



2019

SUSTAINABILITY REPORT

BMW Brilliance Automotive Ltd.



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CEO PREFACE

GROWTH THROUGH TRANSFORMATION

In 2019, as the People's Republic of China celebrated 70 years since its founding, we could reflect on the remarkable transformation that the country has achieved in recent years, as China has transitioned from high-speed growth to high-quality growth. BMW Brilliance is proud to have played its part in contributing to China's manufacturing upgrade and the development of Northeast China as a centre of innovation and high-end manufacturing for the automotive industry.

True high-quality growth is sustainable growth. This is why we are focused more than ever on how our actions will transform the economic, social and environmental landscape of tomorrow. Our BMW vision is to be the leading sustainable provider of premium individual mobility, supported by the sustainability commitments that guide our work. We tackle the challenges of climate change and environmental protection with effective actions, in order to make a sustainable future possible. We are reducing emissions by greening our vehicle fleet and our production, we are increasing the transparency and accountability of our value chain, and we are engaging more deeply with communities to address real social needs. BMW Brilliance continued to grow in 2019, with our sales volume up 17.1% despite market trend that reflect a slowdown of demand in China's automotive market. We attribute this success to our ongoing transformation based on a spirit of cross-cultural collaboration, continued investment in new technology and deeper localisation.

The transformation of our product portfolio is in line with our sustainability commitments, as we offer more New Energy Vehicles and build up a complete E-mobility ecosystem to support wider usage. We are producing our own High-Voltage Battery packs and making



Dr. Johann Wieland
President and CEO
BMW Brilliance Automotive Ltd.

"At BMW Brilliance, we believe that a business can only be successful if it creates a sustainable future, if it makes a positive impact on the world."

charging services easier and more convenient for our customers. In 2020, we will accelerate our E-mobility plans with the opening of the second phase of our High-Voltage Battery Centre, which will produce BMW fifth-generation battery for the new, fully-electric BMW iX3. The BMW iX3 will be manufactured exclusively in Shenyang for the world market, as we upgrade our strategy to "In China, For China and For the World".

Our production methods stand for high-quality-transformation, so BMW Brilliance has become a role model for implementing smart and green manufacturing in China, applying Industry 4.0 technologies and processes in ways that improve quality and boost productivity. In 2019, we became the first automaker in the world with 5G connectivity at our plants, giving us a unique opportunity to test new innovations.

In our Shenyang production base, we switched to 100% renewable electricity by end of 2019, including the generation of solar power

electricity, and the purchase of wind power electricity and International Renewable Energy Certificates (I-RECs). Our major Tiexi New Plant development and Plant Dadong extension will take full advantage of our know-how in smart and green production, adopting the latest digital technologies and best practices that we have refined over the years.

Understanding and delighting our customer is the essence of high-quality, and the essence of our business. This increasingly means providing digital means of customer support and engagement as part of a sustainable customer relationship. This extends beyond the point of sale. Our new subsidiary company, LingYue, is getting us to this next level. It is spearheading our customer-centric digital transformation and providing new digital solutions as part of a premium brand experience.

We understand, sustainability goes beyond legal-entity borders. We feel responsible for our partner-network, and this attitude shapes our sourcing and supplier strategy. Establishing direct relationships with critical raw material suppliers, for example in battery production, enables us to mitigate social and environmental risks. We are committed to helping our local partners become world-class, which clearly includes a strong focus on sustainability. Only sustainable, high-quality growth is long-term growth.

And we understand, transformation has to happen on line in the workforce. During 2019, our workforce grew by 4.8% to nearly 20,000 employees, with lower attrition and improved employee satisfaction. We are increasingly focused on providing training and development that equips our workforce with the skills and flexibility that will enable them to master the automotive transformation.

Finally, the transformation of our Corporate Social Responsibility approach is continuing, with a focus on addressing the real social needs of the country, using our resources and strengths to contribute in the best way possible. We build on 15 years of CSR experience, deep knowledge, and our strong brand influence, to find unique ways to create shared value. Our flagship programmes are consistent and always expanding, and we reached more than two million beneficiaries in 2019 with the use of innovative platforms to engage and empower more of our stakeholders.

The pandemic crisis in 2020 exposed the whole world to enormous social and economic uncertainty. Solidarity and collaboration did

suffer. This demonstrates the tremendous importance of Corporate Social Responsibility. It is more important in times like this, it is more important than ever. The COVID-19 pandemic can only be successfully overcome through solidarity, collaboration, and courage.

At BMW Brilliance, our spirit of cross-cultural collaboration and mutual support have helped us rise to the challenge, restart our operations and support the medical staff on the front-lines. We all have a role to play in economic recovery and building resilience, and BMW Brilliance will go above and beyond to contribute.

"The COVID-19 pandemic demonstrates the tremendous importance of Corporate Social Responsibility. It is more important than ever. The COVID-19 pandemic can only be successfully overcome through solidarity, collaboration, and courage."



Dr. Johann Wieland

President and CEO
BMW Brilliance Automotive Ltd.

OUR POINT OF VIEW

MESSAGE FROM SENIOR VICE PRESIDENTS



Franz Decker

Senior Vice President
Technology and Manufacturing

BMW Brilliance's production volume in 2019 increased by 9.1% to 534,990 vehicles, as we continue to increase our local production capacity for the China market. Our "In China, For China and For the World" strategy will become reality in 2020, with the export of the all-new fully-electric BMW iX3 to the world market. We successfully established 5G wireless connectivity at our three manufacturing plants and have begun applying the technology to test digital innovations that have the potential to further increase our efficiency, quality and flexibility in production. Our advanced logistics systems increasingly utilise low-carbon and multi-modal options for inbound, outbound, and aftersales transport. In 2019, BMW Brilliance was ranked #1 in Automotive Enterprise Green Development Index and retained its National Green Plant status in China.



Wang Jun

Senior Vice President
Finance

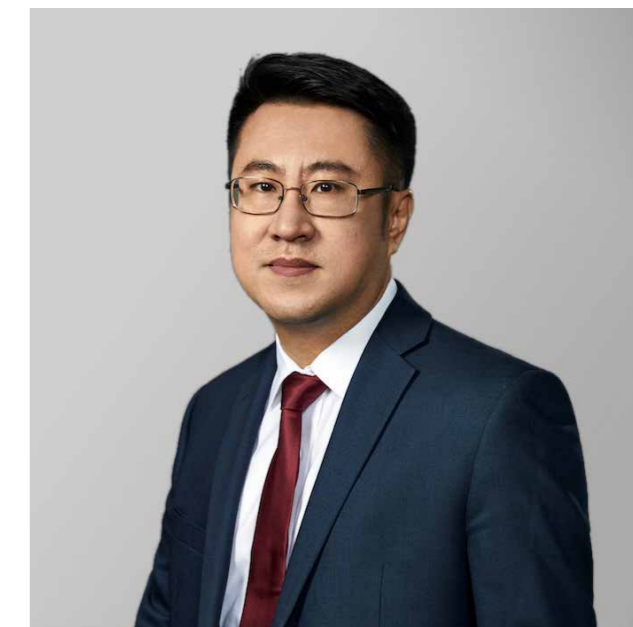
At BMW Brilliance, we prioritise investments in our plants, our people, and our community. We made a contribution of 35 billion RMB in tax in 2019, and we also support the local economy through the creation of jobs, infrastructure, and the development of our value chain. The extension projects recently started at Plant Dadong and the Tiexi New Plant Project will accelerate local community development, and we are preparing talent resources for our expanded operations as we produce the BMW iX3 for the world market. We have built up the local supplier base in the surrounding area, reducing our environmental footprint and investing in local economies. We also made a huge leap forward in digital transformation with the establishment of the China Platform Architecture, which significantly enhanced our operation efficiency, data quality and platform compatibility for various application scenarios.



Sean Green

Senior Vice President
Sales and Marketing

Our sales showed a growth of 17.1% in 2019, with a total of 544,549 vehicles wholesaled. BMW Brilliance NEV sales continue to grow at a rapid pace, with a 50.4% increase from the previous year to 32,246 vehicles, in response to the growing demand for premium sustainable mobility. We are finding ways to make our business model more circular, strengthening the High-Voltage Battery recycling process, infrastructure and system, including the capacity of our dealers to receive and handle end-of-life batteries. In 2019, we provided an extensive and high-quality public charging network with over 130,000 public charging pillars, and had a growing number of dealers that are now capable of selling and supporting NEVs across the country. Adding more customer interactions and digital services, including convenient charging, allows us to build a stronger and longer-term customer relationship with high brand loyalty.



David Shangguan

Senior Vice President
Human Resources

Our employees are at the centre of everything we achieve, and engaging them and supporting their development is essential to meeting our sustainability commitments. In 2019, our total workforce increased to 19,824 employees and we are pleased to report a drop in attrition rate to 3.6% and an improvement in employee satisfaction, as a result of our HR management efforts. This year we had a number of initiatives to reinforce the Core Values of BMW Brilliance and strengthen the culture of business and environmental compliance. Health and safety are absolutely essential, and our OHS measures were successful in reducing our accident frequency rate by 39.3% during 2019. We also expanded health management programmes to support more diverse health needs of our workforce, to ensure that our workers have access to excellent information and advice on how to improve their health in their personal and professional lives.

AN OVERVIEW OF BMW BRILLIANCE

ABOUT BMW BRILLIANCE

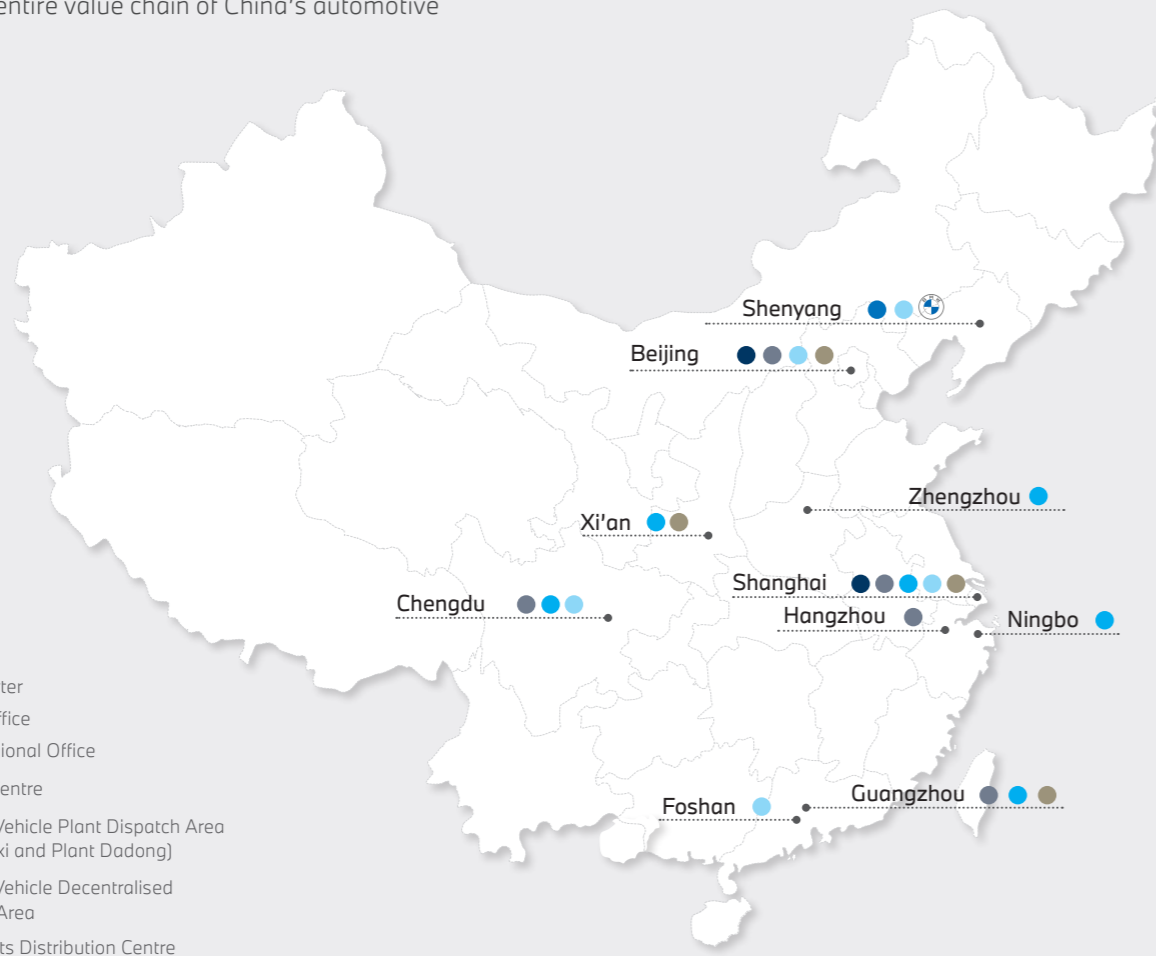
BMW Brilliance was founded in 2003 as a joint venture of the parent companies Bayerische Motoren Werke Aktiengesellschaft (BMW) and Brilliance China Automotive Holdings Limited.

Our business operations include production, research and development, supply chain management and purchasing, sales and aftersales services of BMW automobiles in China. BMW Brilliance has a state-of-the-art production base in Shenyang, Liaoning Province – an industrial heartland of China.

We are inspired by the potential of doing business in a sustainable manner and guided by our aspiration to be the leading sustainable provider of premium individual mobility across the entire value chain of China's automotive industry.

OUR FACILITIES

- 2** Complete Vehicle Plants in Dadong and Tiexi
- 2** Branch Offices
- 8** BMW Brilliance Finished Vehicle Dispatch Areas
- 4** Training Centres*
- 1** Powertrain Plant in Tiexi
- 5** Sales Regional Offices
- 5** BMW Brilliance Spare Parts Distribution Centres
- 17** Training Bases**



OUR DELIVERY

534,990

Automobiles produced

544,549

Automobiles wholesaled

32,246

New Energy Vehicles wholesaled

647

Authorised dealer outlets

OUR WORKFORCE

19,824

Employees

Note:

*Training Centres - BMW managed and deliver trainings for dealers.

**Training Bases- cooperatively managed for vocational training. Open to dealers based on proximity. Provide BMW Certificate Courses and Body/Paint Courses for dealers.

OUR PRODUCTS

1



BMW 1 Series | Sedan

2



BMW 2 Series | Tourer

3



BMW 3 Series | Long Wheelbase and standard version

5



BMW 5 Series | Long Wheelbase
**Including plug-in hybrid model*

X1



BMW X1 | Long Wheelbase
**Including plug-in hybrid model*

X2



BMW X2

X3



BMW X3



ZINORO 60H/100H
**Plug-in hybrid model*



BMW 3 Cylinder Engine

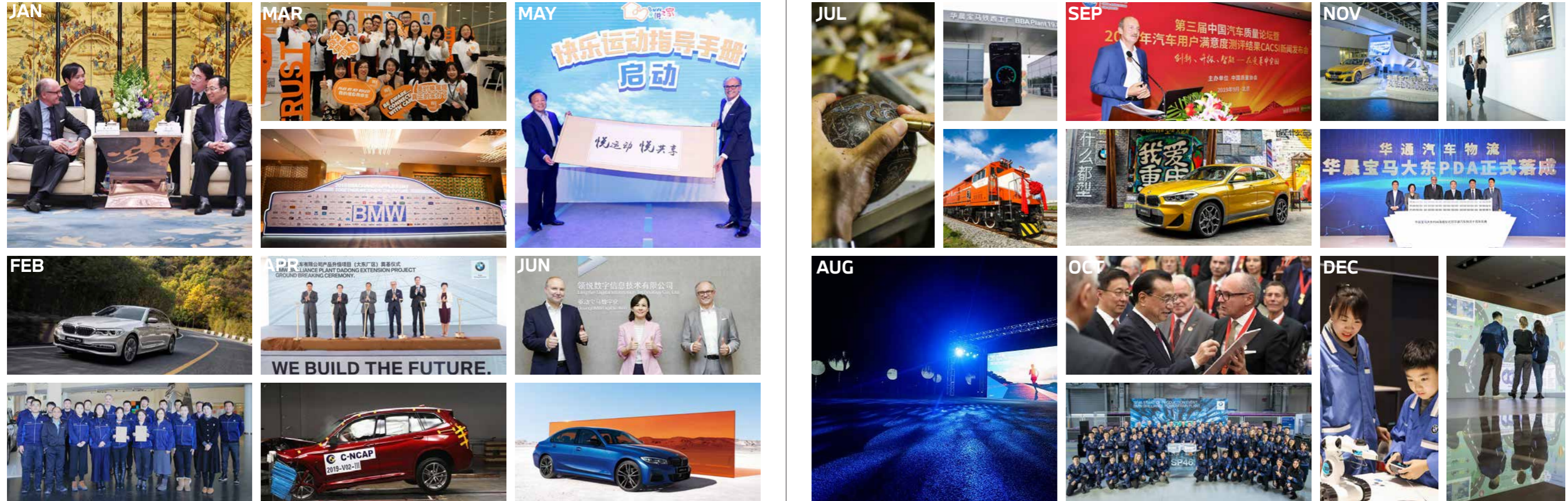


BMW 4 Cylinder Engine



High-Voltage Battery

HIGHLIGHTS IN 2019



JAN

- Dr. Johann Wieland's meeting with Shenyang Party Secretary opened new chapter of win-win cooperation.

FEB

- Launch of the BMW 530Le iPerformance Pioneer Edition.
- Obtained ISO 50001:2011 Energy Management System Certification.

MAR

- First training base for BMW Children's Traffic Safety Ambassadors established in Changsha.
- 1st BMW Brilliance Compliance Day successfully held.
- 2019 BMW Brilliance Grand Supplier Day.

APR

- BMW Brilliance 2 Millionth engine celebration.
- Broke ground on Plant Dadong Extension.
- The All-New BMW X3 gained five-star C-NCAP rating.

MAY

- 2019 BMW Corporate Social Responsibility Forum.

JUN

- LingYue Digital Information Technology Co., Ltd officially inaugurated.
- Launch of the All-New BMW 3 Series.
- Plaque unveiling of the BMW Brilliance Training Centre at the Sino-German Industrial Park.

JUL

- Launched vehicle transportation cooperation with China Railway Special Cargo Service Ltd.
- BMW China Culture Journey's visit in Hainan kicked off.
- 5G mobile network went live at all BMW Brilliance production sites in China.
- Tiexi New Plant Project began ground foundation work.

AUG

- BMW Brilliance Media Club Joy Run kicked off.

SEP

- BMW Brilliance models won 2019 China Automobile Customer Satisfaction Index from CAQ.
- Launched Sustainability Report for the 6th consecutive year.
- Launch of the innovative BMW X2.

OCT

- BMW Brilliance President & CEO Dr. Johann Wieland received the 2019 China Friendship Award.
- Start of Production Event for new BMW 5 Series PHEV battery at Plant Powertrain.

NOV

- BMW Brilliance Plant Tiexi Customer Car Handover Centre officially launched.
- BMW Brilliance Plant Dadong Vehicle Dispatch Area Completion Ceremony.
- Unveiling ceremony of the BMW Brilliance Art Plant Space.

DEC

- BMW Brilliance Plant Tiexi Parent-Child Plant Discovery officially launched.
- "Climate Change Action - Choose Your Future Road" environmental campaign held in Shenyang facilities.
- BMW Brilliance ranked #1 in Automotive Enterprise Green Development Index.

OUR SUSTAINABILITY PROGRESS

KEY PERFORMANCE ACROSS VALUE CHAIN



Research & Development

BMW iX3

Cutting-edge BMW Efficient Dynamics

The all-new fully electric BMW iX3, which incorporates the latest BMW Efficient Dynamics technologies including the 5th generation eDrive system and aerodynamic design, will be produced at our Shenyang production base in 2020.

+83%

Increase in e-range

Enabled by our latest advancement in battery cell technology, we increased the e-range of the X1 xDrive 30 Le and ZINORO 100H plug-in hybrid compact SAVs by 83%.

Gold Medal

in 2019 C-ECAP evaluation

The BMW 5 Series joined the evaluation of the 2019 China Eco-Car Assessment Programme (C-ECAP) and obtained an overall Gold Medal.



Supply Chain

Sustainable Sourcing

Direct sourcing of High-Voltage Battery raw materials

We procure raw materials of High-Voltage Battery cells directly from sustainable sources.

100%

Regenerative energy for Gen5 HVB suppliers

We cascade sustainability commitments to our Tier-1 and Tier-2 suppliers of High-Voltage Battery to use 100% regenerative energy in the production of BMW Gen5 HVB.

394

Local content suppliers in China

Our local content suppliers grew to 394 and our total purchasing volume increased by 15.3% to 49.7 billion RMB in 2019, reflecting our long-term localisation strategy.



Production

5G

Coverage at our Shenyang production base

Our Shenyang production base is the first automobile site with 5G connectivity in the world.

100%

Renewable electricity used in Shenyang production base

We used 100% renewable electricity in our Shenyang production base, including the generation of solar power electricity, and the purchase of wind power electricity and I-RECs.

-68.3%

Reduction in CO₂ emissions per vehicle produced

We reduced our CO₂ emissions per vehicle produced (in t/vehicle) by 68.3% from 2018.

* in which Scope 2 emissions are calculated by market-based methodology in accordance with GHG Protocol Scope 2 Guidance.



Logistics & Transport

-17.4%

Reduction in CO₂ emissions per unit for inbound logistics

The CO₂ emissions per unit for inbound logistics was 180 kg/unit by end of 2019, down by 17.4% from 2018.

-45%

Reduction in CO₂ emissions per unit for outbound logistics since 2014

The CO₂ emissions per unit for outbound logistics was 141 kg/unit by end of 2019, which has been reduced by 45% since 2014.

98%

Parts using returnable packaging

98% of our local parts were transported in returnable packaging in 2019, contributing to material saving and carbon reduction.



Sales & Utilisation

5.79 L/100km

Corporate Average Fuel Consumption

Our Corporate Average Fuel Consumption in 2019 was down by 0.86% from 2018.

130,000+

Public charging pillars provided

By end of 2019, we provided 130,000+ public charging pillars across 200 cities in China.

450

BMW NEV dealer outlets

We expanded our NEV dealer outlets from 336 to 450 in 2019, covering more cities with better service.



Disposal & Recycling

124,600

Recycled parts

We recycled 124,600 parts in 2019, with a total weight of over 563 t.

ReLife Point

Centralised parts remanufacturing/recycling facility

In 2019, we started using the first centralised facility for parts remanufacturing and recycling, the ReLife Point, to enhance the collection and circular use of materials.

3,263

Total defective HVB recycling volume by pieces

This year, we recycled 3,263 pieces of defective HVB with a total weight of 78,875 kg.

