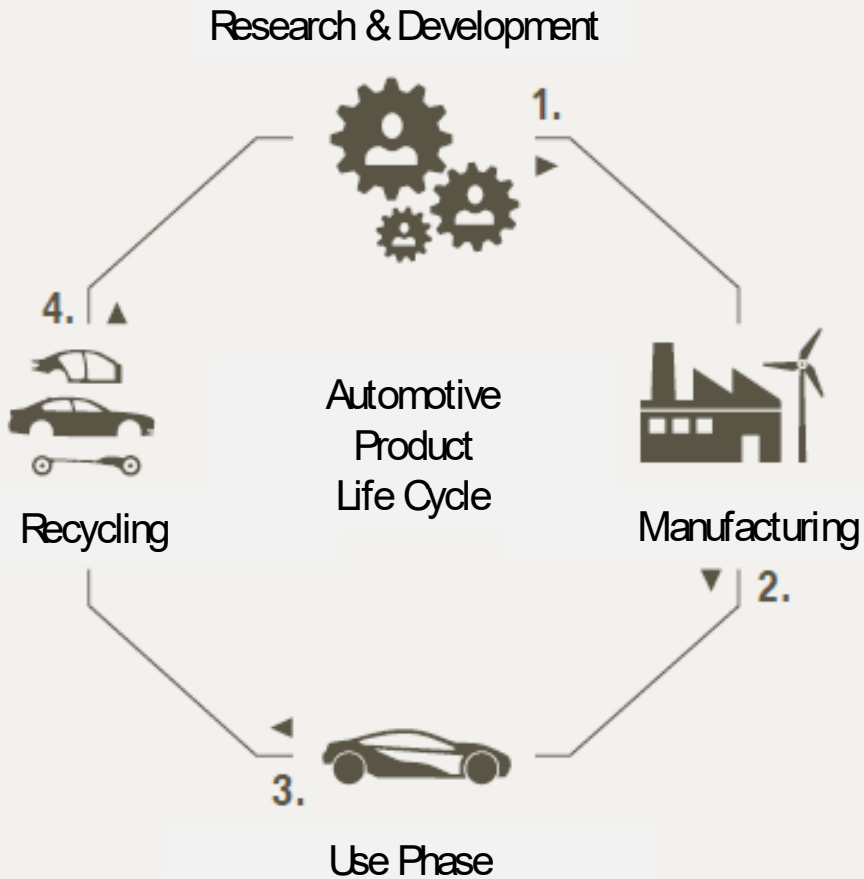


Example
Global warming potential (CO₂-equivalent)
BMW 3 series

BMW GROUP SUSTAINABILITY ACROSS THE VALUE CHAIN.



OVERVIEW.