OUR SUSTAINABILITY PROGRESS

KEY PERFORMANCE INDICATORS

	2015	2016	2017	2018	2019	Change from previous years %
BUSINESS ACTIVITIES						
Revenues from operations (in RMB million)	94,881	98,436	113,197	141,918	172,692	21.7
Tax (in RMB billion)	20	21	25	31	35	12.9
Automobiles produced (in unit)	288,055	305,845	396,888	490,151	534,990	9.1
Automobiles wholesaled (in unit)	287,488	310,041	386,556	465,192	544,549	17.1
Authorised dealer outlets nationwide (number)	515	558	598	625	647	3.5
PRODUCTS AND SERVICES						
Average fleet CO ₂ emissions (in g/km)	165.4	159.2	146.9	139	137.8	-0.9
Corporate average fuel consumption (in l/100 km)	6.95	6.69	6.17	5.84	5.79	-0.9
New Energy Vehicles wholesaled (in unit)	1,249	480	1,983	21,438	32,246	50.4
PRODUCTION AND VALUE CREATION						
Total Greenhouse gas emissions (in t)	9,538,536	9,901,541	11,884,985	14,190,033	15,417,955	8.7
Scope 1 Greenhouse gas emissions (in t)	24,057	33,570	37,448	35,733	42,141²	17.9
Scope 2 Greenhouse gas emissions (in t)	229,126	309,154	240,747	281,753	68,602³	-75.7
Scope 3 Greenhouse gas emissions (in t)	9,285,353	9,558,817	11,606,790	13,872,546	15,307,212⁶	10.3
Share of renewable electricity (in %)	-	-	25	43	100⁴	132.6
CO ₂ emissions per vehicle produced (in t/vehicle)	0.88	1.13	0.70	0.63	0.20^{1,2}	-68.3
Energy consumption per vehicle produced (in MWh/vehicle)	1.66	2.05	1.83	1.65	1.63	-1.2
Volatile organic compounds (VOC) per vehicle produced (in kg/vehicle)	0.45	0.40	0.54	0.56	0.52	-7.1
Water consumption per vehicle produced (in m ³ /vehicle)	2.18	2.58	2.68	2.47	2.40	-2.8
Process wastewater per vehicle produced (in m ³ /vehicle)	0.46	0.46	0.39	0.42	0.44	4.8
Waste for disposal per vehicle produced (in kg/vehicle)	9.17	6.42	7.43	8.05	7.47	-7.2
Total waste (in t)	33,299	46,033	71,976	85,237	87,013	2.1
Total non-hazardous waste (in t)	27,300	40,286	63,812	74,073	76,814	3.7

	2015	2016	2017	2018	2019	Change from previous years %
PRODUCTION AND VALUE CREATION						
Total hazardous waste (in t)	5,999	5,747	8,164	11,164	10,199	-8.6
Local content suppliers in China (number)	319	345	359	378	394	4.2
Purchasing volume in China (in RMB billion)	23.5	23.9	26.7	43.1	49.7	15.3
EMPLOYEES AND SOCIETY						
Total workforce at year-end (number)	16,573	16,286	16,686	18,925	19,824	4.8
Female employees in total workforce (in %)	12.8	12.9	12.8	12.0	12.1	0.8
Employees in management positions (in %)	6.3	6.7	6.9	6.6	6.9	4.5
Female employees in management positions (in %)	27.5	28.4	30.2	30.0	30.6	2.0
Chinese employees in management positions (in %)	78.1	82.0	85.0	86.0	85.5	-0.6
Total new employee hires (in %)	11.6	2.2	8.0	17.3	8.9⁵	-48.6
Attrition rate (in %)	3.8	3.3	4.5	4.8	3.6	-25.0
Average days of further training per employee (in day/person)	2.2	1.7	2.1	1.79	1.23	-31.3
Accident frequency rate (per one million hours worked)	1.06	0.54	0.43	0.28	0.17	-39.3
Beneficiaries of BMW CSR activities (number)	100,400	136,600	157,600	80,292	2,628,710⁶	3,173.9
Expenditure on social commitment activities (in RMB)	-	-	17,064,616	15,575,085	16,513,831	6.0

Note:

1. Direct CO₂ emissions generated by fossil fuel consumption at BMW Brilliance plants, excluding the fossil fuel consumption of construction and on-site suppliers. The coefficients used for calculation are from Emission Factors for Electricity, District Heating and Fuels issued by Application of German Association of the Automotive Industry (VDA).
2. Indirect CO₂ emissions generated by the consumption of purchased electricity and heating at the BMW Brilliance plants, excluding purchased electricity and heating consumption of construction and on-site suppliers. For calculation of the Scope 2 emissions, "market-based" methodology is used in accordance with GHG Protocol Scope 2 Guidance issued by the World Resources Institute.
3. Indirect CO₂ emissions generated in the upstream supply chain, the utilisation phase and the disposal of automobiles produced by BMW Brilliance for sales in mainland China market of the year. Emissions from the supply chain and the disposal are based on the carbon footprints of representative vehicles from the product lines, calculated by Thinkstep's LCA tool GaBi. Emissions from the utilisation phase are based on the average fleet emissions of automobiles delivered of BMW Brilliance and an average mileage of 150,000 kilometres per vehicle.
4. Including the generation of solar power electricity, the purchase of wind power electricity and International Renewable Energy Certificates (I-RECs).
5. Figures related to new employees from 2017 onwards are not directly comparable to figures from previous years due to changes in calculation method. New employees figures before 2017 are those who joined BMW Brilliance during the year and still worked with BMW Brilliance at year-end. Figures from 2017 to 2019 are those who joined BMW Brilliance during the year, regardless of whether they still worked with BMW Brilliance at year-end or not.
6. In 2019, BMW Brilliance organised multiple training programmes on traffic safety through online platforms, which enabled a significant increase in the number of beneficiaries of our CSR activities.

01

FUNDAMENTALS

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SUSTAINABILITY STRATEGY AND MANAGEMENT

At BMW Brilliance, we aspire to be the leading sustainable premium provider of individual mobility in China's automotive industry. This requires our dedication to delivering value that improves the quality of life of our stakeholders, and making positive impacts on the environment and society in which we work and live.

Sustainability is one of the cornerstones of BMW Brilliance's corporate strategy, and it is at the core of our long-term success as a resilient business, driving our future-oriented transformation and leadership in premium mobility and services in China, especially in the context of the VUCA (volatile, uncertain, complex and ambiguous) era.

At BMW Brilliance, we take on the responsibility of a good corporate citizen by offering more sustainable vehicles and mobility solutions, spurring technological innovation, enabling the transition to a low-carbon economy, and creating shared benefits for all our stakeholders as we work towards a sustainable future. We are committed to responsible and transparent business conduct, and extend this expectation to business partners along our value chain.

OUR STRATEGY AND FRAMEWORK

Shaped by these beliefs and the sustainability principles (3Ps), our sustainability strategy is designed to be the manifesto for our future. It aligns with international and national frameworks including the UN Sustainable Development Goals and China's National Plan on Implementation of the 2030 Agenda for Sustainable Development, and reflects our ongoing support for China's 13th Five-Year Plan.

Our strategy lands with a practical framework which sets out strategic focus areas across the three pillars of our value creation model - Products and Services, Production and Value Creation, and Employees and Society - as well as strategic enablers that support and accelerate our transformation to a sustainable business. It also serves to guide our decision-making, synergise sustainability actions and align efforts for greater traceability, scalability, and a more resilient business performance.

Our Sustainability Principles

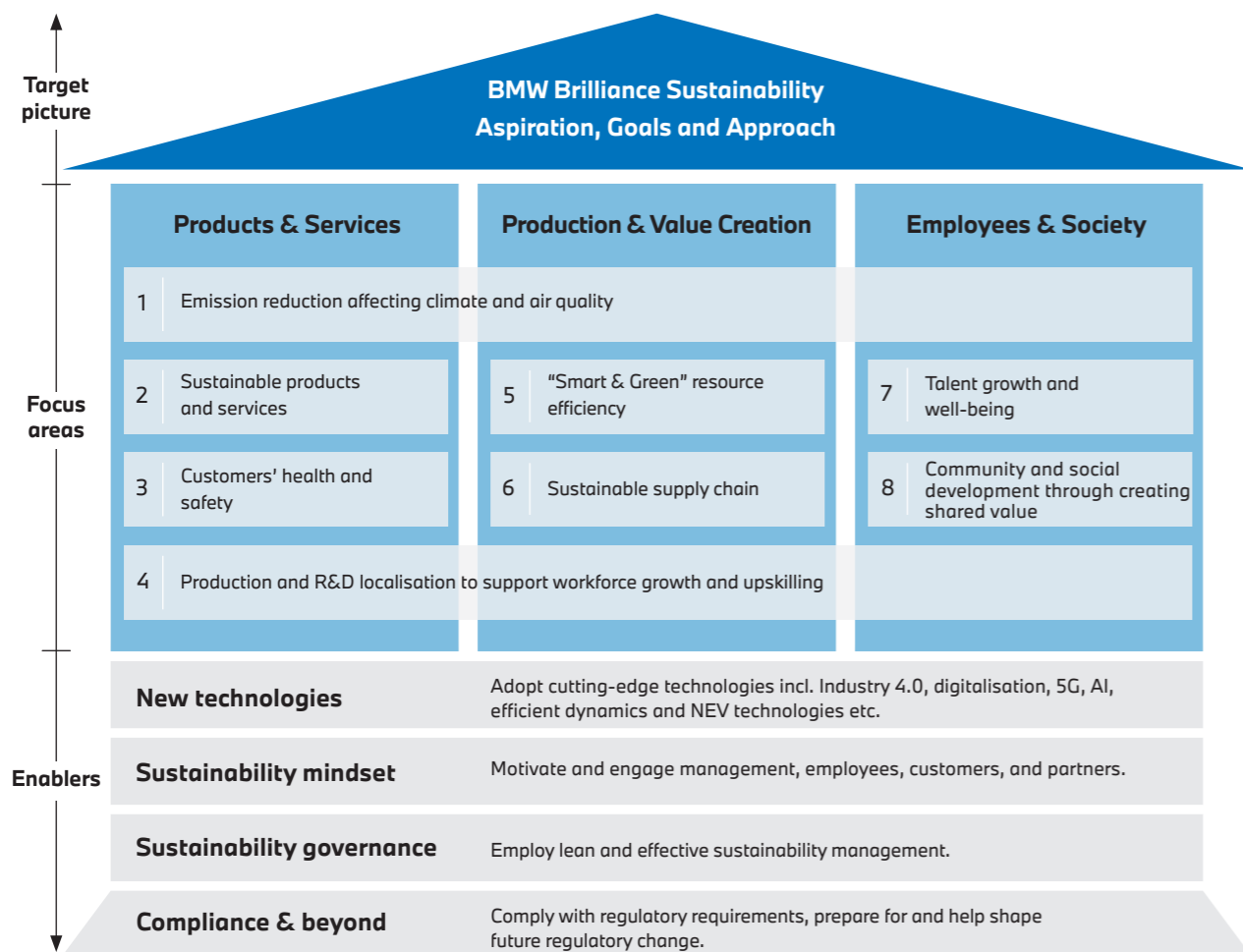


- People** - people are at the heart of everything we do.
- Planet** - environmental stewardship is key to long-term success.
- Prosperity** - value derived from sustainable mobility.

This year, we made a slight adjustment to our Strategy Framework by extending **Focus Area #1: Emissions Reduction Affecting Climate and Air Quality** to cover also the pillar of Employees and Society, as we strive to strengthen employees' ownership for taking concrete actions against climate change and environmental pollution, and engage our stakeholders and broader society through customer and community programmes.

We enrich the scope of one of our strategic enablers: **New Technologies**, with 5G, AI, efficient dynamics and NEV technologies to realise the potential of these emerging technological breakthroughs in disrupting, transforming, and empowering our business.

Figure 01
Our Strategy Framework

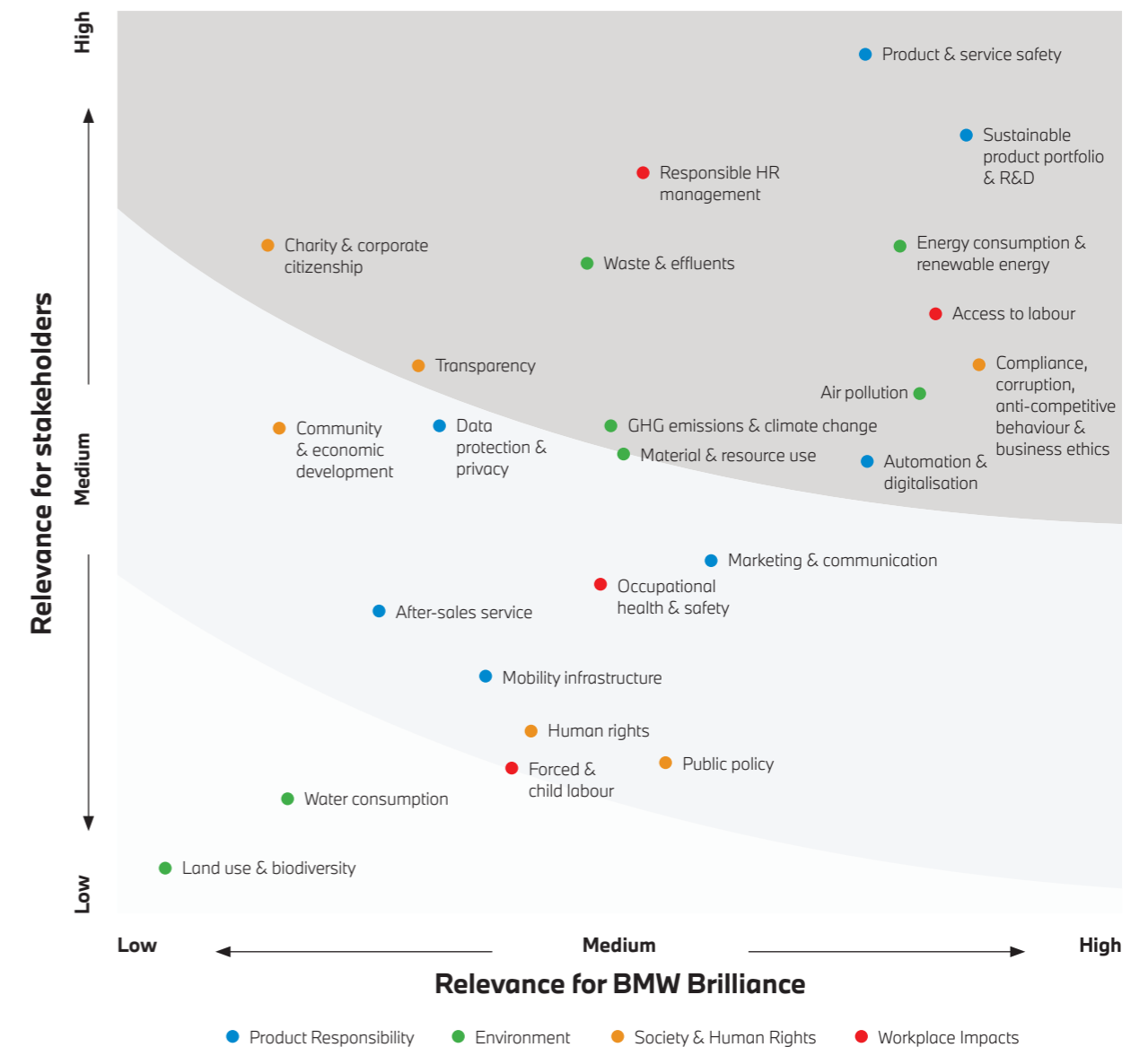


Defining Material Sustainability Issues

Materiality analysis enables a deep dive into external and internal perspectives on sustainability-related risks and opportunities, which we use to define our priority sustainability issues and shape our strategic direction to address the issues with the highest external stakeholder impact and internal business value.

In 2018, we conducted a materiality refresh with an evidence-based approach to test our historical priorities. The robust process explored internal and external stakeholder expectations, major trends, benchmarks, and business impacts to determine areas for action. The outcome of this process was an updated list of 13 material issues that were considered most relevant both by external stakeholders and by the company, and which involve significant opportunities for BMW Brilliance to work towards sustainable development.

Figure 02
Materiality Matrix



These results, which were validated by our Board of Management in 2019, reinforced our strategic orientation to address climate change and improve air quality, to build an accountable and transparent value chain, and to enhance corporate citizenship and local community development. It also helps us navigate sustainability risks and potential consequences, and refine the strategic approach we take to build a sustainable future for our business and society:

- **Climate and air pollution.** The necessity of addressing climate change and pollution has a high impact both on the short-term and long-term business success of BMW Brilliance. International commitment such as the Paris Climate Agreement and the tightening vehicle emission requirements in China continue to drive the auto industry to transform product portfolio and service model, while physical disturbances linked to natural resources and weather-related damages can interrupt supply chains and the availability of raw materials. To enhance resilience to climate-related risks, we have been improving the resource efficiency of our production, and developing a more sustainable product portfolio to respond to increasing market demand for more CO2-efficient vehicles, E-mobility ecosystem and services.
- **Accountable and transparent value chain.** Regulations and societal expectations are calling for more transparent business operations, and to take accountability for environmental and social performance across the whole value chain. In particular, Environmental, Social and Governance (ESG) risks of our diverse supply chain with respect to their environmental, health and safety performance could be critical to our business continuity and increase our cost of doing business. In response, we have been optimising our supplier risk management framework to increase supplier transparency through systemic assessment, management, disclosure and prevention of EHS compliance-related risks.
- **People and community development.** The future success of BMW Brilliance highly depends on our ability to recruit, retain and develop talent, and we must also sustain our social rights to operate in our community. Inability to attract, retain and ensure ongoing commitment of our workforce or engagement with the community where we work could cause a negative impact on our growth paths and company reputation. To meet expectations from employees and communities, we have a strong focus on building company culture and values, ensuring equal opportunities for talent growth and development, and supporting community growth through various CSR and local development programmes.

Contributing to the UN Sustainable Development Goals

The UN Sustainable Development Goals (SDGs) are part of a global action plan with the purpose of shaping economic progress in an environmentally compatible manner and in accordance with social equity. At BMW Brilliance, we believe it is our duty to uphold this social contract, and we have prioritised our actions to contribute to the SDGs that are most relevant to our business, and linked these goals to our company-wide strategic approach.

	Products & Services	Production & Value Creation	Employees & Society	SUSTAINABLE DEVELOPMENT GOALS
Material Issues Product & service safety. → p.36 Total Quality Management → p.38 Customer Health Protection → p.48 Customer Satisfaction and Dealer Performance	●	●	●	
Sustainable product portfolio and R&D. Aftersales service. Mobility infrastructure. → p.40 Product Lifecycle Carbon Emissions → p.42 Forging E-mobility Ecosystem → p.45 Circular Use of Materials → p.47 Customer-centric Services	●	●	●	
GHG emissions & climate change. Energy consumption & renewable energy. Air pollution. → p.25 Sustainability Mindset Fostering → p.40 Product Lifecycle Carbon Emissions → p.42 Forging E-mobility Ecosystem → p.45 Circular Use of Materials → p.49 Fostering Sustainable Lifestyle for BMW Customers → p.58 Green Production → p.67 Green Logistics	●	●	●	
Waste & effluents. Materials and resources use. Water consumption. → p.40 Product Lifecycle Carbon Emissions → p.42 Forging E-mobility Ecosystem → p.45 Circular Use of Materials → p.48 Customer Satisfaction and Dealer Performance → p.58 Green Production → p.67 Green Logistics → p.72 Sustainable Supply Chain	●	●	●	
Automation and digitalisation. Data protection and privacy. → p.27 Compliance Governance → p.31 New Technologies → p.47 Customer-centric Services → p.48 Customer Satisfaction and Dealer Performance → p.56 Smart Manufacturing → p.58 Green Production → p.67 Green Logistics	●	●	●	
Compliance, corruption, anti-competitive behavior & business ethics. Transparency. Human rights. Forced & child labour. → p.27 Compliance Governance → p.58 Green Production → p.72 Sustainable Supply Chain → p.82 Responsible Human Resources Management → p.90 Health, Safety and Wellbeing	●	●	●	
Charity & corporate citizenship. Community & Economic Development. → p.54 Production Strategy → p.94 Corporate Social Responsibility → p.72 Sustainable Supply Chain → p.103 Supporting the Communities in which We Work		●	●	
Responsible human resource management. Access to labour. Occupational health & safety. → p.82 Responsible Human Resources Management → p.87 Long-term Employee Development → p.90 Health, Safety and Wellbeing			●	

SUSTAINABILITY MANAGEMENT AND INTEGRATION

At BMW Brilliance, our Board of Management ensures that sustainability is integrated into all key business decisions regarding the overall direction of the company. We incorporate sustainability into the annual target-setting process through which business functions must set and deliver on concrete targets from a sustainability perspective. This ensures that the overall direction set by the Board of Management is implemented in a systematic way, with accountability for the business functions. The Board of Management is also responsible for ensuring compliance with all provisions of the law and internal regulations as well as for adequate risk management and control > p.27 **Managing Compliance**.

Our internal business functions are responsible for leading progress on sustainability-related decisions made by the Board of Management. This process is steered and monitored by Management Circles across business functions. Through regular reviews, Management Circles ensure that decisions from the Board of Management are translated into actionable items with measurable targets and cascaded effectively to the operational level for implementation.

Within this process, our sustainability Centre of Competency at the corporate level takes on the role of driving the development, integration, and implementation of our corporate sustainability strategy and new initiatives. It coordinates resources across business functions to ensure that the actions we take are coherent and synergistic, and takes the lead on sustainability reporting and communication matters.

Figure 03
Sustainability governance framework

Board of Management (CEO and all SVPs)	<p>Overall Sustainability Direction</p> <ul style="list-style-type: none"> • Define corporate sustainability directions and goals. • Make critical decisions to advance sustainable business transformation.
Sustainability Centre of Competence / Management Circles	<p>Sustainability Governing and Steering</p> <ul style="list-style-type: none"> • Drive sustainability integration into all related decision-making processes and setting of measurable targets. • Steer and coordinate sustainability innovation and implementation. • Lead sustainability disclosure and stakeholder communication.
Operational Functions	<p>Sustainability Implementation</p> <ul style="list-style-type: none"> • Translate sustainability targets into actionable items. • Implement sustainability strategy through innovations, new initiatives and operational transformation.

Guided by our sustainability strategy and management commitments, we are in full stride to integrate sustainability "top-down" into every aspect of our business and value chain with specific targets and key performance indicators. This means that for every major issue and project, environmental and social elements are part of the decision-making process, along with economic factors. By adopting this practice, sustainability as a corporate objective is integrated into all levels of business areas and divisions.

Another focal point of sustainability integration at BMW Brilliance is our Sustainability Lighthouse Initiatives, where we prototype innovative solutions and pioneer technologies to address the most pressing sustainability issues identified in our materiality and stakeholder engagement process.

A good example is the "Artemis Project", an initiative proposed in 2017 to increase transparency in our supply chain on Environmental, Health, and Safety (EHS) risk management. After a year of pilot implementation, a thorough EHS risk assessment process and risk profile of key suppliers were established which proved effective in preventing, reducing, and managing supplier EHS risks. The process was then integrated with the EHS Protection Activity (EPA) programme and became one of the key pillars of our supplier risk management framework, and has been evolving from reactive risk control practice to empowering suppliers to build a more resilient operation model, with expanded capacity building scopes covering risk technology, process optimisation and government relationship for instance > p.75 **Supplier Risk Assessment and Performance**.





BMW Brilliance Launched 5G Pilot Project with strong support from Shenyang Municipal Government.

STAKEHOLDER ENGAGEMENT

At BMW Brilliance, our production and our products connect us to diverse stakeholders, whose viewpoints and actions have a decisive impact on our own success. We proactively engage in ongoing dialogue about sustainability topics with stakeholders both at our production locations and nationwide, to ensure that we understand our own impacts and influence, and that we are responding effectively to stakeholder perspectives.

STAKEHOLDER MAPPING AND ENGAGEMENT

Our major stakeholder groups include our shareholders, customers, employees, suppliers, and dealers, as well as government authorities, the media, academic institutions, our future workforce, and local communities. We incorporate sustainability issues into our interactions with different stakeholder groups in a variety of ways, with topics and formats that are tailored to each group. For example, our CEO meets with provincial and municipal leaders to establish commitments for mutual strategic development, and we collaborate with local universities to boost talent development that will meet our workforce needs.

We strive to address critical issues and concerns in a timely and transparent manner, and to analyse current and coming expectations in different areas of sustainability management. Engaging in dialogue with stakeholders also means that we can share our perspective on possible responses and actions related to any challenges, whether at the local, national, or global levels.

BMW Brilliance works closely with the government on areas of mutual interest and cooperation, such as the development of local manufacturing capacity and industrial transformation. Our top management meets regularly with local municipal and provincial government authorities to strengthen collaboration and address any issues that may arise. The Shenyang government support has been instrumental to BMW Brilliance's success, including in development of the infrastructure that enabled us to become the first automotive plant worldwide to utilise 5G. In 2019, our CEO was honoured to receive the 2019 China Friendship Award, the highest national award given to foreign experts for their contributions to China's social and economic progress.

Figure 04
Our Stakeholder Map

BMW Brilliance Stakeholder Engagement

Academic Institutions	Roundtables, lectures, discussions with experts, scholars and students
Future Talent	Specialised and localised programmes, traineeships, and vocational education opportunities
Communist Party of China	Events with the CPC and BMW Brilliance
Policy Decision-Makers	Regular discussions on key topics such as emission standards, the advancement of E-mobility and supporting infrastructure, and promotion of innovation
Regulatory Authorities	Regular communication with local authorities
Media	Media trips, press releases, information events on new products, test drives and trade fairs
Shareholders	Communication between our Board of Management and Board of Directors and shareholder representatives (BMW Group and Brilliance Group)
Employees	BMW Brilliance Trade Union, employee survey, dialogues with managers, internal communications
Suppliers	Industry initiatives, joint events, training courses, supplier risk assessments, supplier forum
Dealers	Regular interaction with sales organisations and dealers, business conferences
Local Communities	One-on-one meetings, plant visits, neighbourhood dialogue, press events, investment into local communities as part of CSR commitment
Customers	Surveys, social media, trade fairs, autoshows, mass media

Academic institutions are important partners in talent development, and in 2019 we signed 10 cooperation agreements with high schools and vocational schools, expanding the reach of the dual system of vocational education into the university system. As demand for technical personnel is surging, BMW Brilliance is proactively working with academic institutions to enhance educational programmes and develop talent for the future workforce throughout the value chain.

BMW Brilliance is always seeking to better understand our customers and their expectations in 2019, this included a forum on Listening to the Voice of Consumers, held at Plant Dadong. Associates learned about customer expectations and characteristics, and had a dialogue with experts about current challenges and future trends.

SUSTAINABILITY MINDSET FOSTERING

We foster a sustainability mindset throughout our organisation, with events specifically designed for the purpose of creating a shared awareness of key sustainability issues. We share current trends, challenges and best practices of key sustainability topics, as well as the specific actions BMW Brilliance is taking through our initiatives. We empower employees to adopt a sustainability mindset in their daily work and to make changes in their own lives.

The environmental campaign on "Climate Change Action – Choose Your Future Road" was held successfully at Plant Powertrain, Plant Dadong, and Plant Tiexi in December. Through interactive effects and popular VR games, participants learned about the correlation between carbon emissions and climate change, commitments made by different countries and industries, best practices in the BMW Brilliance value chain, and their carbon footprint in everyday life. Our employees also learned how their own daily work is contributing to reducing BMW Brilliance's carbon emissions and combating climate change, and gained a deeper understanding of sustainability through active participation.

Figure 05
Highlights of the "Climate Change Action - Choose your Future Road" campaign



Light and Shadow Illustration

A digital gallery of climate change-related information and knowledge.



VR Game Session

Learn about carbon emissions sources in BMW Brilliance and experience extreme weather events through popular VR games.



Zero Waste and Recyclable

All materials were recyclable and no printed materials were used throughout the campaign.

Environmental compliance is a topic of increasing importance, and our associates are keen to gain knowledge on environmental protection and how it relates to their daily work. In February 2019, the BMW Brilliance "COMPLIANCE DAY" event was held to build associates' awareness and knowledge with respect to environmental protection and compliance topics. Through interactive activities, associates had the opportunity to learn about the key environmental laws and regulations in China, common environmental incidents, as well as BMW Brilliance's management towards environmental protection. More than 630 participants gained knowledge about environmental protection as well as compliance tips relevant to their daily work, and had the opportunity to provide inputs and suggestions.



2019 Compliance Day at BMW Brilliance.

COMPLIANCE GOVERNANCE

We have built a strong compliance culture and infrastructure as a foundation for putting our values into practice in a complex and constantly evolving regulatory environment.

At BMW Brilliance, our compliance efforts are wide-ranging to enable us to meet requirements on anti-corruption, anti-fraud, anti-monopoly and fair competition, information security, data privacy and cybersecurity, product quality and consumer rights protection, trade compliance, workplace health and safety, conformity of production and admittance and environmental protection. Our policies are based on applicable laws and regulations, and we implement and monitor initiatives systematically with multiple communication channels, training, risk management, and remediation to ensure that compliance requirements are understood and enforced.

MANAGING COMPLIANCE

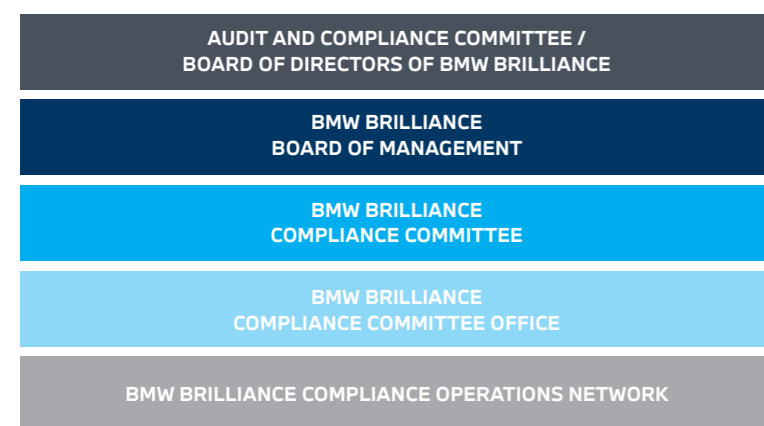
Our compliance system is designed to address long-standing requirements such as fair competition and anti-corruption, and also to respond to emerging issues such as cybersecurity and data privacy, with monitoring and implementation of new government policies and regulations. In addition, we emphasise the importance of each individual BMW Brilliance associate acting lawfully and responsibly, creating a culture which supports compliance.

The compliance management circle is chaired by our CEO, with a BMW Brilliance Compliance Committee (BCC) that includes representatives from Human Resources, Legal Affairs and Compliance, Controlling and Risk Management, Corporate Audit, Business Development, and Government Affairs. In 2020, further enlargement of BCC is scheduled to enhance IT governance and quality management. The BMW Brilliance Compliance Committee Office (BCCO) manages daily compliance matters across the organisation, along with a Compliance Operations Network of department heads, plant directors, and regional sales office heads. A network of Compliance Interfaces from each department was developed, and in September 2019, the first BMW Brilliance Compliance Interfaces Workshop was successfully convened in Shenyang, with constructive exchange on multiple topics including anti-corruption, compliance risk management, and conflict of interest.

In 2019, we enhanced the application of IT tools for compliance management, including a due diligence evaluation for onboarding indirect purchasing suppliers. BCCO is also working with the IT department on an online approval process to enhance internal anti-trust controls, which is expected to go live in 2020.

BMW Brilliance monitors compliance risks through a periodic Compliance Risk Management Report. In 2019, major updates to the report were introduced to make the assessment more targeted, accurate, and effective. In-depth trainings on compliance risk management were also provided.

Figure 06
BMW Brilliance compliance management system



Compliance Training and Communication

All employees at BMW Brilliance are required to follow the Legal Compliance Code, supported by processes including risk assessments, mitigation, training programmes, and a whistle-blowing mechanism. We have open communication with all employees, and our Compliance Committee Chairman and General Counsel regularly send letters on important policies and announcements with information on how to actively mitigate specific compliance scenarios.

Our training efforts are designed to ensure that our employees are fully aware of our compliance requirements. We have mandatory online training modules on the Legal Compliance Code, with more than 700 new associates completing online training in 2019. BCCO is preparing more online training modules which can be viewed on mobile devices to improve accessibility for employees.

In-person legal and compliance trainings were also provided to more than 3,300 internal trainees in 2019. Training courses are customised to reflect specific business scenarios, with topics such as anti-corruption, anti-monopoly, anti-fraud, compliance risk management, conflict of interest, and information protection. Joint trainings are provided by BCCO and core teams to target groups on specialised topics such as environmental management and cross-border taxes.

We also introduced WeCompliance, a user-friendly platform on the intranet page with Case Studies, Legislation Express, and compliance notifications. In 2019, a total of 94 WeCompliance pop-up messages on various topics were released, with positive feedback from associates.

100%

Compliance online training completion rate of nominated new associates.

WE ARE COMPLIANCE

In March 2019, we organised Compliance Day events in the Beijing office and three Shenyang plants, increasing the compliance awareness of more than 1,000 associates.

Our sales divisions in Beijing and regional offices as well as the related purchasing and R&D teams receive regular legal and compliance team trainings on anti-monopoly legal requirements specific to the automotive industry. We also include compliance clauses for external partners in purchase contracts and dealer agreements.

Compliance Case Management and Support

Employees, suppliers, and business partners can submit any compliance concerns through line managers or personnel of BCCO, Corporate Audit, or Human Resources. Processes for community members to raise concerns are in place at the plant level.

Concerns can also be raised through our confidential and anonymous SpeakUp hotline, which is managed by the BMW Brilliance Compliance team. We acknowledge, investigate as appropriate, and document all concerns. Where concerns are investigated and substantiated, we report them, take appropriate remedial actions, and document the outcomes. BMW Brilliance does not tolerate any form of retaliation against anyone who raises a concern or participates in an investigation.

In addition to regular support for the Compliance Network, BMW Brilliance Compliance team has actively participated in compliance-related projects that are steered by other business functions (e.g. environment protection and information security) through joint trainings, workshops and events.

DATA PRIVACY AND CYBERSECURITY

Data privacy is a concern across all industries as technological innovation and digitalisation create new risks for companies and for customers. At BMW Brilliance, we are making significant investments in protecting customer, partner, and employee data. In 2018, we developed initiatives to raise awareness and to strengthen our data privacy protection systems and culture. Since late 2018, we have engaged an external firm to review our internal personal data processes, primarily regarding employees, to identify gaps and develop mitigation plans to comply with the latest legal requirements. Related best practices and lessons learned from completing the internal mitigation plan, which is expected to be completed in 2020, will also be extended to customer data protection.

To enhance cybersecurity, BMW Brilliance collaborates with other BMW Group legal entities in China to navigate Cyber Security Law compliance topics. Mitigation procedures were also developed in collaboration with the IT department and an external party which will support implementation and training.

PREPARATION FOR THE SOCIAL CREDIT SYSTEM

By 2020, all citizens and businesses in China will be evaluated by a social credit rating, which aims to create transparency on compliance with official obligations and incentivise behaviour. The comprehensive national social credit scores for over 33 million business participants have been completed by the National Development and Reform Commission (NDRC) and are expected to be made publicly available in the future. The scores will have broad implications for business which could be positive or negative, in areas such as business access, capital funding, and government programmes.

At BMW Brilliance, our preparations for the 2020 Social Credit System include completion of a self-assessment that identifies potential risks and gaps within our operations. We established cross-department coordination and responsibility, and for any gaps identified, the relevant departments must submit a mitigation plan to the compliance team. We will continue to provide training and notifications to assist employees in understanding the legislation and implementing trends, and detailed requirements of the system.

RESPECTING HUMAN RIGHTS

We are committed to respecting the human rights of all individuals impacted by our operations. The BMW Brilliance Joint Venture Equity Contract includes a requirement to establish policies and procedures at BMW Brilliance to avoid human rights infringements and to address adverse human rights impacts that might involve our company. We base our respect for human rights on internationally agreed principles such as those set out in the International Bill of Human Rights and the International Labour Organisation's Declaration on Fundamental Principles and Rights at Work. We expect all employees and business partners to respect human rights in their daily actions.

Human rights issues are managed by the relevant business functions of BMW Brilliance, with the Human Resources Department responsible for assuring human rights within our operations, and the Purchasing and Supplier Quality Management Department responsible to ensure that suppliers respect human rights.

As part of our efforts to prevent human rights violations, we provide information and training to employees in particular on the SpeakUP programmes. We also conduct risk analyses and human rights impact assessments, and we maintain internal monitoring and reporting structures. Our cooperation with business partners and our dialogue with stakeholders also allow us to identify and address risks quickly.

The following governance documents and policies embed human rights into our business practices.

BMW Brilliance Joint Venture Contract	Objective: A founding document of BMW Brilliance as a Joint Venture between BMW Group and Brilliance Automotive, the Contract sets out the key principles of business conduct.	Issues Addressed Our commitment to the United Nations Global Compact and respect for the International Labour Organisation's labour guidelines are explicitly stated.
Associate Handbook	Objective: The Associate Handbook, which includes our Ethics and Code of Conduct as well as our Business Principles, communicates to all employees their rights and responsibilities, as well as our corporate values.	Issues Addressed All human rights issues relevant to human resources are reviewed in the handbook, such as non-discrimination, remuneration, working hours, and other terms of employment.
Legal Compliance Code	Objective: The Legal Compliance Code explains the central importance of lawful conduct to BMW Brilliance and provides an overview of the legal areas relevant to our business.	Issues Addressed Human rights protection is emphasised in multiple sections of the Legal Compliance Code, including Mutual Esteem and Principle of Non-discrimination, Safety at Workplace, and Data Protection.
General T&C for the Purchase of Goods and Services	Objective: Our terms and conditions of procurement govern the rights and obligations of the parties involved.	Issues Addressed Environmental criteria as well as recognised human rights and labour standards are included.

NEW TECHNOLOGIES

BMW Brilliance takes a leading role in driving the fundamental transformation of China's automotive industry in terms of the innovation, application, and integration of the latest technologies.

As a technological pioneer in the automotive industry, we are shaping the future production system with innovation, digitalisation, and application of Industry 4.0 technologies. Within our organisation, we are constructing one unified digital platform for technological communication. Outside of BMW Brilliance, we are driving technologies and knowledge sharing to boost the capacity of our partners. We create an open environment that encourages innovation and the cultivation of a digital culture, where our employees are motivated to unlock the full potential of new technologies.

We want to lead the digital transformation of the automotive industry, as we believe it can contribute to creating smarter solutions, optimising business processes and efficiency, and ensuring our long-term competitiveness across the value chain. Supported by four focus areas – Visual Recognition, Smart Data and Analytics, Innovative Automation, and Virtual Planning & Commissioning, our digitalisation strategy is also an enabler of a more sustainable business approach, with information technology (IT) fully integrated throughout our business operations.

THE WORLD'S FIRST 5G AUTOMOTIVE PRODUCTION BASE

In 2019, BMW Brilliance became the world's first manufacturer to apply 5G technology in automotive R&D and production.

We believe that 5G is a ground-breaking technology with the potential to revolutionise industrial production. We submitted a proposal to the Shenyang Municipal Government in 2017, seeking support to accelerate the construction of Shenyang's 5G network. In 2018, we were the first 5G pilot company in Shenyang to begin developing a 5G network at our production base. And this year, we led the automotive industry into a new stage of high-end manufacturing with our bold and pioneering progress.

BMW Brilliance is taking a leading role in testing the use of 5G to improve industrial productivity. The benefits of this new technology are not just in its high data rate and rapid response time, but also in the reliability and security of the network, which provide optimal conditions for innovations that utilise large quantities of data in real time. These include applications such as virtual and augmented reality, wide-scale networking of machines, and the use of autonomous logistics fleets.

We have begun applying 5G technology in a pilot project that uses the network to transfer large quantities of test data from vehicles to the data centre in real time, making data collection and analysis more efficient. In 2020, we will continue to explore more 5G application scenarios in our R&D and production process, and step-by-step upgrade our existing systems to enable 5G transmission and reception.

35

5G base stations, and

21

signal towers across our Shenyang production plants.

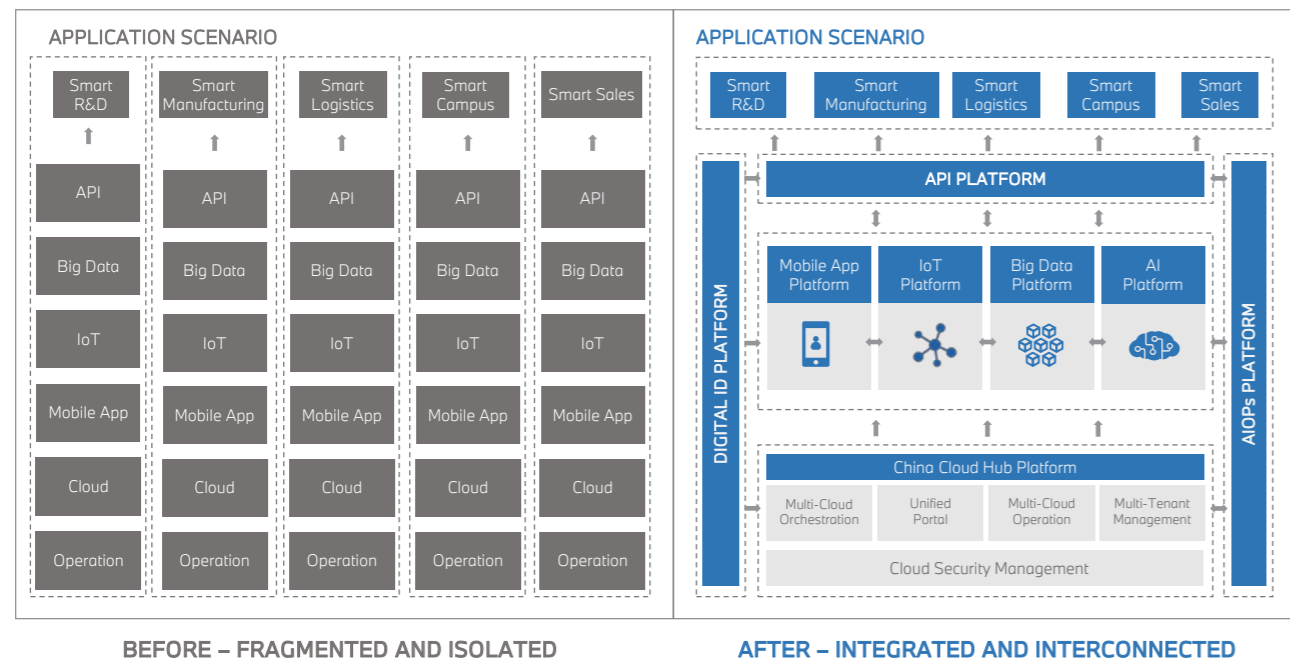
TRANSFORMING TO A UNIFIED PLATFORM ARCHITECTURE

As we adopt more and more digital tools and applications across our business in pursuit of higher efficiency and smarter big-data analysis, however, the different platforms are not always compatible, leading to more siloed operations and requiring additional effort to extract and convert data before they can be used. For us to truly harness the benefits of digital transformation, we have embarked on an ambitious IT engineering project to build one unified digital platform for technological communication between the many digital tools and applications we have installed.

With the establishment of one overarching platform, different application platforms will be seamlessly integrated and interconnected. Not only will this platform reduce duplicate investments in IT infrastructure, but it will also significantly enhance data quality and synergy.

In 2019, we showcased our China Platform Architecture at the BMW Group IT Fair in Munich, Germany, to share our experience and exchange ideas and knowledge with different markets and plants. We demonstrated how cutting-edge digital technologies are helping BMW Brilliance to maintain strong growth despite market trends and challenges. We are committed to continuing our digital transformation in smart manufacturing, sales and aftersales, and overall business operations.

Figure 07
Transformation from multiple IT platforms to one unified platform



FORECAST 2020

2020 is a decisive year for world leaders to take concrete and aggressive actions, in order to achieve the UN Sustainable Development Goals by 2030. For BMW Brilliance, we are set to develop step-change targets in our sustainability focus areas, and work to accelerate the transformation of our business through new sustainability lighthouse projects, deeper collaboration with stakeholders and strengthened sustainability culture across our organisation.

Riding on the wave of our company-wide digitalisation transformation, we have set concrete plans to further deploy IT tools and systems in compliance management. These include developing more e-learning courses to expand the scope of trainees and to increase the effectiveness and mobility of compliance trainings.

We have been nurturing a digital mindset and culture across our organisation in 2019. Stepping into 2020, we will upgrade our Agile model with the focus on faster reaction to market changes and customer expectations, and faster delivery of the right products and services. Meanwhile, the BMW Brilliance innovation lab will be in full speed to turn digital concepts and innovative ideas with respect to AI, smart logistics and intelligent industrial park, into on-the-ground applications for our operation.

As a model of intelligent manufacturing, we wish to share our knowledge and experiences in the journey of digitalisation transformation with the manufacturing industry to accelerate their own transformation towards an innovative and digitalised operation model. This will be done through the establishment of a standard engagement mechanism in 2020, leveraging on the network of the China-Germany (Shenyang) High-end Equipment Manufacturing Industrial Park, so our lessons learned and best practices can be shared in an open and transparent manner with our partners and industry peers.



02

PRODUCTS AND SERVICES

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Sustainable Product Lifecycle	40
Customer-Centric Services	47
Forecast 2020	51

PRODUCTS AND SERVICES

To achieve our goal of being the leading provider of sustainable premium individual mobility in China's automotive industry, we are continuously improving the quality and environmental footprint of our vehicles, and fostering the conditions that will make a comprehensive E-mobility ecosystem possible. We are manufacturing vehicles of excellent quality that protect our customers' health and safety. Our NEV product portfolio continues to expand with new models, and we are investing in our dealers and in the infrastructure that supports our customers to have a premium and convenient lifestyle experience of E-mobility, including digital solutions. Our efforts to calculate and reduce the life-cycle emissions and resource use of our vehicles have made us a pioneer in circular use of materials and batteries. With the customer at the core of our business, we are transforming the customer experience into one that is both premium and sustainable, and creating a community with a shared vision. In this manner, we are making a contribution towards solutions of the environmental challenges faced by society.

CONTRIBUTION TO SUSTAINABILITY DEVELOPMENT GOALS (SDGs):



2019 HIGHLIGHTS

137.8 g/km

Average fleet CO₂ emissions

5.79 L/100km

Corporate average fuel consumption

32,246

2019 New Energy Vehicle sales volume

130,000+

Public charging pillars provided

124,600

Recycled parts

450

New Energy Vehicles dealers outlets in China

>60,000

BMW NEV customers in China

3,263

Total defective HVB recycling volume by pieces

Note: The charging wallbox in this photo is for illustration only. The actual product may vary depending on BMW dealers.



BMW Brilliance vehicle production line in Plant Tixi.

TOTAL QUALITY MANAGEMENT

BMW Brilliance has in place a Total Quality Management culture based on the concept of quality as spanning the complete customer experience, from the product itself to our supporting services. Quality and customer satisfaction are essential for our business success as a premium brand, and are included in our top corporate targets.

Building an organisation-wide culture of quality is central to BMW Brilliance's corporate values. From product design to the production line and our customer service centre, the responsibility for quality at BMW Brilliance reaches down to every entity of our process that contributes to value creation for customers. While top management is directly responsible for quality, the performance indicators and responsibility span from the Board of Management to the employees directly in contact with customers, through a 3-level target agreement process. We also have a quality target steering function which reports directly to the CEO.

BMW Brilliance strives for Zero Defect in our production, in all new products, and throughout the supply chain. We utilise Industry 4.0 technologies to enhance our data analytics, which further improves our process stability and product quality. We adopt artificial intelligence tools in our process control system which include machine learning for pattern recognition. Coupled with our state-of-the-art visual recognition technology, we have put in place automated quality checks with real-time results and immediate diagnosis of root causes, improving not only quality performance but also productivity.

We also foster innovations in product quality improvement through an annual Quality Award within the Technology function. In 2019, twenty teams participated in the Quality Award competition, which was won by the Powertrain Melting and Casting Shop for a project on pressure curve optimisation, which reduced casting defect rates.