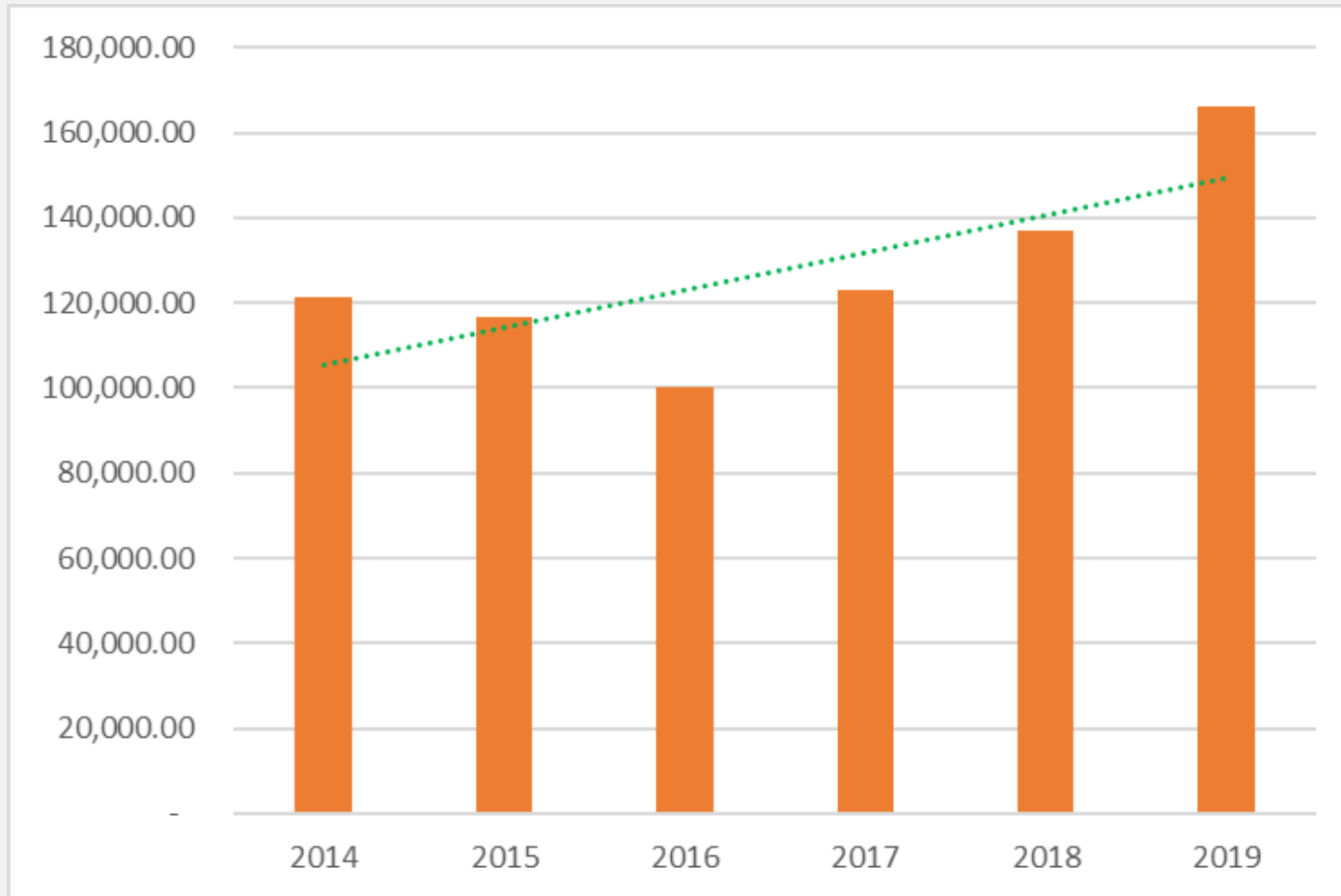
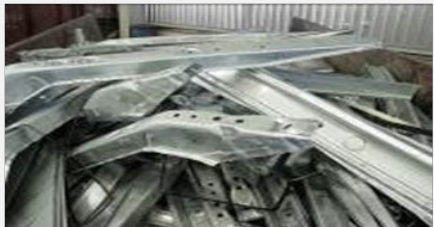
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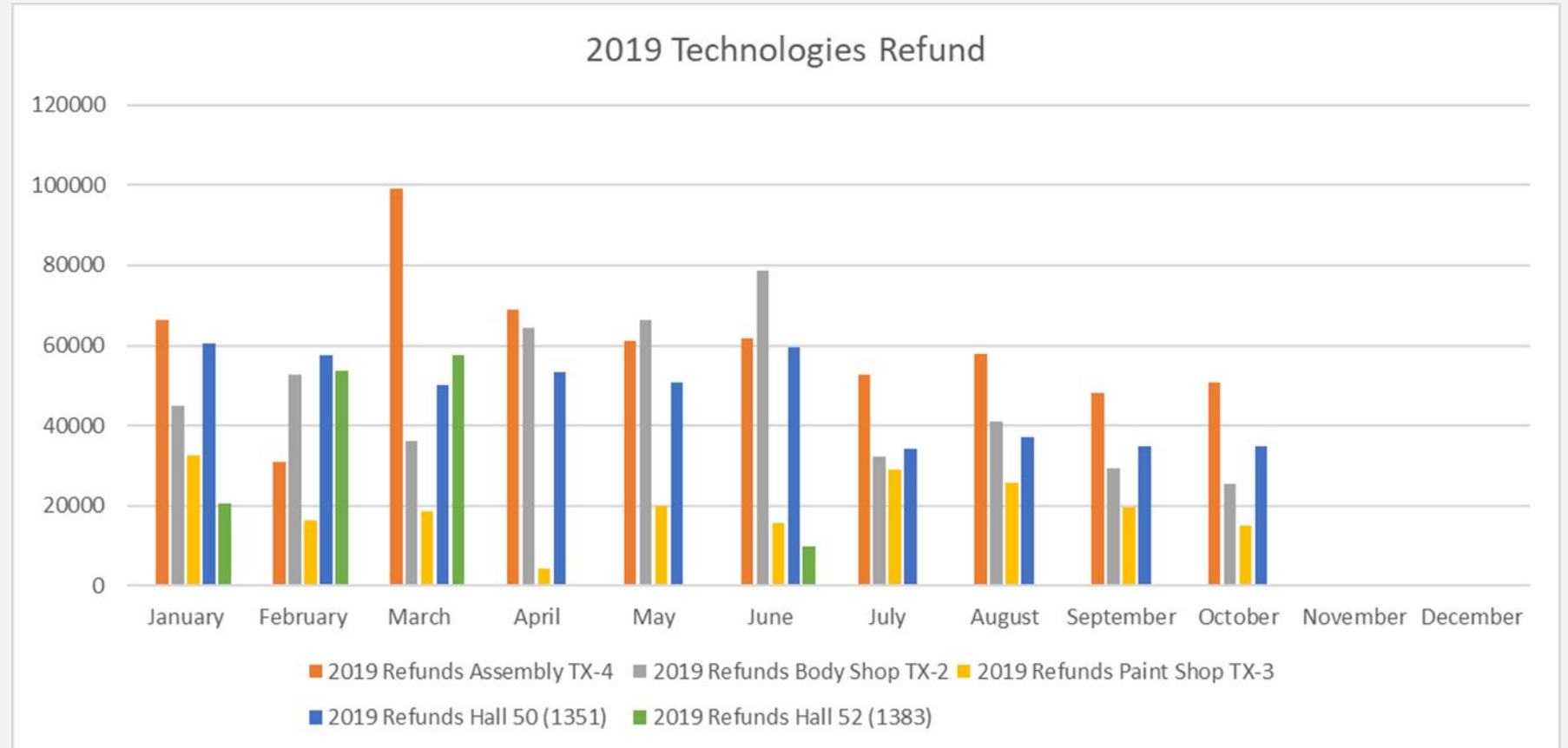
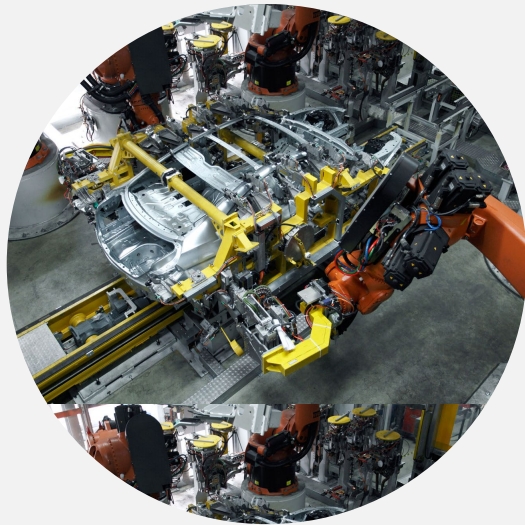
Waste and Recycling: Plant Spartanburg