BMW Brilliance models won the 2019 China Automobile Customer Satisfaction Index (CACSI) from CAQ.



BMW 3 Series
Top B-class Luxury Sedan



BMW 5 Series
Top C-class Luxury Sedan
Top PHEV Sedan



BMW X1
Top A-class Luxury SUV Sedan



BMW X3
Top B-class Luxury SUV Sedan

PRODUCT SAFETY DESIGN

Ensuring the safety of our product includes both maximising safety on the road, and the protection of our customers' health through the use of hazard-free materials. BMW Brilliance has an integrated approach to product safety, in line with the global safety standards of the BMW Group. We protect our customers, passengers and other road users through the design and installation of advanced passive and active safety systems, and we ensure that only hazard-free materials are used in our vehicles.

Intelligent Safety

Intelligent Safety consists of one or more systems that can help improve driving safety under various circumstances and prevent imminent collision, through precision monitoring and data analysis.

Leveraged on the ability to measure real-time speed and distance with surrounding objects, the Emergency Brake Assist function can warn drivers about the risk of collision and, where appropriate, brings the vehicle to a complete stop before it results in a crash with an obstruction, a person or another vehicle. It can effectively reduce the possibility of rear-end collisions.

The Lane Change Warning function uses sensors to monitor the area and blind spots around the vehicle to assist drivers execute lane-change in a safe manner. This warning is made, for example, using flashing symbols on the side mirror, or even through steering wheel vibrations or steering impulses.

These functions, along with other active safety measures, allow us to reduce risk of accidents and injuries faced by our customers and other road users.

Highest rating in the 2019 China-Insurance Auto Safety Index (C-IASI) test.

The all-new BMW 3 Series gained highest rating on Roof Strength and Pedestrian Safety, in the 2019 China-Insurance Auto Safety Index (C-IASI) test. It was the highest rating ever gained among all tested cars since relevant tests implemented.



Intelligent Safety - Emergency Brake Assist Function.

CUSTOMER HEALTH PROTECTION

We ensure the health of our vehicle drivers and passengers by adhering to the most stringent regulations regarding hazardous materials, to reduce potentially harmful emissions from interior components. We also provide a premium experience by controlling noise disturbance from engine and vehicle vibration. All regulations and standards for product safety and protection of customer health and the environment are met throughout the vehicle's entire life cycle, from development to use, recycling and disposal.

Managing Hazardous Substances

BMW Brilliance is committed to effective management of all prohibited and restricted substances. We utilise the BMW Group material database and the International Material Data System (IMDS), which enables us to identify any prohibited substances in our parts and components. We undertake safety testing to ensure compliance with relevant international and national standards, for instance, the EU regulations of Directive 2000/53/EC, REACH, and China's regulation of GB/T 30512 Requirements for Prohibited Substances on Automobiles, to control the limits of hazardous materials, such as lead (Pb), mercury (Hg), cadmium (Cd), hexavalent chromium (Cr⁶⁺), polybrominated biphenyls (PBBs), and polybrominated diphenyl ethers (PBDEs), in our parts and components. We document and declare the inventory of high-risk parts with hazardous substances in compliance with the national standard.

Our use of the IMDS allows us to strengthen the control of hazardous substances, including those which are currently exempt from the GB/T 30512 standard. By proactively limiting the use of these substances, we have gone beyond current requirements and are better prepared.

Ensuring Interior Air Quality

BMW Brilliance provides a clean and healthy interior air quality for passengers by reducing Volatile Organic Compound (VOC) emissions and ambient air pollution. We strictly adhere to the BMW Group global standard of specifications in the design of all interior components of our vehicles, such as seats, instrumental panel, door panels, headliner, and carpet, in order to minimise VOC emissions. Our vehicles also comply with the vehicle interior air quality requirements stipulated under GB/T 27630 Guideline for Air Quality Assessment of Passenger Car, which is verified before vehicles are released for series production.

All BMW Brilliance vehicles are equipped with air purification filters to improve interior air quality by filtering dust particulates of various sizes, which is essential in times of severe ambient air pollution.

Examples of hazardous materials which we test for in our parts and components:

- Lead
- Mercury
- Cadmium
- Hexavalent chromium
- Polybrominated biphenyls
- Polybrominated diphenyl ethers



The interior of the BMW 3 Series - safe interior air quality and minimised noise level.

Minimising Interior Noise

We invest extensively in acoustic research and design to minimise interior noise and vibrations, providing a peaceful experience for drivers and passengers. Our Acoustic Centre draws on BMW Group's 100 years of technical experience and utilises cutting edge technology in acoustic simulation and testing to reduce interior noise from powertrain, body, mechatronics, and chassis.

Comprehensive simulation and testing of vehicle interior noise is carried out at our acoustic laboratories with the most advanced technologies, for instance acoustic simulation model, air tightness tests and wind tunnel experiments, to analyse the various noise sources and corresponding transfer path, and to evaluate the effectiveness of noise insulation design and features.

The Acoustic Centre is contributing to constant improvement of interior noise for all BMW Brilliance vehicles. In the case of the new Long-Wheelbase BMW 3 model, we achieved a 7 dB improvement in complete vehicle low frequency booming noise during the development phase. Furthermore, the Long-Wheelbase 5 Series model received a full score in the Interior Noise category of the 2019 C-ECAP evaluation, recognising our achievements in offering a safe and premium product.



The BMW 5 series obtained a gold medal in the China Eco-Car Assessment Programme (C-ECAP) assessment, and a full score in the Interior Noise category.

SUSTAINABLE PRODUCT LIFECYCLE

The regulatory response to global climate change includes increasingly stringent and challenging emissions standards for the automotive industry. BMW Brilliance is reducing the emissions of our vehicle fleet by embedding sustainability in every stage of our product life cycle. We are making our vehicles more fuel-efficient, offering more New Energy Vehicle (NEV) models, and making NEV use more accessible and convenient by providing more charging facilities and enabling more dealerships to sell and service NEVs. We also reduce emissions by recycling more materials and batteries from our vehicles.

PRODUCT LIFECYCLE CARBON EMISSIONS

Total Carbon Emissions across Value Chain

In 2019, the total carbon emissions across our value chain increased by 8.7%, while our total production volume increased by 9.1%. We continue to achieve marked improvements in fuel economy through efficient dynamics and increasing share of production and sales of electric vehicle models. The average fleet CO₂ emissions of BMW Brilliance per kilometre in 2019 were 137.8 g/km, which equals a 0.9% reduction compared to the previous year. Our CO₂ emissions from production decreased by 65.1%, as we switched to 100% renewable electricity for our production activities.

-65.1%

Reduction in CO₂ emissions from production phase as compared to 2018.

(In which Scope 2 emissions is calculated by market-based methodology in accordance with GHG Protocol Scope 2 Guidance.)

Figure 08

CO₂ emissions of BMW Brilliance automobiles (in t)

	2016	2017	2018	2019	Change from previous year %
Total Emissions	9,901,541	11,884,985	14,190,033	15,417,955	8.7
Upstream chain ¹	2,099,198	2,675,910	3,408,077	3,981,487	16.8
Production ²	342,724	278,195	317,486	110,743	-65.1
Utilisation phase ³	7,292,407	8,735,582	10,219,060	11,058,404	8.2
Disposal ⁴	167,212	195,298	245,409	267,321	8.9

1. Emissions from the upstream chain are calculated based on the carbon footprint of representative vehicles from the product lines.

2. Includes Scope 1 and Scope 2 emissions from production at Tiexi, Dadong and Powertrain plants in Shenyang. Scope 1 emissions are the direct CO₂ emissions generated by fossil fuel consumption at BMW Brilliance plants, excluding the fossil fuel consumption of construction and on-site suppliers. The coefficients used for calculation are from Emission Factors for Electricity, District Heating and Fuels issued by Application of German Association of the Automotive Industry (VDA). Scope 2 emissions are the indirect CO₂ emissions generated by the consumption of purchased electricity and heating at the BMW Brilliance plants, excluding purchased electricity and heating consumption of construction and on-site suppliers. For calculation of the Scope 2 emissions, "market-based" methodology is used in accordance with GHG Protocol Scope 2 Guidance issued by the World Resources Institute.

3. The fleet emissions are extrapolated from the average fleet emissions of BMW Brilliance products sold in a given year. The calculation was based on an average mileage of 150,000 kilometers.

4. Emissions from disposal processes are calculated based on the carbon footprint of representative vehicles from the product lines.

Fuel Consumption Management

5.79 L/100 km

2019 BMW Brilliance corporate average fuel consumption.

BMW Group's Efficient dynamics strategy enables us to produce more lightweight and aerodynamic vehicles, which along with our increase in NEV production helped to decrease our Corporate Average Fuel Consumption (CAFC) to 5.79L/100km (down from 5.84L/100km in 2018).

Our innovations in product design contribute to improvements in fuel efficiency, in terms of materials and performance. For example, our intelligent drag reduction intake grille automatically opens only when the engine, brake system, and other components need air, and is otherwise closed, optimising aerodynamics and reducing fuel consumption.

The Chinese government's Dual-Credit Scheme allows vehicle manufacturers to openly trade NEV credits on a trading platform and transfer CAFC credits to related parties. Our excellent performance on CAFC and production of NEVs enabled us to generate a surplus of 240,746 CAFC credits and 15,753 NEV credits in 2019, beyond government requirements. In 2019, the Ministry of Industry and Information Technology released a draft policy paper on Phase V fuel consumption regulation and revised dual-credit policy, which will be effective from 2021, with more strict requirements on CAFC and more emphasis on producing NEVs. BMW Brilliance will take active measures, based on our forecast model, to adapt to this challenge, and plan for the best way to fulfill regulatory requirements over the long term.

Product Lifecycle Assessment

The BMW Group leads our product life cycle assessments (LCA) of carbon emissions, in accordance with ISO 14040 Environmental Management – Life Cycle Assessment – Principles and Framework. BMW Brilliance collaborates with BMW Group to evaluate the carbon emissions of representative vehicle models over the entire life cycle, from raw material acquisition to product disposal and recycling.

The BMW Group material database and IMDS systems are fundamental for collecting and monitoring information about parts and components as a basis for our LCA calculations, so that we can better understand potential environmental impacts. Conducting LCAs enables us to identify areas for improvement and develop practical solutions to reduce emissions and environmental impacts. In 2019, we conducted LCAs for 2 selected parts for the China Eco-Car Assessment Programme (C-ECAP). In the meantime, we are also preparing to conduct LCAs for more models in 2020.



The BMW all new iX3 to be manufactured at BMW Brilliance and launched in 2020.
 (Note: the picture shown is BMW iX3 concept model)

FORGING E-MOBILITY ECOSYSTEM

BMW Brilliance is a pioneer in E-mobility, offering premium new energy vehicles and the infrastructure and services to effectively support them. Our production strategy is aligned with the BMW Group commitments of offering 25 electrified models by 2023, with more than half of those vehicles planned to be fully electric.

We are in a position to shape the future of E-mobility in China by forging a complete, closed-loop ecosystem. As we lead the premium NEV sector with cutting-edge technology, a rich product portfolio, and convenient E-mobility services, we contribute to China's national commitment to shift to low-carbon transportation and smart cities. Development of new energy vehicles is a necessity in an era of ever-increasing requirements to reduce CO₂ and deliver zero-emission vehicles, and our strategy includes the flexibility to respond to all kinds of regulatory and market demands.

BMW Brilliance E-mobility Ecosystem



We construct and advance the E-mobility ecosystem in six areas, to shape the future of E-mobility in China.

Growth of E-mobility

The prospects for E-mobility are expanding in China and globally, and BMW Brilliance is leading the way with a future-oriented vision that includes the development of cutting-edge premium NEVs, which are already demonstrating rapid sales growth. 2019 was a strong year for new energy vehicle production, with sales of 32,246 BMW NEVs, up 50.4% from 2018, and sales of the BMW 530 Le doubled year-on-year.

In 2020, production of the fully-electric BMW iX3 will begin at our Shenyang plant. Not only will it further strengthen BMW's premium NEV line-up for the China market, the new model will also be exported to the global market, putting our "In China, For China and For the World" commitment into action.

To support our growth in electric vehicle products, we increased our NEV dealer outlets from 336 to 450 in 2019, achieving 100% coverage of all Tier-1 and Tier-2 cities. In 2020, we will further expand our NEV dealer network to sell and service our NEV models.

Technology Leadership

Increasingly higher demands for technical parameters mean that BMW Brilliance is at an advantage in the rapid development of E-mobility, by virtue of the BMW Group's extensive knowledge and years of experience. In 2019, BMW Group released the ground-breaking fifth-generation eDrive system, which has global significance for NEVs in terms of the upgrades in performance, range, weight, space, and flexibility, and is the key to future-oriented sustainability for vehicles with electrified drive systems. The fully electric BMW iX3 will be the first BMW model to benefit from this highly efficient electric drivetrain, providing a novel balance between range and battery size.

Battery Competency

Our PHEVs maintain the top position in the premium China market with our continuous product improvements. The BMW X1 xDrive30 Le and ZINORO 100H compact SAVs include a new type of battery, with the latest advances in battery cell technology enabling an 83% increase in e-range and reduction of combined fuel consumption by 72%, to 1.3L/100km.

We are working on the development of lightweight, highly efficient and safe batteries with outstanding energy density. Our HVB Centre and assembly capacity is growing rapidly, with the HVB Centre Phase I open in 2017, and production expected to start in HVB Centre Phase II in 2020, marking a crucial step in BMW Brilliance's NEV localisation strategy.

Higher density
Less material use
More sustainable



High-Voltage Battery modules are assembled at BMW Brilliance HVB Centre.

The High-Voltage Battery featured in the BMW iX3, with a net-battery size of 74 kWh, is an integral part of the BMW fifth-generation eDrive system that enables the BMW iX3 to realise a range of 500 km within the NEDC test cycle – a range that is only possible for common electric vehicles with larger and thus heavier batteries.

Meanwhile, the BMW engineers were able to reduce the share of cobalt contained in the battery by a significant margin compared to the former technology. To achieve circular economy, the HVB is designed for a second life as a stationary battery pack, following the first long life in the vehicle.

The BMW iX3 will be produced at the BMW Brilliance Shenyang production base in 2020, for both China and global markets.



BMW Park & Charge at Beijing Capital International Airport.

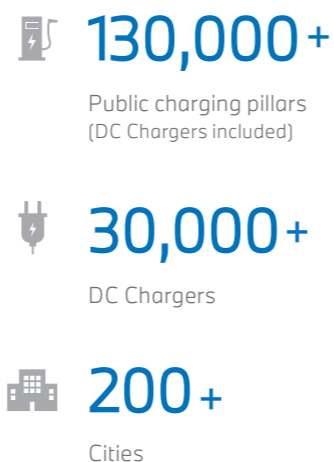
Charging Infrastructure

In 2019, BMW Brilliance significantly expanded our network of public and private charging facilities, coupled with improved digital solutions which enable our customers to use our charging services much easier and more conveniently.

By the end of 2019, we surpassed our target for public charging network expansion, with more than 130,000 high-quality public charging pillars in place across 200 cities, including 30,000 DC chargers. We also rolled out dealer charging stations at 172 dealers. To improve customer charging experience and convenience, we expanded the Park and Charge service, in which we have zoned over 200 parking lots at major public transportation hubs in five cities exclusively for all BMW Group customers to park and charge their vehicles.

We provide safe and worry-free private charging solutions to meet all kinds of customer needs. Our basic private charging wallbox installation service is complimentary and available nationwide for BMW NEV customers who have parking spots feasible for installation. For customers without the installation pre-conditions, they can choose to use a free BMW charging wallbox, or enjoy a complementary charging card service that are provided in certain cities. Our goal is to make charging easy without leaving home.

We are shaping the future of E-mobility through innovation and digitalisation of our charging services. Our NEV customers can easily access charging information via multiple digital channels, including **BMW ConnectedDrive**, **BMW Connected APP** and **ChargeNow WeChat platform**. We have also realised Charging Pillar Operator (CPO) roaming with BMW Connected to allow our customers to enable charging and payment via ChargeNow without deposit, a key milestone of improving customer charging experience.



CIRCULAR USE OF MATERIALS

We do not consider end-of-life materials from our vehicles as disposable wastes, but instead as secondary source of raw materials that can re-enter our product lifecycle. However, these materials must deliver the same or superior quality. We collaborate with stakeholders to establish recovery systems for disposed components and materials, and work towards reintegrating them into the raw materials cycle.

We calculate recoverability rate and recyclability rate in accordance with the methodology stipulated in GB/T 19515 Road Vehicles-Recyclability and Recoverability-Calculation Method. This process not only fulfills the requirements of the national standard, but is also in accordance with EU End-of-Life Vehicle (ELV) directives.

Parts Remanufacturing

At BMW Brilliance, we have been pioneering and practicing circular economy principles through developing specific product lines of remanufactured parts, as part of our continuous efforts to maximise material use and reduce energy consumption and GHG emissions, while simultaneously supporting the after-market needs of our customers with lower cost of vehicle ownership.

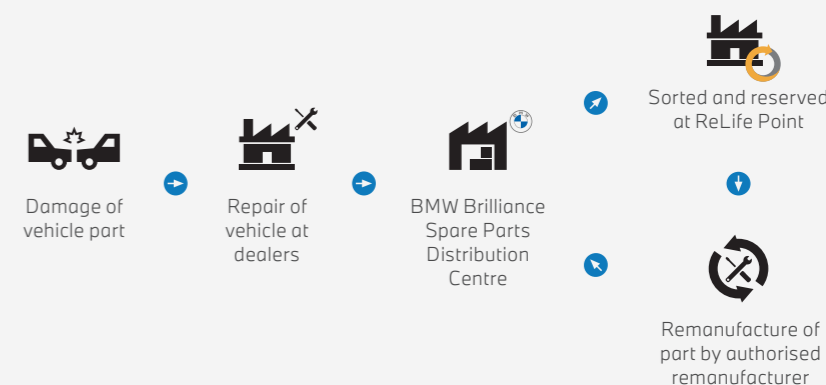
Following a successful trial offering, in 2019 BMW Brilliance released eight more models of remanufactured automatic transmission. At this point, there are over 60 kinds of parts which can cover the mainstream BMW 8HP car models. We also launched the AC compressors as a remanufactured product which utilised over 2,500 recycled AC compressor cores throughout the remanufacturing process. This product has provided a much more economical option for repair and has been well received by our customers. Building on this momentum, we are currently developing remanufacturing capacity for Electrical Power Steering (EPS) steering gear, head units, and mechatronics, with plans to go live in 2020.

To further enhance the collection and recycling of vehicle parts, BMW China has established a partnership with ENCORY to set up the first ReLife Point (RLP) in Cangzhou, Hebei, as a centralised facility for parts remanufacturing and removal, and further recycling in the future.



The ReLife Point and reverse logistics system

The RLP will serve as a central hub of our reverse logistics system, powered by digital solutions, to enable material flow from dealerships back to the hub in an effective and traceable manner.



Now with the release of the Measures for the Management of End-of-Life Vehicle Recycling by the State Council in May 2019, for the first time the Government is opening up the market for the remanufacturing of five key vehicle components – the powertrain, steering system, transmissions, front and rear rails, and car frame from end-of-life vehicles. It lays down the legal framework that a regulated vehicle recycling and remanufacturing market needs to grow in order and good health. BMW Brilliance is delighted to see the policy advancement, and will continue to invest and expand our remanufactured products, thereby contributing to the growth of circular economy and green development in China.

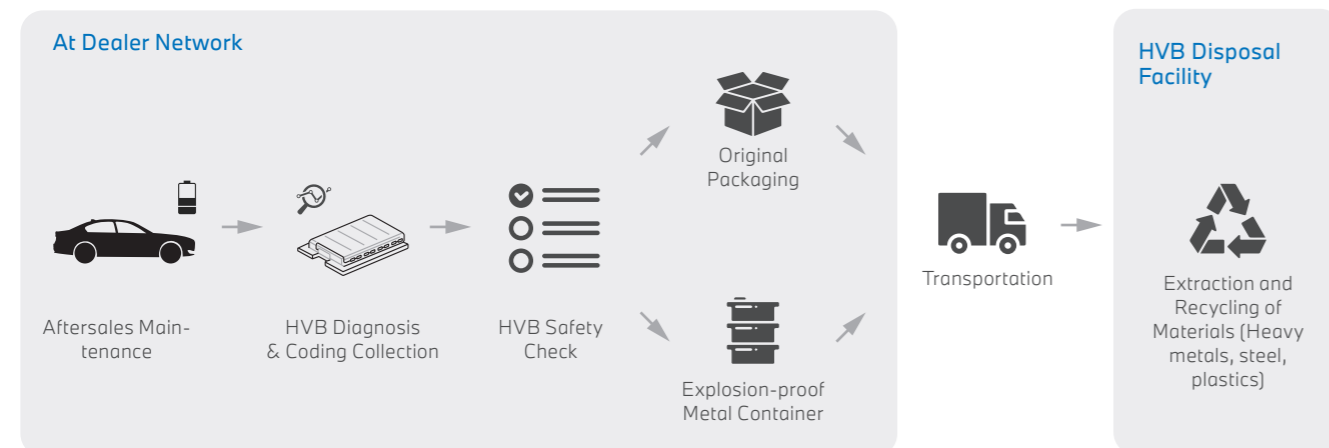
High-Voltage Battery Recycling

Recycling of HVB has always been a consideration in our battery design and development, because the raw materials of HVB are highly valuable. We have taken a leading role in HVB Recycling and as reported by our recycling partner, our raw material extraction rates are 99.43% (nickel), 99.09% (cobalt), and 99.4% (manganese).

Our HVB recycling process includes diagnosis, safety checks, transportability check, packaging, and transportation from our dealers to the recycling facility. 423 NEV dealers have reported to MIIT in 2019 as BMW HVB recycling network service stations. A new national policy released in November 2019 sets more stringent requirements for HVB storage and recycling outlets, and we will enhance dealer capacity to ensure compliance and safety.

Meanwhile, BMW Brilliance is exploring the potential for secondary usage of replaced HVB, and pilot projects are planned in 2020.

Figure 09
HVB recycling process at BMW Brilliance



3,263
pieces of defective HVB
were recycled in 2019 with a
total weight of 78,875 kg.



We strive to provide customer-centric services to our customers.

CUSTOMER-CENTRIC SERVICES

BMW Brilliance's relationship with customers is essential for realizing our vision for a successful and sustainable business, and customer satisfaction is a top corporate target. We engage with customers to understand their experience and interpret and respond to any feedback, with multiple channels open for unfiltered customer comments in order to maximise transparency.

Our business strategy is customer-centric, made possible through close collaboration with our dealership partners. Particularly as the automotive industry undergoes disruptive changes and transformation, listening to customer voices provides important input to our strategic decisions for product development. Our relationship with customers is also evolving, from a one-time transaction to a lifetime relationship with continuous interaction.

BMW Brilliance's new subsidiary start-up company, LingYue Digital Information Technology, was launched in 2019 to accelerate our customer-centric digital transformation and improve our customer lifecycle management. LingYue is a data service provider and innovation incubator, with an important role to play in our growth and value creation in China through digital solutions and services that enable seamless online-to-offline customer experiences. As a start-up, LingYue benefits from the experience of BMW Group but can react quickly to changing customer needs.

CUSTOMER SATISFACTION AND DEALER PERFORMANCE

Our dealers have the most direct interactions with customers, and we are continually working with dealers to improve customer satisfaction. We use the Joy Index to monitor dealer performance in sales and aftersales services, which enables us to jointly track improvements over time and align services with customer needs and expectations.

The Customer Board Platform provides regular dealer performance reports in regards of service quality, tools for daily operational management and best practice sharing. In 2019, 70 additional dealers began implementing the Customer Board project, reaching a total of 205, and engagement with dealers was deepened through the participation of BMW Brilliance and BMW China cross-functional teams in on-site meetings to share best practices and lessons learned, and support resolution of common customer issues.

One aspect of dealer performance is environmentally responsible management, which is increasingly relevant to customer expectations in terms of both their own health and safety interactions and their expectations for responsible corporate actions and regulatory compliance. As environmental standards and enforcement tighten, meeting regulatory requirements is important for our dealers to ensure the stable provision of high-quality service to customers without disruptions caused by enforcement measures. BMW Brilliance supports dealers with an EHS Manual and Dealers EHS Self Check List which covers relevant legal regulations, and EHS management workshops to understand current practices. Another 10 workshops with big dealer group are planned in 2020.

RENEWED CUSTOMER EXPERIENCE

With the unprecedented changes happening in the automotive market, customer satisfaction underpins the survival of a company. Customer satisfaction arises from customer experience, and excellent customer experience is based on customer needs being heard, understood and met. Today's customers value more for personalisation, easier and faster access to information and virtual user experience. This is why we are taking proactive steps to digitally transform the way we engage and interact with our existing and prospective customers, with emerging technologies in addition to traditional physical touch-points at dealerships.

In 2019, BMW Brilliance launched the BMW Official E-commerce Shop on WeChat platform, to offer customers a cyber experience to learn about BMW vehicles in real time, even if they do not have physical access to the products. Our E-shop consolidates all information a customer would wish to know before purchase, including product specifications, finding dealership locations, and reservations for test driving. Additionally, customers can enter our Virtual Showroom where our product specialists can provide one-on-one introductions to the product in detail via real-time video interaction.

205

Dealers

were engaged through our Customer Board Platform for customer satisfaction management.



BMW Dealers EHS Self Check List

Covering 114 self-check items of Environmental, Health and Safety aspects of management regulation and facility operation.



A BMW dealer completed the Network Transformation Project in 2019.

As live broadcasting has quickly become the new way of customer interaction, we are also collaborating with the T-mall, to put on regular roadshows of our products, including live-broadcasting by celebrity sales of our dealers to engage with customers online.

Moving from online to offline, we are steadfast in our collaboration with dealer partners, and empower them to create a cozy and premium customer experience across all points of contact in the dealership in response to market transformation. To this end, this year BMW Brilliance, in a joint effort with dealers, put forward the Network Transformation Project to revitalise our dealer outlets inside-out – with emotionalised and modernised design in line with the philosophy of customer centricity, product boutique layout, multi-sensory connection, interactive spaces with different levels of privacy and digitalisation, and human-oriented services – all meant to deliver a brand-new unique experience to customers from their first step of entering the dealer outlets. The new concept has rolled out to 59 dealers and will expand to cover more dealers in 2020.

FOSTERING SUSTAINABLE LIFESTYLE FOR BMW CUSTOMERS

Creating NEV Customer Community

Investing in long-term relationships with BMW customers also means the opportunity to promote sustainable behaviour, in particular for NEV owners who are pioneers in a new type of sustainable lifestyle in China. BMW Brilliance has the opportunity to influence and positively reinforce the formation of more sustainable consumer habits and choices, including selection and use of BMW NEV.

Our objective is to strengthen and expand the community of NEV owners, building goodwill and product trust of NEV models among key customer groups, and connecting individuals sharing the same vision. In 2019, we held NEV events in five cities, giving current owners and potential customers the opportunity to learn about new models, test drive vehicles, and connect with others in the BMW NEV community. We hosted dialogues where full-electric vehicle owners shared their opinions and experiences, and we promoted sustainable lifestyle by partnering with NGOs to share about environmental topics such as waste recycling. With the launch of the BMW East Region NEV Power Platform in November, more and more NEV owners have been encouraged to adopt a sustainable lifestyle and take more responsibility for environmental protection. Through this platform, BMW East Region will plant trees in BMW NEV Eco-Forest in Xinjiang and Inner Mongolia for NEV owners, following a commitment made at the November 2019 launch ceremony. By the end of 2019, a core group of NEV owners was willing to share and promote sustainable lifestyles.

>60,000

BMW NEV Customers in China

They are our ambassadors to promote green and sustainable lifestyle.

Promoting Driving Safety

We support BMW customers to achieve a safe and confident driving experience through road safety training provided by experienced trainers. More than 14,000 participants took part in our Driving Experience training courses and events across ten cities in 2019, including advanced modules on how to handle your vehicle during an emergency and how to drive in snowy conditions.



Launching ceremony for BMW East Region NEV Platform.



2019 BMW NEV Customer Event in Shanghai.

FORECAST 2020

In line with the BMW Group's strategy, BMW Brilliance will continue providing a premium sustainable offering through our R&D, production and customer-centric services. We will prepare for the global launch of the all-electric BMW iX3, the first to use BMW's new fifth-generation eDrive technology, in 2020, which will be produced in our Shenyang plant and exported globally, fulfilling our pledge of "In China, For China and For the World".

We will strengthen our effort to address climate change throughout our entire value chain. We are preparing to conduct Lifecycle Assessments for selected BMW Brilliance models, to improve our understanding of environmental impacts throughout the product lifecycle.

We continue to lead in shaping the future of E-mobility. In 2020, we are targeting to integrate all charging services into a "One-Stop-Shop" platform for optimal customer experience.

With a clearer policy framework and requirements coming into place, we will launch three more remanufactured parts in 2020. Meanwhile, we will kick off the remanufacturing development of new parts for products such as transfer box and starter/alternator. Our ReLife Point facility is expected to reach full function in 2020, and the core current collection and handling processes at all Regional Distribution Centres will be switched to RLP. The Encory China Dealer Front-end (ECDF) tracking system will also go live to support our reverse logistics process.

The Network Transformation project will expand to cover more dealers, and we will expand participation in the Customer Board platform to 245 dealers. Our mission is to inspire, empower, and enable dealers to achieve outstanding customer satisfaction through digital tools for centralised training and knowledge-sharing.



PRODUCTION AND VALUE CREATION

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PRODUCTION AND VALUE CREATION

BMW Brilliance's commitment to green, smart and sustainable manufacturing is our way of meeting the responsibility that we have to society to tackle global challenges such as climate change and resource scarcity. Sustainable production is at the core of our business, and is fully integrated into our strategic goals and targets. Smart manufacturing helps us to improve our quality and efficiency, and is fully embedded in our production facilities. We are continually working to further reduce the CO₂ emissions and resource use per vehicle we produce, through better energy management and a transition to use of fully renewable energy resources. Our efforts in green logistics are helping to reduce our environmental footprint, through increased use of low-carbon and multimodal options and innovations in green packaging. For our supply chain, we foster the implementation of social and environmental standards, along with transparency and resource efficiency, and are shifting from risk control to risk prevention. We also support initiatives to improve sustainability in the mining and processing of critical raw materials. An expanded approach to increase sustainability of both our own production and that of our logistics and supply chain partners is an essential element of meeting external expectations and our own rigorous standards.

CONTRIBUTION TO SUSTAINABILITY DEVELOPMENT GOALS (SDGs):



2019 HIGHLIGHTS

5G

Coverage at our Shenyang production base

100%

Renewable electricity used in Shenyang production base*

-68.3%

Reduction in CO₂ emissions per vehicle produced**

1.63 MWh

Energy consumption per vehicle produced

-7.1%

Reduction in VOC emissions per vehicle produced

-17.4%

Reduction in CO₂ emissions per unit for inbound logistics

394

Local content suppliers in China

Note:

* Including the generation of solar power electricity, the purchase of wind power electricity and I-RECs.

** Calculated by market-base methodology in accordance with GHG Protocol Scope 2 Guidance.

PRODUCTION STRATEGY

As the largest production base in BMW Group's global production network, BMW Brilliance is committed to green, smart, and sustainable manufacturing. Our production strategy integrates sustainability into our Purpose & Vision, Strategic Goals, and Core Values to form the long-term foundation of our business. Sustainability is also integrated into our strategic approach, with our regular strategy process as a consistent tool to continuously review and align the strategy. Our strategy process utilises the EFQM Model as a philosophy and methodology to drive improvement throughout our production and environmental management, integrating stakeholder expectations and tracking our achievements based on key performance indicators and targets.

The three strategic goals are the strategic priorities of our production strategy and are closely connected with sustainability: Local Strengths, Flexible Response, and Good Neighbour. With regards to **Local Strengths**, we aim to optimise the advantage of operating within our main market of China by utilizing local strengths, local decision-making, and our unique "blended culture". We have skilled and passionate people with an excellent problem-solving mindset, and we focus on precise process adherence. Additionally, we are applying our local strengths to tailor vehicle models for the Chinese customer. **Flexible Response** is all about ensuring readiness for the future. We proactively take calculated risks and prepare for opportunity and risk-driven scenarios in a challenging environment including our Zero Defect Launch activities, raw material management, and regulatory compliance.

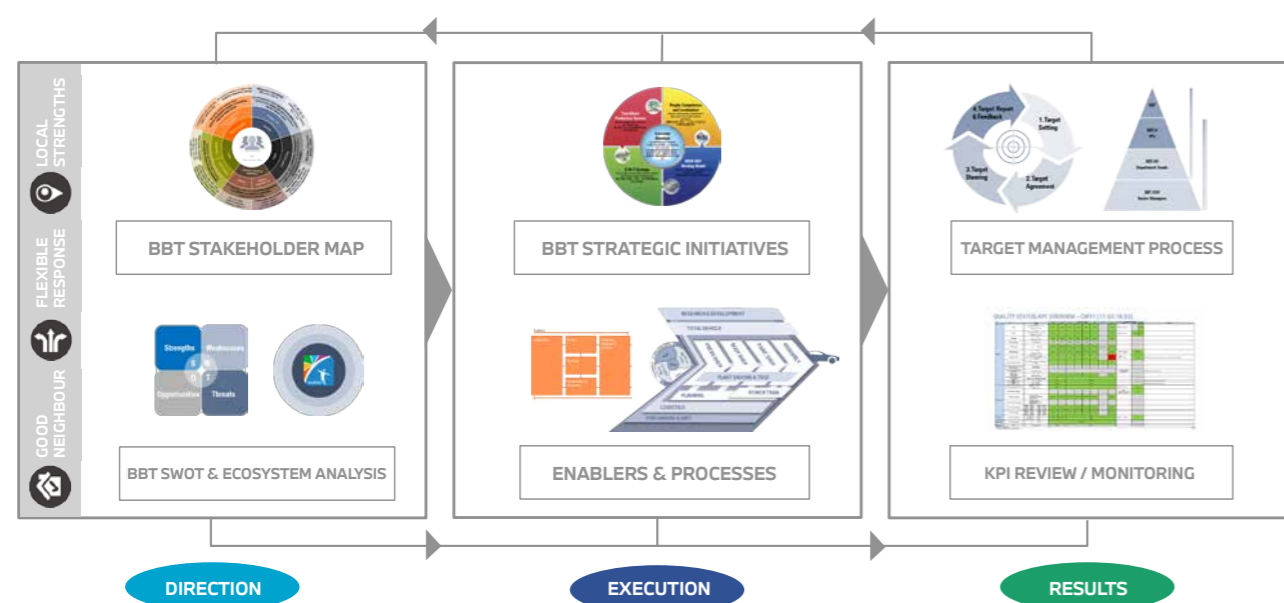


To be a **Good Neighbour**, we strive to be a good corporate citizen for the mutual benefit of both BMW Brilliance and the society. We are committed to environmental sustainability through smart and green manufacturing. We reduce energy consumption by focusing on energy efficiency of our production processes, and cut our fossil fuel consumption by switching to clean energy sources. We reduce water consumption by reusing and recycling safe wastewater. In addition, we reduce VOC and CO₂ emissions, and ensure responsible waste management for the good of our society.

The Strategic Goals are the guiding elements for the Strategic Approach. We define our strategic direction according to stakeholder expectations and ecosystem developments. On that basis, we translate our direction including the strategic goals into strategic initiatives and enablers and business processes, which serve as the actions to optimise current capabilities and tackle major challenges. The effectiveness and efficiency of these actions are translated into performance measurements which are reviewed and measured against our aligned targets. Sustainability is fully integrated into our daily operations management and the regular review of progress and success. Specific quantitative targets are in place for environmental performance such as emissions and waste management. Finally, the results are used to update and adapt elements of the strategic approach, closing the circle of the strategy process.

In 2020, we will continue to integrate sustainability into the core of our strategy process, and contribute efforts to drive improvements in production efficiency and environmental sustainability. As a role model for green and sustainable manufacturing, we will continue to adhere to our strategy by reducing environmental impact to achieve sustainable development in the long run.

Figure 10
Our Production Strategy process

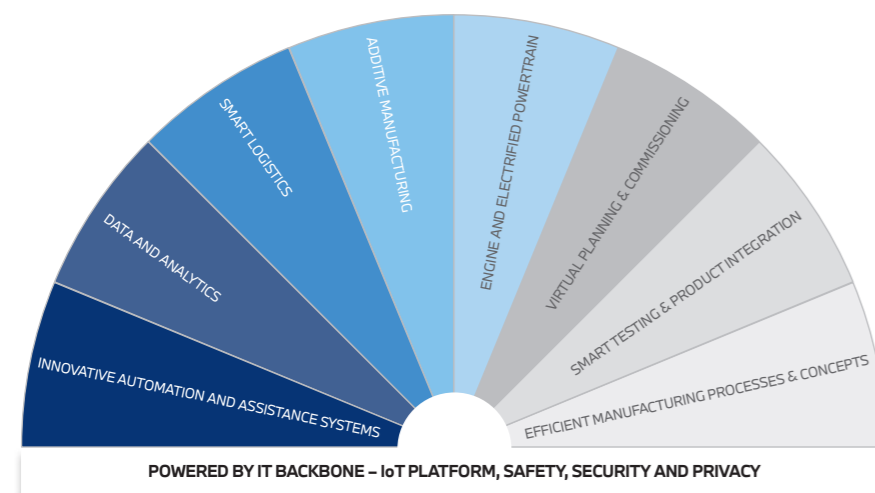


SMART MANUFACTURING

In this fast-developing era, smart and intelligent manufacturing is becoming the new norm for high-end manufacturing industry, and a core strength that has already begun to differentiate our competitiveness from the others. BMW Brilliance has long envisioned the strategic importance of such transformation, and we are positioned as a leader and pioneer in the application of "Industry 4.0" technologies in our production systems. By acting as a role model and bringing in world-leading technologies, we strive to accelerate China's transition towards intelligent manufacturing and promote the upgrade of traditional industry.

Our state-of-the-art production base in Shenyang combines Industry 4.0 and Chinese craftsmanship, and cutting-edge intelligent manufacturing and digital innovative technologies are well integrated into our production processes. We develop and apply these technologies in eight areas, spanning production planning, manufacturing, testing, logistics and data analytics etc., all with the support of a robust IT infrastructure with an IoT platform, safety, security, and privacy.

Figure 11
Our priority areas in smart manufacturing application



Our highly flexible production systems at both Plant Tiexi and Dadong are capable of manufacturing combustion engine models and NEVs on the same production line, and our current applications of Industry 4.0 technologies focus on improving process stability and quality assurance by advancing the intelligence of machines and systems, so they can learn from patterns, communicate with each other, and predict errors and deviations. At Plant Dadong, we are now able to perform predictive maintenance for over 1,200 equipment motors in our assembly line through remote monitoring and management of motor operating status, and intelligent diagnosis of issues. This has allowed us to minimise production fluctuations due to unpredicted shut-down and maintenance of equipment or system.

We are actively levelling up digitisation and automation throughout our logistics process, as we believe the future of logistics is smart. At Plant Tiexi, we utilise Automated Guided Vehicles (AGV) that operate automatically based on real-time machine-to-machine communication enabled by sensors in our warehouse. The AGV is capable of self-transporting up to 5t of bins in one go, which is equivalent to the work done by five forklifts, thereby reducing our resource consumption while improving efficiency substantially.



In the area of international logistics, in 2019 we established a new transportation tracking system, referred to as Import & Export On-carriage Visualisation, which is a centralised platform that enables real-time tracking of incoming and outgoing cargo routing via GPS technology, coupled with a pre-warning mechanism to predict the risk of cargo delay and ensure in-time delivery for production and aftersales service. This new advancement once again demonstrates BMW Brilliance's efforts in executing our digitalisation and Industry 4.0 strategy, contributing to our aspiration of Zero Defect in supply chain, production and logistics.

With full coverage of the 5G network at all our Shenyang production facilities, BMW Brilliance has become the first automobile R&D and production base with 5G connectivity within the BMW Group, and in the world > p.31 New Technologies. This was a cornerstone in our journey of next-generation smart manufacturing, and we have laid a robust groundwork for constructing intelligent facilities for our new plant development and extension projects, that are set to commence operations in the next two to three years.



BMW Brilliance Plant Tianjin

GREEN PRODUCTION

BMW Brilliance is taking on the responsibility to address global climate change and resource depletion. We strive for continuous improvement in our energy and resource efficiency under the framework of green production, actively contributing to the BMW Group targets for reducing resource consumption and answering the call from the Chinese government on green development and environmental protection. Our efforts in this area are in line with our stakeholders' expectations, and also enable us to reduce our production costs and prepare us to meet increasingly stringent regulatory requirements.

GREEN PLANT MANAGEMENT

With our ongoing efforts in green production and management, our 2019 National Green Plant audit results improved further as compared to 2018. We are proud to be one of China's first National Green Plants, and to continue to maintain this status year after year.

The management system we have in place is designed to help manage and limit our resource consumption. All our production plants are certified with the Environmental Management System ISO 14001:2015 as well as meeting the BMW Group standards on environmental policy. Every year, we evaluate our management performance and identify areas for continuous improvement together with the environmental specialists from the BMW Group, who have vast exposure and experience among the many BMW production bases and are able to share best practices and know-how in environmental management.

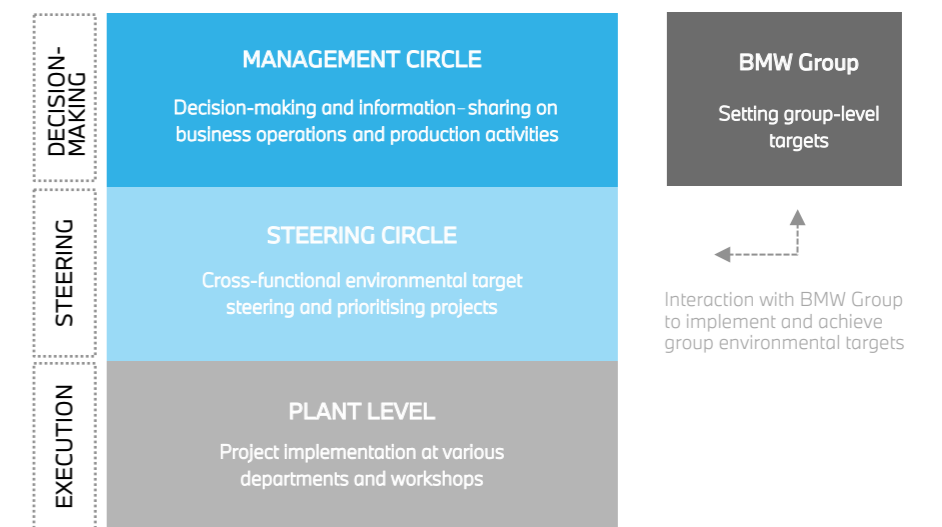
BMW Brilliance production bases are certified with the following management systems:

- ISO 9001:2015
Quality Management System
- ISO 14001:2015
Environmental Management System
- ISO 50001 :2011
Energy Management System
- OHSAS 18001
Occupational Health and Safety Management System

As we recognise the challenges as much as the importance to reduce energy consumption on yearly basis, we established a holistic energy management system in accordance with the ISO 50001:2011 standard and achieved the certification in 2018. This year, we successfully passed our annual evaluation. Investing in energy management also aligns with the Chinese government's Green Plant programme and prepare us to cope with the tightening energy regulatory requirements. Comparing to 2018, we have improved in operational and maintenance management of field equipment, energy measurement for key energy-intensive equipment, and the implementation of various energy efficiency measures in our production process. Looking forward, we will focus on risk identification and control associated with energy use and management, and to strengthen the energy-saving awareness for all employees.

Environmental governance at BMW Brilliance involves our Management Circle which plays an active role in decision-making, and each Plant Director is held responsible for environmental performance at their site. Inherited from and linked to the BMW Group, we have well-established Environmental Steering structure in place, which engages management level from the top for target-setting, a steering circle in the middle to facilitate cross-functional collaboration, and the plant level at the bottom to execute improvement plans. Through this steering process, BMW Group environmental goals and targets are cascaded down effectively for implementation, monitoring and evaluation.

Figure 12
Environmental governance and steering process at BMW Brilliance



Go Green With Our Next-Generation Infrastructure

As BMW Brilliance grows over time, we are designing our next-generation infrastructure as a new model of modern green plant, which embodies our commitment to reduce Greenhouse Gas (GHG) emissions, conserve resources and materials, and transition to renewable energy sources.

Set to begin construction in 2020, the new plant development of Plant Tiexi (Tiexi New Plant Project) has an array of sustainability elements embedded into its design. First and foremost, it will be powered by a Combined Cooling, Heating and Power (CCHP) co-generation unit using natural gas as the primary energy source, and can capture waste heat from electricity generation for steam production. The co-generation process can maximise total energy conversion and efficiency of the power system, while the use of natural gas, a much cleaner fuel than coal, will release significantly less CO₂ as well as dust particulates and sulphur dioxide to the atmosphere, contributing to a better air quality. We also plan to install a large-scale distributed photovoltaic system in Tiexi New Plant to increase the share of renewable sources in our energy matrix. Besides, Tiexi New Plant will incorporate the most advanced digital platform and green installations, including real-time monitoring of energy consumption and pollutant emissions, LED lighting system, and green building design features, among other Industry 4.0 technologies and smart systems. A new metro line is under planning to connect Plant Tiexi and the new plant with Shenyang city centre, organised based on high-volume travel during production shift times, to enhance the ease of commute for our employees while reducing the overall carbon footprint from shuttle buses.

Our Plant Dadong Extension (NEX), which broke ground in April 2019 and is scheduled for completion in 2022. After the extension, Plant Dadong will have a 100% flexible production system that is capable of manufacturing combustion engine models and NEVs on the same production line. The NEX also includes a direct railway connection from Plant Dadong Finished Vehicle Dispatch Area to Dalian Port, where our finished vehicles can be transported more seamlessly and efficiently to our various decentralised dispatch areas across China.

Sustainable design features of Tiexi New Plant include:

- Combined Cooling, Heating and Power (CCHP) co-generation unit
- Distributed photovoltaic system
- Real-time monitoring system
- Green building design
- Riverside green space
- Metro-line to Shenyang city



BMW Brilliance Tiexi New Plant Start of Construction ceremony.

RESOURCE EFFICIENT PRODUCTION

In realising our goal to be the most resource-efficient premium mobility service provider in China, we take bold actions to make our manufacturing processes more efficient with regards to energy and planetary resources, with less emission of GHG and waste to the environment. To reduce our carbon footprint and act against climate change, we have ramped up the use of renewable electricity for our operation, and achieved the BMW Group target of supplying production exclusively with electricity from renewable sources by 2020. With these measures, we meet our stakeholders' and government expectations for a high-quality and green development.

Reducing Greenhouse Gas Emissions

At BMW Brilliance, we are determined to drive down GHG emissions of our manufacturing process by assessing, improving and rethinking the way we use energy and resources, and exploring ways to use more renewable energy. To advance our management of GHG emissions, we established the GHG emission inventory for our Shenyang production facilities in accordance with the ISO 14064-1:2006 standard, and passed the 3rd party verification this year.

Direct GHG emissions are generated from the burning of fossil fuels from our production activities, whereas indirect emission is based on our consumption of purchased electricity and heating. In 2019, the production-related emissions from BMW Brilliance was 110,743 t of CO₂.