PLANT SPARTANBURG RECYCLING TREND



Recycling measured in Metric tons for reporting to Munich

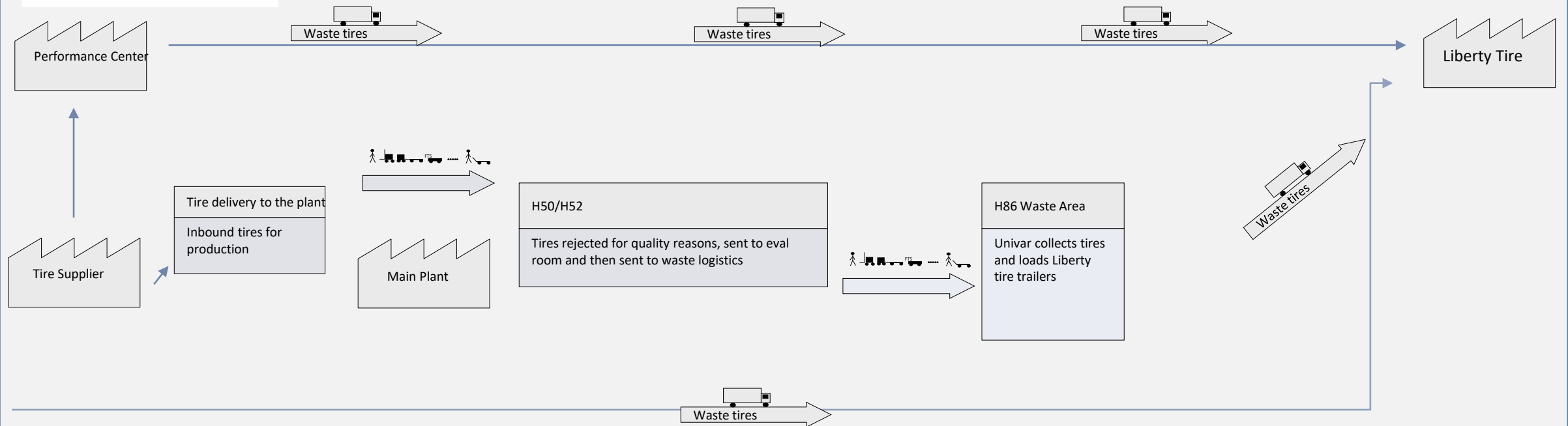
PLANT SPARTANBURG RECYCLING PAYS



Recycling includes, paper, cardboard, plastic and metal

PLANT SPARTANBURG TIRE RECYCLING

Waste Stream Example



Key factors for recycling tires;

- Reliable recycling facility
- Stable logistics chain
- Pure waste stream, no contamination
- Proper security measures before leaving plant
- Supporting documentation for reporting
- ~1-2 trailers every 4 to 6 weeks shipped

CURRENT USE OF RECYCLED MATERIAL; “CIRCULAR ECONOMY”



Advantages:

- Saving raw materials
- Lower Material Costs
- Meeting stakeholder as well as customer expectations
- Maintaining Environmental Sustainability goals

THANK YOU FOR YOUR ATTENTION

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