Figure 13

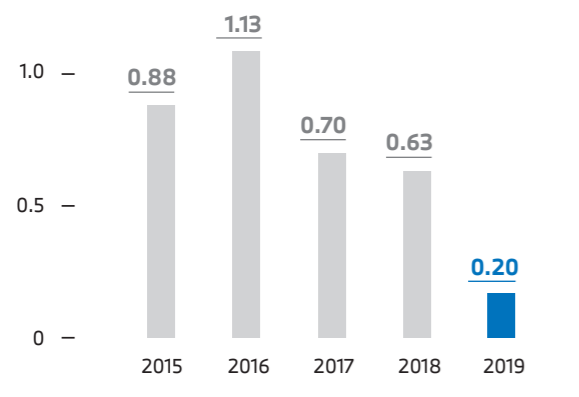
BMW Brilliance direct and indirect Greenhouse gas emissions (in t)

	2016	2017	2018	2019
Total Greenhouse gas emissions	9,901,541	11,884,985	14,190,033	15,417,955
Scope 1: Direct Greenhouse gas emissions ¹	33,570	37,448	35,733	42,141
Scope 2: Indirect Greenhouse gas emissions ²	309,154	240,747	281,753	68,602
Scope 3: Indirect Greenhouse gas emissions ³	9,558,817	11,606,790	13,872,546	15,307,212

1. Direct CO₂ emissions generated by fossil fuel consumption at BMW Brilliance plants, excluding the fossil fuel consumption of construction and on-site suppliers. The coefficients used for calculation are from Emission Factors for Electricity, District Heating and Fuels issued by Application of German Association of the Automotive Industry (VDA).
2. Indirect CO₂ emissions generated by the consumption of purchased electricity and heating at the BMW Brilliance plants, excluding purchased electricity and heating consumption of construction and on-site suppliers. For calculation of the Scope 2 emissions, "market-based" methodology is used in accordance with GHG Protocol Scope 2 Guidance issued by the World Resources Institute.
3. Indirect CO₂ emissions generated in the upstream supply chain, the utilisation phase and the disposal of automobiles produced by BMW Brilliance for sales in mainland China market of the year. Emissions from the supply chain and the disposal are based on the carbon footprints of representative vehicles from the product lines, calculated by Thinkstep's LCA tool GaBi. Emissions from the utilisation phase are based on the average fleet emissions of automobiles delivered of BMW Brilliance and an average mileage of 150,000 kilometres per vehicle.

This year, we reduced our CO₂ emissions per-vehicle produced from 0.63 t to 0.20 t, down 68.3% from 2018 and for the third year in a row. We see this as confirmation that our consistent efforts to improve energy efficiency and increase the share of energy coming from renewable sources are working.

Figure 14
CO₂ emissions per vehicle produced (in t/vehicle)



-68.3%

Reduction in CO₂ emissions per vehicle produced from previous year.

(In which Scope 2 emissions is calculated by market-based methodology in accordance with GHG Protocol Scope 2 Guidance.)

We also work to reduce our Scope 3 emissions, which includes emissions caused by the use and disposal of our products, upstream in our supply chain, and in transport logistics. Most of our Scope 3 emissions are generated during utilisation of our vehicles, which means that improving vehicle fuel efficiency and promoting NEV sales are targeting a significant source of emissions. BMW Brilliance has also begun to partner with suppliers to increase transparency on their greenhouse gas emissions through the Carbon Disclosure Project (CDP) > p.78 Ramping up for Carbon Disclosure Project Supply Chain Programme.

Use of Renewable Electricity

At BMW, we recognise the use of renewable energy in our production process as an essential approach to lower GHG emissions and mitigate climate change, therefore the BMW Group has set an objective to supply all production plants worldwide with electricity from renewable sources by 2020, and is expanding on-site renewable generation capacities in parallel.

At BMW Brilliance, we are taking actions at full throttle to complete our part of this effort – and we are proud to say that, by end of 2019, we achieved the target of using 100% renewable electricity in our Shenyang production base.

This symbolic milestone can only be accomplished with a clear clean energy strategy, which we formulated based on in-depth research on relevant policy requirements, market landscape and clean energy options to replace traditional energy. Riding on the wave of national power reform, most of our renewable electricity comes from the purchase of wind power, supplemented by the solar power electricity generated from our facilities, and the purchase of International Renewable Electricity Certificates (I-RECs).

We are also actively expanding our renewable energy generation capacity. In 2019, we completed the installation of distributed solar photovoltaic systems at Plant Tiexi and Powertrain, which has already generated over 20,000 MWh of electricity since operation commenced. We plan to expand the distributed photovoltaic system as part of the Tiexi New Plant development and Plant Dadong extension.

100%

Renewable electricity used in Shenyang production base by end of 2019.

(Including the generation of solar power electricity, the purchase of wind power electricity and I-RECs)



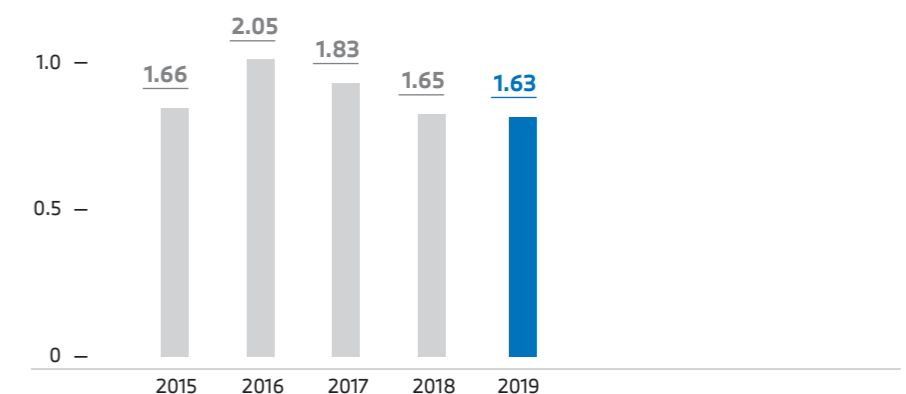
Integrated system of solar panel and wind turbine to generate renewable electricity for lighting.

Improving Energy Efficiency

In 2019, we were able to reduce the energy consumption per vehicle produced by 1.2% from the previous year. This was achieved through the implementation of various Energy Saving Enablers. Our waste heat recovery project in the Powertrain Foundry workshop enabled automatic recovery of high-temperature flu gas to heat water, with annual energy saving capacity of 6,800 MWh. We also established an energy metering management standard and energy data management platform to realise automatic collection of energy consumption data from energy-intensive equipment. This allows us to monitor energy consumption with accurate and real-time data to improve analysis and decision-making.

For capacity-building, this year the BMW Experts held the worldwide Value-added Production System (VPS) Energy Initiative to share best practices and to find potential energy saving measures within the plants in Germany and overseas. The VPS Energy Initiative at Plant Tiexi, Dadong and Powertrain was launched in June, and identified several specific measures to reduce energy.

Figure 15
Energy consumption per vehicle produced (in MWh/vehicle)



-1.2%

Reduction in energy consumption per vehicle produced from previous year.

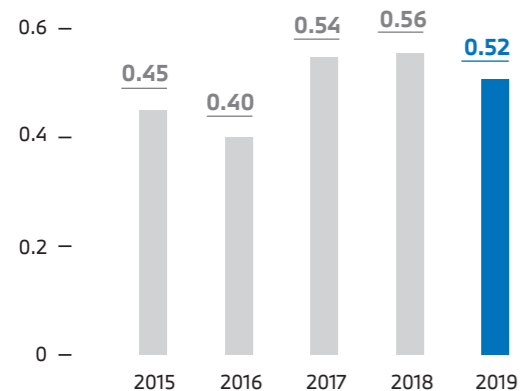


Lowering Volatile Organic Compound (VOC) Emissions

VOCs are hazardous in nature, which can cause detrimental depletion of the ozone layer and deteriorate air quality badly even in small concentrations. For this reason, VOC emissions are now heavily regulated in China with some of the most stringent standards in the world.

We aspire to be the role model of the industry in limiting VOC emissions from production process and complying with the latest VOC emission standards. Through our constant efforts to optimise the VOC treatment systems in our facilities and proactively shifting to water-based solvent, this year we reduced the VOC emissions per vehicle produced by 7.1%, to 0.52 kg/vehicle.

Figure 16
Volatile Organic Compound (VOC) emissions per vehicle produced (in kg/vehicle)



-7.1%

Reduction in VOC emissions per vehicle produced from previous year.

Looking to 2020, we learned that a new Liaoning Province VOC emission standard will further tighten the quota and allowable concentration of VOC discharge from our facilities. The challenge of meeting this new standard is critical, even with the one-year transition period which is in place. We have already begun feasibility studies for the upgrade of our existing VOC treatment capacity, and we invited a national VOC specialist from the Standard Committee of the Painting Industry to train our environmental and production team on VOC management and the new policy requirements.

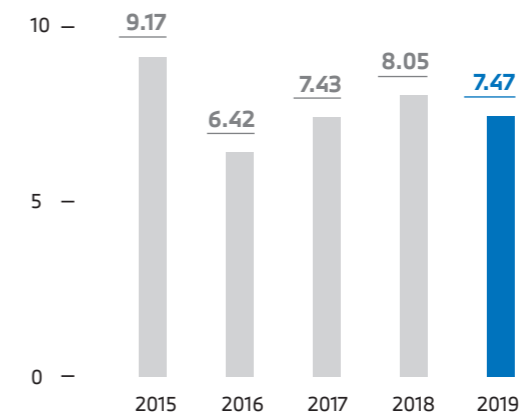
Responsible Waste Management

Our industry is resource-intensive, so we work hard to optimise efficiency, generate less waste, recycle whenever we can, and manage waste disposal responsibly. We record the waste we produce using an adapted version of the BMW Group's waste information system so that we can optimise the handling of waste, including reuse and recycling as well as regulatory compliance. In 2019, our waste disposal per vehicle produced was reduced to 7.47 kg/vehicle.

Figure 17
Waste for disposal per vehicle produced (in kg/vehicle)

-7.2%

Reduction in waste for disposal per vehicle produced from previous year.



Throughout our logistics operation and production process, we continue to expand the use of recycled and returnable packaging wherever practical to reduce packaging waste and minimise our environmental impact > p.70 Green Packaging. The waste weighing system installed in 2018 has been providing accurate data that proved to be fundamental to our waste management decision-making process.

We also installed a new sludge dehydration system that helps to reduce the volume of waste, which will run at full capacity in 2020, reducing the volume of sludge from 200 t/year to less than 40 t/year, and will also reduce our waste transport costs.

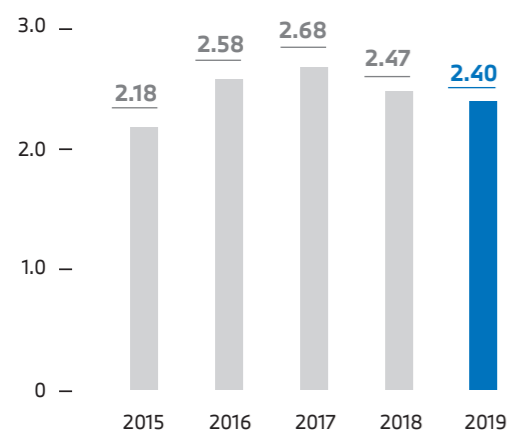
Reducing Water Consumption

We acknowledge our responsibility to consume and manage water resources more efficiently and sustainably, especially in Shenyang where we face perennial challenges with water scarcity. We monitor water consumption levels and targets at each of our plants.

We have been optimising our processes to reduce water consumption and reclaim water as much as feasible to reuse in our production and for auxiliary purposes. In Plant Dadong, the water reclamation system was optimised to save 18,616 m³ of water in 2019, and the wastewater recycling systems of Plant Tiexi and Powertrain recycled 113,068 m³ of water. Using a purification system for recycling water at Plant Powertrain contributed to saving 7,941 m³ of water resources.

With the water-saving measures above, we reduced our water consumption per vehicle produced by 2.8%, to 2.40 m³/vehicle in 2019.

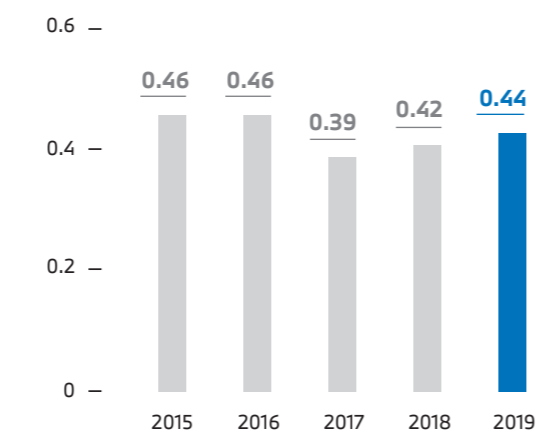
Figure 18
Water consumption per vehicle produced (in m³/vehicle)



-2.8%

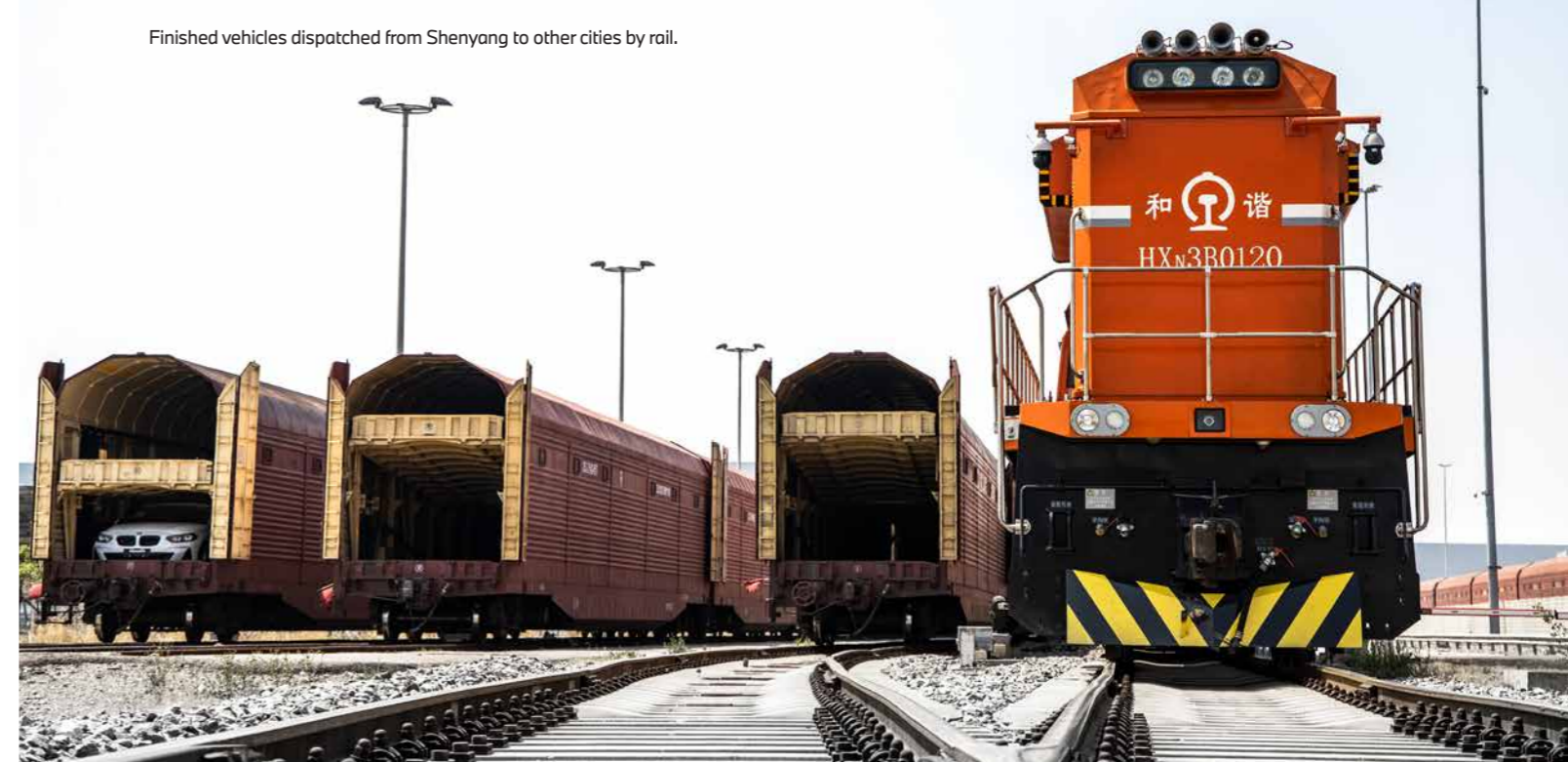
Reduction in water consumption per vehicle produced from previous year.

Figure 19
Process wastewater per vehicle produced (in m³/vehicle)



+4.8%

Increase in process wastewater per vehicle produced from previous year.



GREEN LOGISTICS

Our logistics planning is based on the principles of excellent quality, high efficiency, low consumption and sustainability. We aim for safe, efficient, and reliable transportation across the entire logistics chain, as we move parts from suppliers to plants, finished vehicles from plants to customers, and spare parts from regional distribution centres to our dealers.

Sustainability is always one of the focus areas in our logistics operation. BMW Brilliance has been actively scaling up low-carbon and multi-modal transportation which effectively reduce the CO₂ emissions from our inbound, outbound and aftersales logistics. We also practice environmental protection and circular use of resources in our selection and design of packaging materials, maximising the use of returnable packaging and finding new solutions to increase the packaging re-use ratio.

We believe that smart and intelligent logistics represents the future of the logistics industry, and BMW Brilliance is at the frontier of applying digitalisation and leading-edge technologies throughout our logistics operations, from planning to transportation and warehousing. In working towards our objectives, we rely on extensive collaboration with our suppliers, logistics service providers, as well as dealers, as the active participation of many different stakeholders is required for greening the logistics industry.

INBOUND LOGISTICS

Inbound logistics is responsible for ensuring that parts from suppliers are transported safely and efficiently to our production base, as sustainably as possible. Our emphasis has been to increase the proportion of low-carbon and multi-modal transportation by reducing air freight and scaling up sea and rail haulage. This has proven to be effective in reducing our CO₂ emissions and environmental impacts, while simultaneously increasing our cost efficiency. By end of 2019, we have lowered the CO₂ emissions per unit for inbound logistics to 180 kg/unit, which was a 17.4% reduction from 2018 level.

"Sustainability is always one of the focus areas for BMW Brilliance logistics. We will keep our leading position in the automotive logistics industry by constantly reducing CO₂ emissions across our logistics operation."

Dr. Franz Decker
Senior Vice President
Technology and Manufacturing

Rail transportation plays a critical role in greening our inbound logistics operation. We have a dedicated 2,000-km railway transportation line in place from the Greater Shanghai region to Shenyang, bringing parts from our suppliers in the Yangtze River Delta region in special containers as a more efficient and reliable means of long-distance transportation. In 2019, we tested a new "parcel train" model in which parcels of variable dimensions can be transported together in one container, allowing our logistics service providers to fill containers more efficiently and maximise space utilisation. In 2019, 31 of our suppliers participated in the parcel train pilot project.

We are also increasing the share of sea transportation, especially for international shipment of parts imported from Europe or other continents. The much larger carrying capacity of sea vessels means a much lower CO₂ emission intensity as compared to air freight, and more available technological breakthroughs on cleaner fuel and engines for vessels implies that we can green our sea freight faster and further.

In addition, we set up a sea-land transportation route from Yantai to Shenyang in 2017 as an alternative to the much longer land transport route around the Shandong Peninsula. The new multi-transportation mode brought benefits in terms of lead time, costs, and emission reduction.

We began using electric trucks for transporting materials in 2018 at Plant Dadong, where some materials and parts are stored a few kilometres from our production workshops. In 2019, with the increased production volume of BMW X3 and BMW 5 Series, the E-trucks operated more frequently and with optimised scheduling.

OUTBOUND LOGISTICS

For BMW Brilliance's outbound logistics, we partner with rail, sea, and road logistics service providers to transport our finished vehicles nationwide in a cost-efficient and sustainable manner, and we are committed to strengthen the collaboration with our logistics partners in line with our strategy. Our management pillars include green logistics, cost efficiency, and digitalisation, to achieve combined business and environmental benefits.

In 2019, BMW Brilliance became the first premium automotive manufacturer to enter into a direct partnership with China Railway Special Cargo Services Ltd. for the pre-haul distribution of automobiles nationwide. The partnership will optimise operational processes and efficiencies in our rail transport network, and further enhance BMW Brilliance's green logistics. The collaboration underlines our commitment to sustainable development and our support for China's long-term environmental vision.

Finished vehicles are transported from the BMW Brilliance plants either to Dalian port by railway, then by sea to Ningbo, Shanghai and Guangzhou, or transported by rail directly to Xi'an, Chengdu and Zhengzhou. Currently, 78% of our finished vehicles can be transported wholly or partly by rail, which is the

Getting to Zero Coalition

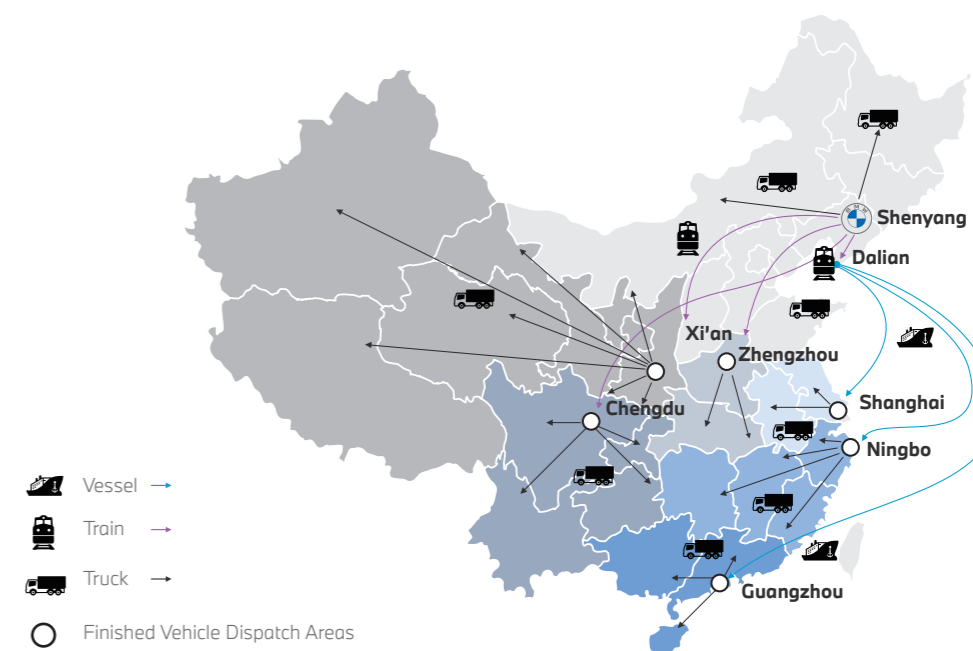
In December 2019, BMW Group was the first carmaker to become a member of the "Getting to Zero Coalition", a joint partnership initiated by the Global Marine Forum, the Friends of the Ocean and the World Economic Forum, which sets a target to accelerate maritime shipping's decarbonisation with the development and deployment of commercially viable deep sea zero emission vessels by 2030.

78%

of our finished vehicles can be transported wholly or partly by rail, which is the highest proportion among automotive manufacturers in China.

Figure 20

Multi-modal distribution network of finished vehicles to Decentralised Dispatch Area



highest proportion of any automotive manufacturer in China. By systematically shifting from road to rail transport for finished vehicles, BMW Brilliance has reduced CO₂ emissions per unit for outbound logistics by 45% since 2014.

Looking forward, a direct railway connection will be established at Plant Dadong, which is expected to be operational by 2022. This will further enhance our transportation efficiency, lower our CO₂ emissions, and reduce traffic congestion in Shenyang by replacing more than 75% of Plant Dadong's local truck transportation with rail.

AFTERSALES AND SPARE PARTS LOGISTICS

The aftersales logistics department manages our five Spare Parts Distribution Centres (RDCs), in Beijing, Shanghai, Foshan, Chengdu and Shenyang, as well as the import of spare parts from Europe and the logistics of transporting parts between RDCs and dealerships. BMW Brilliance currently operates 5 RDCs which store more than 80,000 spare parts in total, and a new RDC in Hefei is expected to be operational in 2021. Each RDC is capable of delivering emergency orders to dealers in its service region within 24 hours.

Many spare parts for aftersales services are imported directly from Europe. While sea freight accounts for 78% of the transportation, we are actively expanding the use of rail and reducing the use of air freight to cut our carbon footprint and improve cost-effectiveness. Under China's national One-Belt-One-Road initiative, we have been able to gradually import more parts through

25
Calendar Days

Lead time to transport spare parts from Germany to Chengdu Regional Distribution Centre.

Europe-China railway lines, from Germany to our production base in Shenyang and to our RDC in Chengdu. Shifting from sea freight to rail allows us to cut the transportation lead time from Germany to Chengdu from 60 days to 25 days, in addition to minimising weather and security risk. Around 1,500 containers per year are transported to the Chengdu RDC by rail in this way.

In 2019, BMW Brilliance worked with our logistics partner to pilot the use of E-trucks to transport spare parts from RDCs to dealerships, starting with Foshan in Guangdong. The pilot project resulted in a 58% reduction in CO₂ emissions compared to the use of conventional trucks for the same haulage, and we are exploring the potential to expand the pilot to other cities such as Shanghai.

GREEN PACKAGING

As early as 2010, BMW Brilliance began adjusting our packaging strategy to utilise returnable packaging, and we started to invest and manage returnable packaging from 2011. We strive to fight pollution with our emphasis on returnable packaging, using lighter material and less volume in our packaging, and shifting to almost 100% degradable materials. Through intensive design efforts, we have significantly reduced one-way packaging, and in 2019, 98% of our local parts were transported in returnable packaging. These initiatives have helped us maximise resource utilisation, save on materials and cost, and reduce our carbon footprint, while contributing to the national agenda of environmental construction and green logistics.

We work closely with our bin suppliers to identify every possible way to enhance bin utilisation. With the launch of our BMW 3 series in 2019, we revamped our bin design so that the bins can be used across product generations, instead of being disposed of at landfill, while generating cost savings. We are also exploring the feasibility of standardising bin design across product models, and we rolled out a bin-sharing and bin rental model in order to reduce the idle time of returnable packages.

Lightweight design is another major step we have taken towards green packaging. We continue to upgrade our bin design with structural optimisation that allows us to use less material, and we use lighter packaging material wherever possible. With these innovations, each of our car models can achieve around 8,000 kg of Expanded Polypropylene (EPP) material savings. In overseas logistics, we also raised the utilisation rate of our containers for Plant Dadong from 84.8% to 89% through a series of packaging optimisation measures.

We collaborate with our tire suppliers to use returnable foldable metal bins for delivery to all RDCs, and we engage with dealers to reduce the packaging material for spare parts by using returnable packages and maximising usage efficiency. At our Chengdu RDC, 46% of outbound Extended-Late Evening Delivery (E-LED) goods are packed and delivered in returnable packages.



Piloting E-truck for spare parts logistics

Demonstrated 58% lower CO₂ emissions versus conventional trucks.

98%

of local parts were transported in returnable packaging.

89%

We optimised our oversea packaging by increasing utilisation rate of Plant Dadong import containers from 84.8% to 89% in 2019.



Logistic Centre in Plant Tiexi.

GREEN AND RESILIENT WAREHOUSE MANAGEMENT

BMW Brilliance was selected to be in the first group of National Green Plants, and we turn China's green manufacturing strategy into action by increasing our resource efficiency and reducing our environmental impact, including in our logistics storage operations. We are committed to safe, smart, efficient, and green management of storage at our production base, our Decentralised Dispatch Areas, and our Regional Distribution Centres.

When we plan for a new storage facility or expansion of existing facilities, we conduct a thorough risk assessment to aid in site selection. This risk assessment takes into account the frequency and likelihood of natural disasters, extreme weather events, and any hazards in the vicinity, to ensure that safety risks are controlled and minimised.

Our finished vehicles are stored at Plant Dispatch Areas (PDA) at our production bases and Decentralised Dispatch Areas (DDA) in other locations, which are operated by logistics service providers. We added a PDA at Plant Dadong in 2019, with 11,000 outdoor and 2,200 indoor parking spaces, and the use of Radio-Frequency Identification (RFID) technology to improve process and resource efficiency. At DDAs across China, we now request logistics operators to measure and report water consumption, in order to manage water usage and raise their awareness of water conservation.

Our new RDC in Hefei is the first BMW Brilliance warehouse designed in accordance with the international LEED green building standard. We also require our other RDC operators to convert to LED lighting and install monitoring systems to enable real-time energy management, as a starting point to reduce energy consumption. We follow the US standards and BMW Group standards for our fire safety measures at RDCs, which include minimising the use of water in responding to fire incidents, and improved fire-fighting capability.



Our new RDC in Hefei is designed in accordance with the LEED Green Building Standard.



2019 BMW Brilliance Grand Supplier Day.

SUSTAINABLE SUPPLY CHAIN

BMW Brilliance is committed to integrating sustainability standards and performance along our entire supply chain, as a means of value creation that ensures high-quality products and services while safeguarding environmental and social standards. We are improving transparency and investing in deeper and more direct supply chain engagement, enabling our supply chain partners to continuously make improvements.

We are ensuring social and environmental compliance in our supply chain with strengthened risk management processes and mechanisms, especially for Environmental, Health and Safety (EHS), social, and financial risks. Our overall approach is transitioning from risk control to risk prevention, which relies on improved supplier awareness and more proactive analysis and mitigation.

Sustainable sourcing requires building transparency to the source of our critical raw materials, and establishing direct sourcing relationships with raw material suppliers to secure supply and enable us to better manage social and environmental risks. We partner with others through supply chain sustainability initiatives to address contextual and systemic factors and improve overall conditions, by standardizing sustainability requirements and introducing monitoring mechanisms.

Our local content suppliers in China continues to grow in size and improve in quality, as we support supplier development and enable local suppliers to achieve global production standards and reach an international scale by making increased contributions to BMW Group's global supply network.

SUPPLY CHAIN MANAGEMENT

BMW Brilliance adheres to Zero Defect across our process from order to product delivery, hence we require our suppliers to commit to the same level of outstanding product and service quality that we set for ourselves. From the nomination process till the after EOP-management, we select and evaluate our suppliers based on a list of criteria, among which are five criteria that represent strategic importance to BMW Brilliance - product quality, incorporation of sustainability into product development, supply chain management, agile and flexible production, and cost efficiency.

With our supplier network accounting for a significant portion of BMW Brilliance's value creation, it is especially important to ensure supplier compliance with environmental and social standards. We build long-term supplier partnerships with increased transparency and shared objectives, which include environmental and social sustainability.



The Departments of Parts Purchasing, Supplier Quality Management, and Delivery Assurance together form a cross-functional team to manage and enhance supply chain performance. In times of market fluctuations, rapidly-changing policy and regulatory requirements, we work closely with suppliers to maintain a stable, agile and high-quality supply of parts and materials.

Sustainability is integrated into our supply chain starting from the supplier selection and nomination process, with all suppliers required to comply with BMW Group's core principles and sustainability standards as defined in the BMW Group Supplier Sustainability Policy, and is the basic for supplier relationship included in the IPC (International Purchasing Terms and Condition). At BMW Brilliance, we also require suppliers to be certified with the ISO 14001 Environmental Management System and the ISO 45001 or OHSAS 18001 Occupational Health and Safety Management Standards, as part of our BMW Brilliance Environment, Health and Safety Purchasing Management Procedure, to ensure compliance with local labour and environmental legal requirements.

All supplier contracts are harmonised between the BMW Group and BMW Brilliance supplier networks, and contain Supplier Sustainability Clauses that include commitments to environmental conformance and social responsibility, and adherence to the principles of the UN Global Compact and the International Labour Organisation (ILO) on the protection of human rights and a ban on forced and child labour. Our suppliers also commit to ensuring that their own suppliers also comply with these agreements.

We have also engaged directly with raw material suppliers, for example, of our High-Voltage Battery (HVB) cells, to make this highly specialised supply chain more transparent, which enables us to cascade BMW Group's sustainability commitments further down the supply chain.

Implementation of sustainability standards at our suppliers is monitored through our supplier risk management framework and due diligence process. We have expanded the coverage of our EHS risk assessments to more suppliers, and we support their improvement with robust training and knowledge sharing. In addition, we have deployed a new Environmental Risk Assessment system with early warning and risk-alert functions, which supplements our risk control mechanisms with risk prevention.

SUSTAINABLE SOURCING

The rapid growth of the NEV market in China has created a surge in demand for the raw materials needed to produce battery cells. The extraction of needed minerals such as cobalt and lithium also carries specific environmental and social risks, which BMW Brilliance mitigates by establishing direct access and relationships with raw material suppliers to address sustainability issues in the sourcing countries while securing supply volumes, achieving both sustainability and long-term business success.

Sourcing Raw Materials for High-Voltage Battery

The BMW Group's commitment to social responsibility drives our efforts in the sustainable sourcing of cobalt. The BMW Group shifted to sourcing cobalt from Morocco and Australia instead of the Democratic Republic of Congo, where artisanal mining is still a predominant source of cobalt, with critical social and environmental risks. For increased transparency, we have established direct access to the cobalt mines we source from and we conduct audits on social and environmental risks. We are also collaborating with external partners to tackle labour issues and poor working conditions related to artisanal mining.

For sourcing of lithium, we have built long-term partnerships to procure directly from our raw material suppliers. This transformation enhances transparency, enabling us to secure supply volumes and control supply chain risks.

Integrating Sustainability Into Procurement

To cascade sustainability commitments down our supply chain, we integrate sustainability goals into our procurement process by working with Tier-1 and Tier-2 suppliers for Gen5 HVB production to increase the amount of secondary material used for aluminium, cobalt, and nickel. 50% of cobalt is currently being provided from secondary material, and nickel will reach the 50% target by 2025. For Gen5 HVB production, 100% of energy used must be regenerative, such as from renewable sources (water, wind, solar) or from plants powered by landfill gases. BMW Brilliance supports HVB suppliers by sharing our knowledge and experience to support them to reach the same level of sustainable operations.

We set sustainability commitments for our Tier-1 and Tier-2 suppliers of HVB Gen5 production to use:



100% Aluminum
from secondary material



At least 50% Nickel
from secondary material



At least 50% Cobalt
from secondary material



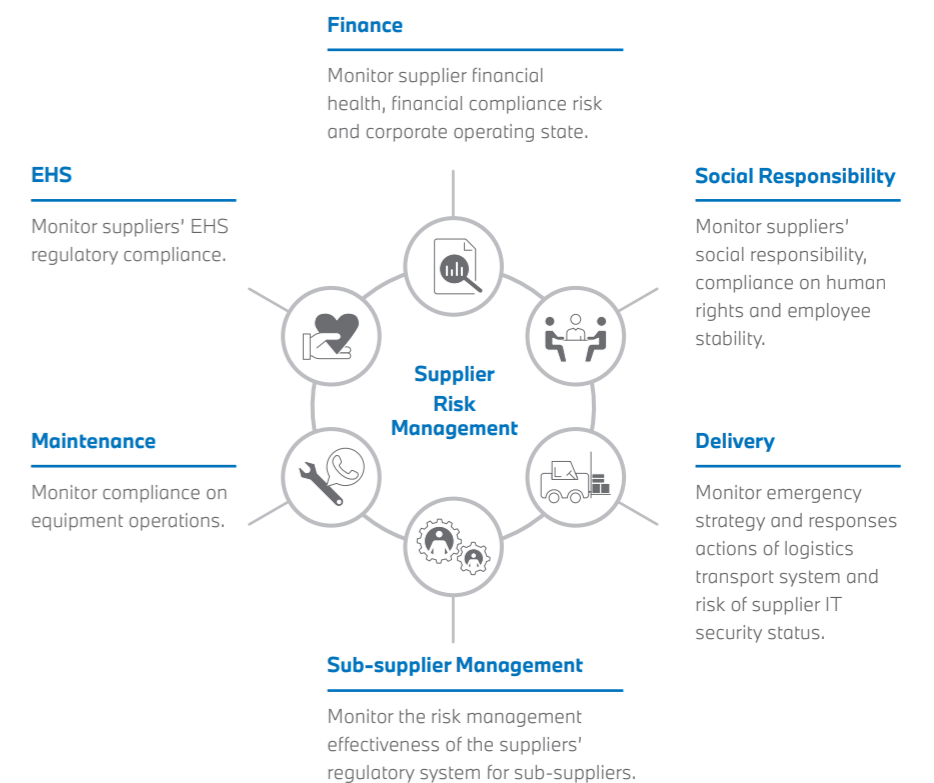
100% Regenerative Energy
For HVB cell production

SUPPLIER RISK ASSESSMENT AND PERFORMANCE

Adherence to environmental and social standards along the entire value chain is of the utmost importance for BMW Brilliance and our stakeholders. Our strengthened Supplier Risk Management (SRM) framework covers six areas: Environment, Health, and Safety; Social Responsibility; Sub-Supplier Management; Finance; Delivery; and Maintenance.

Supplier awareness has increased significantly due to implementation of the SRM, and our supplier risk management is recognised as industry-leading, with management principles that incorporate risk prevention as well as risk control, building a culture among suppliers in which both BMW Brilliance and suppliers proactively manage risks. We reinforce expectations of social responsibility through evaluations of new, existing, and high-risk suppliers, and we have deepened sub-supplier management to extend our commitment beyond Tier 1.

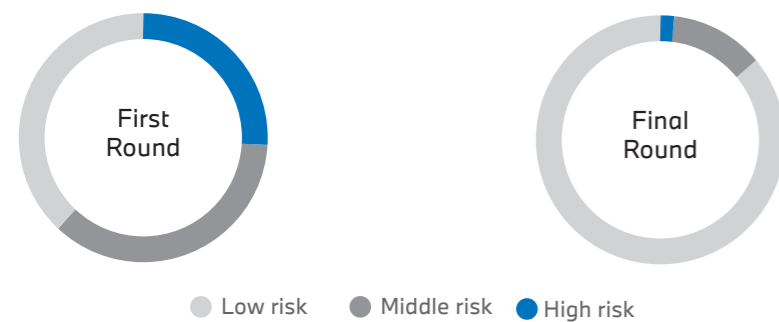
Figure 21
Our Supplier Risk Management framework



Enhancing Supplier EHS Management

We continued to support our targeted suppliers to make substantial improvements in Environmental, Health and Safety (EHS) Management with our EHS Protection Activity (EPA) initiative that includes on-site risk identification, audits, process optimisation and capacity building activities. In 2019, we extended the EPA initiative to cover more raw material suppliers and focused on key suppliers more vulnerable to EHS risks. Following the initial round of assessments in 2019, most suppliers demonstrated significant improvements in reducing the risk levels from high and medium to low.

Figure 22
2019 Supplier EHS risk assessment outcome



As our approach advances from risk control to risk prevention, this year we launched an Environmental Risk Management System (ERMS) to improve the effectiveness of data collection and analysis, with daily alerts and warnings of potential risks. The ERMS uses big data analysis for risk scanning and notifies purchasing and QMT teams with warnings of potential risks, enabling rapid response. The risk scans include EHS, transportation, major events, extreme weather, and natural disasters, identifying potential influences on supply chain management and enabling our purchasing department to prepare and adapt.

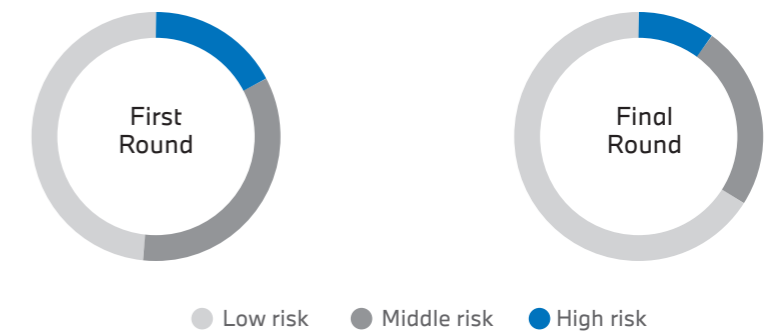
Increasing Transparency of Supplier Social Performance

One component of the BMW Brilliance SRM is our social risk assessment project, which monitors suppliers with regard to social responsibility, compliance with human rights requirements, and employee turnover rates. We regularly audit suppliers against 10 social responsibility requirements, with rigorous timelines for implementation of corrective measures. From our 2019 social responsibility audit results, the findings were primarily in the area of employee satisfaction, overtime hours, grievance processes, and lack of labour unions. Moderate improvements were noted after implementing corrective actions, and we will work more closely with targeted suppliers to improve their performance in 2020.

Supplier Flammable and Explosive Hazard Management Project (FEHM)

In response to the two influential plant explosions in March 2019, we immediately started the FEHM project to identify, evaluate and minimise risks related to chemical and hazardous materials, involving more than 20 suppliers in our supply chain.

Figure 23
2019 Supplier Social Responsibility assessment outcome



Strengthening Supplier Financial Health

As part of supplier risk assessments, we also evaluate supplier financial management, in order to monitor supplier financial health, identify financial compliance risks, and assess financial performance. The annual financial audits of nominated suppliers, including Tier-1 to Tier-3 levels, had a qualified response rate of 98%, up from 90% from 2018. This improvement reflects an increased awareness of the importance of financial risk management among suppliers, who have directed more resources to building up internal financial health during stable periods in preparation for financial challenges. With mutual efforts and constructive cross-alignment, suppliers with indicators of financial risk receive more intensive monitoring regarding their financial health and operating status.

SUPPLIER DEVELOPMENT AND ENGAGEMENT

At BMW Brilliance, we are committed to develop local sourcing capacity, as it provides shared benefits for our business, our business partners, and our local and national economy. In 2019, our local content suppliers in China continued to grow to 394, with a 15.3% increase in total purchasing value to RMB 49.7 billion. The number of suppliers located in northeast China also increased, with 70 suppliers now based in Shenyang and 91 suppliers in Liaoning. Together, we play an important role in driving sustainable and economic development at multiple scales, in Shenyang, Liaoning Province, and the Northeast China region.

Developing suppliers in closer proximity also allows us to work directly with them on improving quality, agility, and efficiency that benefits both our suppliers and BMW Brilliance. Besides contributing to local employment and economic growth, a more localised supplier network means a smaller transport footprint, with lower costs and emissions.

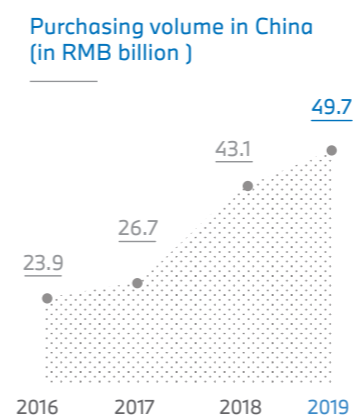
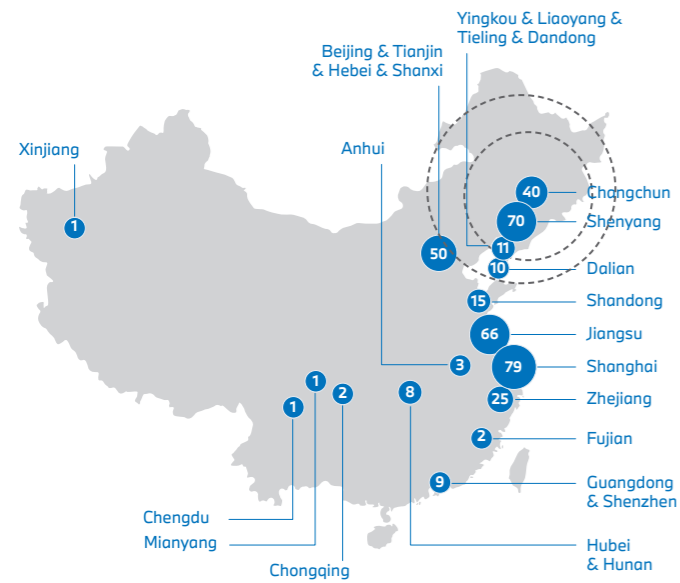


Figure 24
BMW Brilliance supplier network



394

Local content suppliers in China by end of 2019.

To ensure Zero Defect in our products and services, we require our suppliers to meet BMW's stringent global quality standards, and provide consistent support to help them achieve technological breakthroughs and production optimisation.

On the 2019 BMW Brilliance Grand Supplier Day, we honoured top-performing suppliers with the Quality Excellence Award to recognise their delivery of consistently high-quality products and excellent services in the past year. Because of their outstanding quality, some of BMW Brilliance's leading local suppliers have become part of BMW Group's global supply network, providing parts and products to BMW Group production locations worldwide. We pride ourselves in introducing local suppliers to an international platform and boosting their level of operations.

As we enter the next chapter of high-quality development "In China, For China and For the World," with the soon-to-begin production of the fully electric BMW iX3 in Shenyang for both the China and international markets, there will be new challenges testing our suppliers' flexibility and capacity for innovation. Overcoming these challenges will give rise to an even more capable supplier network and a stronger Chinese automotive industry.

Ramping up for Carbon Disclosure Project Supply Chain Programme

To support our suppliers in reducing the climate impacts of their operations, this year we began the ramp-up work for participating in the Carbon Disclosure Project's (CDP) Supply Chain Programme in 2020. A cross-functional session was hosted to kick off this new initiative, during which we invited a CDP specialist to provide training to our core team members with respect to the disclosure process and requirements. Meanwhile, we are also working to understand the emission hotspots among our key suppliers and planning for engagement in 2020.

FORECAST 2020

For our next generation infrastructure – Tiexi New Plant Project, 2019 was the year of land preparation. In 2020, it will be a year of construction, which is scheduled to commence in April, with the building infrastructure closed in late autumn.

We will explore the feasibility of localised outbound logistics management systems to enable real-time delivery management, monitoring, and enhanced risk prevention.

We will explore opportunities with our logistic partners to use more LNG fleet and E-trucks in Tier 1 cities, which are imposing stricter traffic control on heavy vehicles, for outbound and aftersales logistics.

On packaging, we will pilot the use of returnable bins for our imported parts through revamping the packaging design with our international supplier.

Sustainable sourcing of cobalt and lithium for HVB cells will enter the implementation phase, with process enhancement to establish it as standard practice.

Our Supplier Risk Management approach will continue to transform from risk control to risk prevention, with a focus on key suppliers. We will also expand the scope of social responsibility audits to cover more aspects. The sustainable supply chain strategy will take an upgrade to enhance the focus on CO₂ emissions.

We will pilot the CDP Supply Chain Programme with selected suppliers for disclosure of their GHG emissions on the CDP platform, which will help us identify emission hotspots and explore opportunities for GHG emissions reduction.

We are also planning for a closed-loop project with aluminium and steel, in which we will return metal waste back to steel and aluminium manufacturers as secondary raw materials in a circular economy approach, which will also reduce CO₂ emissions and expand our sustainability commitments to more actors in our supply chain.

EMPLOYEES AND SOCIETY

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EMPLOYEES AND SOCIETY

At BMW Brilliance, success depends on the dedication of our people and talents, and we ensure that they are in the right roles and have equal opportunities to fulfill their potential. In line with our core values, we put great efforts towards protecting our employees' safety and well-being, and we adapt to meet new health challenges with an occupational health and safety concept that includes holistic health management programmes, along with work safety and ergonomics. In this time of digitalisation and rapid technological change, it is vital for BMW Brilliance to maintain our position as an attractive employer. We invest in our employees, offering opportunities to foster continuous learning, and utilise various channels for feedback and dialogue so that we can continue to adapt and improve our talent development and human resources management. We also take responsibility as a good corporate citizen to address current issues in society, inspiring our dealers, our customers, and our employees to join in a community effort to overcome societal challenges.

RESPONSE TO SUSTAINABILITY DEVELOPMENT GOALS (SDGs):



2019 HIGHLIGHTS

19,824

Total workforce at 2019 year-end

30.6%

Female employees in management positions

92%

Employees satisfied working at BMW Brilliance

-39.3%

Change of accident frequency rate vs 2018

2,628,710

Beneficiaries from BMW CSR activities in 2019

2 CSR Guidebooks

Released to share our knowledge with society on Children's Traffic Safety Education, and Joyful Sports



2019 Plant Tiexi Associate Meeting.

RESPONSIBLE HUMAN RESOURCES MANAGEMENT

The acceleration of modern technologies is transforming the working environment for employees in the automotive industry. Even as the workplace changes, BMW Brilliance continuously applies our core values and implements our programmes to attract talent, maximise employee safety and well-being, and foster employee development and learning, which improves employee satisfaction and ultimately productivity and performance.

HR STRATEGY AND MANAGEMENT

Human resources management at BMW Brilliance is a top priority of our executive team, with direct reporting to the CEO by our Senior Vice President of Human Resources, who is responsible for the formulation and implementation of BMW Brilliance's Human Resources Strategy. The Associate Handbook clearly outlines our employees' rights and responsibilities, including the BMW Brilliance Legal Compliance Code.

Our approach to leadership and professional development relies on establishing shared Core Values among all employees, to enable us to achieve high performance and meet our targets. A unique combination of management style, benefits, training and opportunities helps us to maintain a competitive advantage as the Most Attractive Employer in the automotive industry, differentiating BMW Brilliance from other employers and attracting talented professionals.

Our human resources approach has four main areas: Core Values; Talent Attraction; Long-term Employee Development; and Health, Safety and Wellbeing.



Our Core Values

BMW Brilliance has five Core Values that are the basis for our decision-making and for our management approach. We foster these Core Values among our employees through open discussions to establish a common understanding of the values and how they are put into practice through specific behaviours.

- **Responsibility:** We go beyond for the best corporate interest.
- **Appreciation:** We motivate and care for each other. We give clear feedback.
- **Transparency:** We share meaningful information efficiently.
- **Trust:** We earn mutual trust by keeping our promises.
- **Openness:** We are open to different opinions and inspire each other to identify new opportunities.

Since March 2019, we established dedicated Core Value Space for teams to experience and re-familiarise themselves with our five Core Values. The elaborate and joyful interior design provides employees with an open and relaxed space to facilitate team building, and nurture shared and deeper experience of the Core Values. Pre-designed team-oriented games, which are guided by designated facilitators from the Human Resource team, are available in the Core Value Space. If participants wish to refresh or gain inspiration through fun teamwork. Since the launch of this initiative, the Core Value Space has rapidly gained popularity and become one of the most lively spaces in the offices.

EMPLOYEE PARTICIPATION AND FEEDBACK

91%

of employees are satisfied with their jobs.

92%

of employees are satisfied working at BMW Brilliance.

To facilitate employee growth, BMW Brilliance relies on our community of employees to share their feedback and suggestions. We provide communication platforms that enable our entire workforce to contribute, and we continue to develop new and improved mechanisms for dialogue and discussion. Our collective voice is what drives improvements in our corporate culture, and our diversity is what enables the company to innovate and identify areas for improvement and integration of innovative ideas and concepts.

Employee Satisfaction

BMW Group conducts an employee survey every two years. The 2019 survey results showed a continued high level of satisfaction of BMW Brilliance employees, with 91% of employees satisfied with their jobs, and 92% of employees satisfied working at BMW Brilliance. Both of these indicators increased slightly from the 2017 survey results.

In response to suggestions from the employee survey, we began three new initiatives. First, we created an online Total Rewards Statement which employees can access to clearly and easily view a comprehensive summary of their compensation and benefits. In addition, a new dress code policy, "Dress for Work Success", introduced "smart casual" attire as an option for the daily business environment. Finally, our Office>NEXT initiative created a new working style to build collaboration and innovation, with more open spaces, more meeting rooms, and more collaborative areas to facilitate connections.



Office workspace environment created under the Office>NEXT initiative.

We use platforms such as Executive Dialogue as a way for employees to speak directly with management about topics such as the company's strategic direction and objectives. In April, we held an SVP Table event at Tiexi, in which Wang Jun, Senior Vice President of Finance, and Michelle Yuan, Head of HR Management Shenyang, met with 20 associates to answer questions in a transparent and open manner, as well as promoting teamwork and collaboration. As an extension of Executive Dialogue, we began holding Expert Talks (similar to TED Talks) on a monthly basis, where BMW internal experts from various business lines share their knowledge to strengthen associates' understanding of business strategy and open up their horizons. Videos of the talks are also posted on our e-learning platform.

Executive Dialogue and Expert Talks

Additional dialogue takes place during Associate Meetings, when employees at each plant come together for a day of dialogue with management. In Dadong, 7,000 associates gathered with the management team in July for the 2019 associate meeting to review past achievements and look forward to the future, and 9,000 associates attended the July meeting held in Tiexi. The Powertrain Plant held an associate meeting in August, with 2,300 associates participating.

Associate Meetings and Open Door

Open Door meetings are another format we utilise to invite questions from associates and discussion with management, and also serve as a communication channel for management to learn about associates' opinions and express support, and lay a good foundation for ensuring safe production and zero waste.

BMW Brilliance Trade Union

BMW Brilliance's Trade Union was established to represent all employees with the aim of protecting employees' rights and interests through mediation. The Trade Union and the Board of Management meet annually to address topics such as health and safety or compensation. In 2019, the annual Employee Representatives Congress and Union Member Representatives Congress was held at Plant Tiexi. Mr. Wang Jun, SVP Finance and Secretary of CPC BMW Brilliance Committee, set the goals of "Guiding political direction, supporting business development, and contributing to the revitalisation of Northeast China". Awards for excellence were given out to party and union members, and the 2019 Collective Contract on Labour Remuneration was approved. The annual convening of conferences has enhanced the cohesiveness of BMW Brilliance employees.

TALENT ATTRACTION



BMW Brilliance received a number of Best Employer awards in 2019, including but not limited to:

- Most Attractive Employer in 2019 (Universum), #1 in automotive industry
- #1 China Best Employer 2019 (Zhaopin.com)
- IoT Field of Top Employer 2019 Top 5 (Lagou.com)
- Most Influential Employer of the Year Top 10 (Maimai.com)
- Best Overseas Employer Top 6 (LockinChina)

To attract and develop talented professionals with the right set of skills and experience, we offer a combination of benefits, remuneration, and training opportunities. We want to be the most attractive employer in the automotive industry, supported by competitive salary and benefits packages, a commitment to effective communication between management and employees, and opportunities for cross-cultural experiences that contribute to diverse skill development.

Our 2019 employee survey confirmed that we are excelling in terms of employee job satisfaction, and external awards validated our efforts to be the most attractive employer.

Comprehensive Employee Benefits

We reward our employees with total remuneration that is aligned with the upper third of the relevant labour market in China, and make adjustments based on an annual benchmark analysis for the automotive industry. In addition to fixed base salary and overtime payments, our employees receive allowances and a variable bonus that links total remuneration to performance, and a customised flexible benefits programme.

In support of our employees' work-life balance, we provide extensive vacation leave in addition to the statutory annual leave, as well as generous personal leave benefits for maternity and paternity leave, sick leave, and compassionate leave. In addition, we provide three options of work-time models for production and non-production employees to suit individual needs based on their job nature and functional requirements.

For all local regular contract employees at BMW Brilliance, we have an Associate Car Programme that grants discounts and periodic special rates for particular vehicle models. For convenient and economical transportation for our employees' daily commute, we provide a shuttle bus service between our plants and public transport centres across Shenyang.

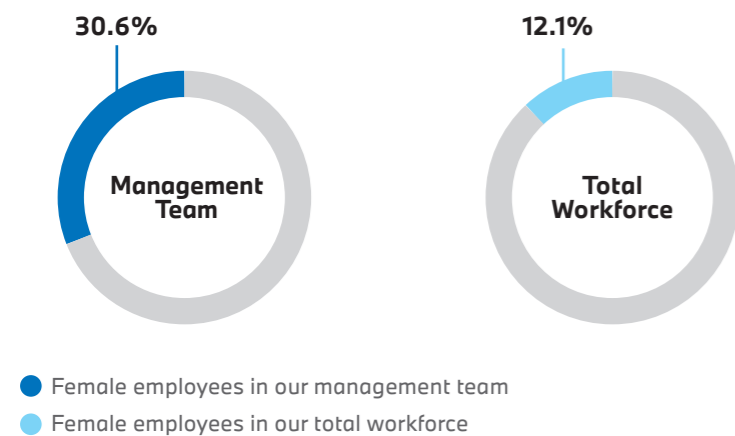
Monitoring Workforce Growth

We track several internal and external key performance indicators to evaluate whether we are reaching our goal of being an attractive employer. Our workforce was stable in 2019, with 19,824 employees (excluding employees with contracts through a third-party labour-dispatch service provider).

The diversity of our workforce provides immense value through the varying perspectives that our employees bring from their different professional and personal backgrounds. Our Global Leadership Development Programme and international vocational training are designed to promote employee exchange, international experience, and an inter-cultural and diverse workforce.

We are investing in female leadership development, with seminars to share experiences and encourage female employees to advance in their career paths. In 2019, female made up 12.1% of our total workforce and 30.6% of our management team, which was slightly increased from the 2018 proportion.

Figure 25
Gender composition of our management team and total workforce (in %)



Our ongoing efforts to develop local talent have contributed to a steady increase of Chinese employees in management positions, who now account for 85.5% of our management group. All employees hold full-time contracts. Other essential indicators in relation to our workforce growth and composition are detailed in > p.108 Key Performance Indicators.

BMW Brilliance continues to succeed in retaining talent and maintaining loyalty within our workforce. To track this, we closely monitor our monthly employee attrition rate. BMW Brilliance's voluntary attrition rate was 2.6% in 2019, decreased from 3.7% in 2018. The overall attrition rate (voluntary and non-voluntary) decreased from 4.8% in 2018 to 3.6% in 2019. Despite the impacts on the automotive industry during 2019 from shrinking market demand in China, BMW Brilliance's attrition rate remains well below average in the market, as reflected from the results of our employee survey.

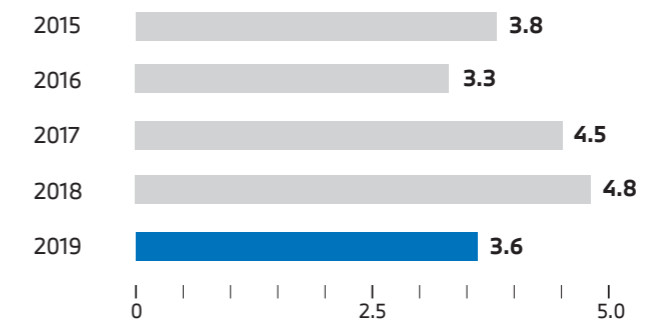
19,824

Our total workforce at 2019 year-end.

-25.0%

Change in attrition rate compared to previous year.

Figure 26
Attrition rate (in %)



BMW Brilliance has established a strategic process for human resources planning in order to identify and explore new competencies that will propel the future development of the company. We recruit critical talent based on current needs and future forecasts, and connect with talent in the market through a variety of means such as driving experience integrated job events, overseas job fairs, campus events, and social media engagement.

LONG-TERM EMPLOYEE DEVELOPMENT

The training and development of our employees to reach their full potential is fundamental to the company's sustainable growth. We regularly evaluate our performance in training and development, and in 2019, we maintained a very high employee training satisfaction rate of 98.2%. Areas of development include strengthening our leadership culture and developing future talent through a variety of innovative short-term and extended programmes, supported by key external partners.

Competency Model

In 2015, we rolled out our Competency Model to advance the professional development of our employees, with a structured framework of employee competencies and clear appraisal criteria. It helps managers to objectively identify and develop both individual and team potential. For employees, the model helps them understand their own competencies, receive clear feedback, and find a career path that is both suitable and motivating. We also facilitate rotation so that employees can experience different work environments.

Training Programmes

We host many of our non-technical training programmes through online platforms to offer employees more opportunities and better access to further develop themselves.



We help our employees to reach their full potential with comprehensive employee development programmes.

In 2019, there were 30 diverse non-technical courses on the learning platform covering 9 different modules, including professional competency, inter-cultural, orientation, financial, HR, marketing, sales, and product and process.

In support of the Integrated Product Data Management (IPDM) programmes roll-out at BMW Brilliance, the technical training team organised 31 training sessions with 7 topics for 231 target group members during 2019. One online training was imported from BMW Group onto the local E-Learning platform for all BMW Brilliance colleagues to access.

Meanwhile, we recognise the importance of internal trainers in delivering both technical and non-technical trainings. This year, we recruited internal trainers from business departments for training at the Academy, and completed 95 sessions, in which 38 sessions (40%) achieved a remarkable evaluation score of 4.9 out of 5.

Strengthening Our Leadership Culture and Developing Future Talent

We provide leadership training at different development phases, including potential leaders, new leaders, experienced leaders, and high-performing leaders. We also conduct team-based learning workshops for team leaders and team members.

BMW Brilliance participates in several specialised programmes to build the skill sets needed for the future. We are training and cultivating the next generation for the benefit of our business over the long term and the overall development of the automotive industry in China.

In 2019, we established a cooperation with Shenyang University of Technology and Shenyang University for the SpeedUp China in Production Programme, which will cultivate applied talent in cutting-edge technologies to implement the development strategy of Made in China and Industry 4.0.



IDEA TO OFFER:

The Idea To Offer (ITO) Training is a learning-by-experience training programme offered by the Academy of BMW Group China for R&D associates. A total of seven sessions of ITO training took place in Shenyang Plant Tiexi and the R&D centres in Beijing and Shanghai. The participants went through the ITO process together and assembled a model car, developing the practical knowledge of how a car is developed and delivered to the customer.

Our key leadership and future talent training programmes are introduced below:

Leadership Programmes

Young Leaders College	A 1.5-year leadership development programme specially designed for high-performing mid-level local BMW Brilliance and BMW Group leaders, to form a strong BMW Group local management team. By the end of 2019, 152 BMW Brilliance and BMW Group leaders had joined the programme.
Leadership Magic Cube	A team-based learning programme that enhances team performance through collective work on innovation, strategy, decision-making, and collaboration within or across teams. In 2019, 50 sessions were implemented for teams from different departments.
Section Leader Training Programme	Training for new and established section leaders, with fundamental and essential leadership knowledge and skills which contribute to production efficiency. In 2019, 360 production section leaders joined 15 training sessions.
Experienced Leaders Programme	A global programme for established senior leaders, with visits to external companies for exchange in transformation and innovation, and deep dive discussions and exchange on key leadership topics. In 2019, 72 senior leaders joined 3 training sessions.

Future Talent Programmes

The Global Leader Development Programme (GLDP)	An international graduate initiative offering recent talented graduates an opportunity to jumpstart their career at BMW Brilliance. Through four rotations, these professionals work in multiple departments including one at BMW Group headquarters. By the end of 2019, 11 employees were enrolled in the Global Leader Development Programme.
ProMotion China Ph.D. Programme	A four-year programme to attract high-potential Ph.D. students interested in research and development, production planning, and process optimisation with a specialisation in Industry 4.0 technologies. Since 2014, we have had 36 participants, including 13 new Ph.D. students on board in September 2019. One of the two Ph.D. students who graduated in 2018/2019 joined BMW Brilliance.
Fastlane China Programme	Provides career growth and rapid promotion opportunities for outstanding master graduates. Fastlane trainees are provided soft skills training and a designated "buddy" who provides guidance and inspiration to help trainees reach their full potential. In 2019, 21 trainees graduated from the programme.
SpeedUp China in Production Programme	Recruits bachelor's degree students and develops young professionals into high-quality production technicians and future section leaders. In 2019, 75 trainees graduated from the programme.
The New Vocational Education Programme	Programme adapted from the dual education system in Germany, modified to suit the Chinese context. Designed to build the technical skills of our production employees and to support vocational school and college students to build the capacities they need to secure well-paid jobs. 100% of graduates who passed the evaluation have joined BMW Brilliance. 288 apprentices have graduated from the New Vocational Education Programme, with 59 completing the programme in 2019.

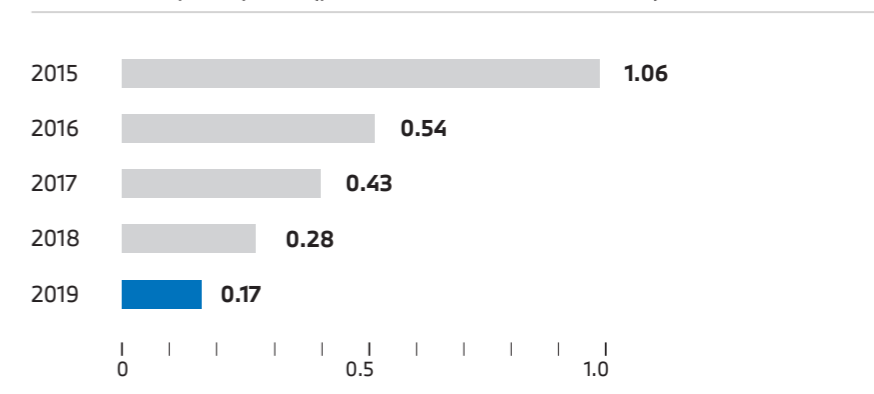


-39.3%

Change in accident frequency rate compared to previous year.

Figure 27

Accident frequency rate (per one million hours worked)*



* The scope only covers directly contracted employees in the production plants. It is calculated by the number of accidents with one day lost time or more divided by the total working hours (in millions) of the year.

HEALTH, SAFETY AND WELLBEING

At BMW Brilliance, we consider our employees to be our most valuable asset and undertakes to safeguard them from injury and ill health arising from the operations and activities associated with our business, through the effective management of our health and safety risks.

We invest in the health, safety and wellbeing of our workforce, which means not only having a comprehensive and rigorous safety management system and risk control programmes in the workplace, but also efforts to support long-term health management such as adapting production for aging workers and serving healthy food in our canteens. We persist in building a safety culture and supporting our employees to preserve their health in order to improve their own wellbeing and to enhance the long-term viability and optimal performance of the workforce.

Occupational Health and Safety Management

BMW Brilliance's Occupational Health and Safety Management (OHS) Policy is supported by our workplace health and safety management system, which is established in accordance with applicable health and safety laws and regulations, the BMW Group Health and Safety Policy, and in compliance with Chinese labour law, OHSAS 18001, the United Nations Global Compact Principles, and the Declaration on Fundamental Principles and Rights at Work by the International Labour Organisation. Any violation of the Legal Compliance Code is filed with the Human Resources Department and the Compliance Committee. Both our internal and shareholder audit teams conduct annual audits to ensure full compliance with internal and external rules and regulations.

In 2019, our accident frequency rate was reduced by 39.3%, from 0.28 to 0.17. This impressive improvement was made possible by a combination of training, promotion activities, site inspections, management-level safety walks, and internal and external audits, with corrective actions for all audit and inspection findings. We are proud of the accomplishment and the daily efforts of all involved to create an even safer workplace at BMW Brilliance.

Creating a Safe Workplace

We highly value our employees' health and wellbeing, and we strive to create a healthy, safe, and compliant workplace. To achieve this, we adopt and implement the most advanced systems and continuously make improvements in our health and safety standards and practices.

The office ergonomics evaluation project BAPA 3.0 launched in 2018 has continued to expand in coverage of office employees, and in 2019 we also focused on vigorously promoting the Safety and Ergonomics Risk Assessment system (SERA), which is aimed at employees on production lines. The system is capable of assessing physical stress, mental stress, work environment, accident risks and specific stresses for various job workstations along the production line. We invited experts from Germany to provide 4 days comprehensive training to our 89 system users to equip them with the needed skills and knowledge. Data from SERA can help us develop more specific risk prevention and mitigation measures, and optimise system performance and efficiency while ensuring a safe workplace for our production employees.

Implementing Health and Safety Initiatives

Health and safety are the cornerstone of sustainable business, and especially so in our industry. We have made health and safety a commitment to all our employees, so that "Safety First" is not just a slogan but at the centre of a safety culture throughout the organisation. In 2019, BMW Brilliance implemented a series of activities to raise employees' safety awareness, communicate our safety commitments, and bring our safety culture to the next level.

Throughout the whole year we conducted many regular safety inspections and 28 rounds of targeted and specific inspections to identify unsafe employee behaviours, equipment conditions, and facilities.

Meanwhile, we strongly encouraged employees to act as the first line of defence and proactively report any unsafe behaviour or equipment to their supervisors. To ensure that they have the needed knowledge and improved awareness, a 3-Tier general safety training and various special safety trainings were organised throughout the year.

In 2019, our safety department held 13 rounds of emergency drills covering different emergency situations, including chemical safety, confined space, working at height and special equipment. During the "Work Safety Month", we organised safety quiz contests, roadshows, and a "Safety Star" campaign to foster a safe mindset and culture across the organisation.

We are also in the process of transitioning our Occupational Health & Safety Management System to ISO 45001. Appointment of Occupational Health and Safety Management Representative has been made and our management level associates have received relevant training .

Managing Employee Health

Inherited from the BMW Group, BMW Brilliance promotes responsible behaviour and a corresponding work environment to foster the long-term health and performance of our associates. Under this framework, in 2019 we have upgraded our Health Initiative from "Health Management 2020" to "Health Management 2025", laying down a clear roadmap of our various health management programmes for the next 3 years. The programmes cover the areas of nutrition, exercise, rehabilitation, addiction, mental resilience, vaccination, ergonomic and spitting, which have been developed in response to the common health issues found among our employees.

Health Check Programme



BMW Brilliance provides annual health checks for employees as part of the Health Management 2025 programme, with comprehensive personal health evaluation summaries and medical research to strengthen the self-responsibility of employees. More and more associates pay attention to their own health and rely on our medical resources for diagnosis and treatment. In 2019, the participation rate was 97%, supported by a new convenient mobile booking system. Statistics and information review were made available through the intranet and JoyChat.

In addition, our Physical Assessment & Rehabilitation Centre (PAR Centre) received 9,386 registrations with 39,449 visits through 2019, and supported around 1,000 associates for rehabilitation treatment of musculoskeletal problems.

Stop Smoking Initiative



BMW Brilliance employee surveys found that 44% of BMW Brilliance associates are smokers, and we expanded our smoking cessation activities in 2019 to encourage and support associates to stop smoking. Activities included communication campaigns, with posters in smoking areas and information

published online. We offer one-on-one doctor consultations and TCM treatment to motivate and encourage smoking cessation. We did pilot programmes with peer groups for experience-sharing. From our 2019 programmes, 8 associates among approximately 200 participants decided to quit smoking.



Resilience 2.0

"Powering Up Your Mind" concept was well-integrated with our 24/7 Employee Assistance Programme (EAP) service and trainings including non-violent communication, positive discipline, stress management and EAP concept introduction. In 2019, 360 associates used the EAP service and 752 employees participated in 30 training sessions which helped them refuel inner strength and overcome challenges.



Burn What You Eat

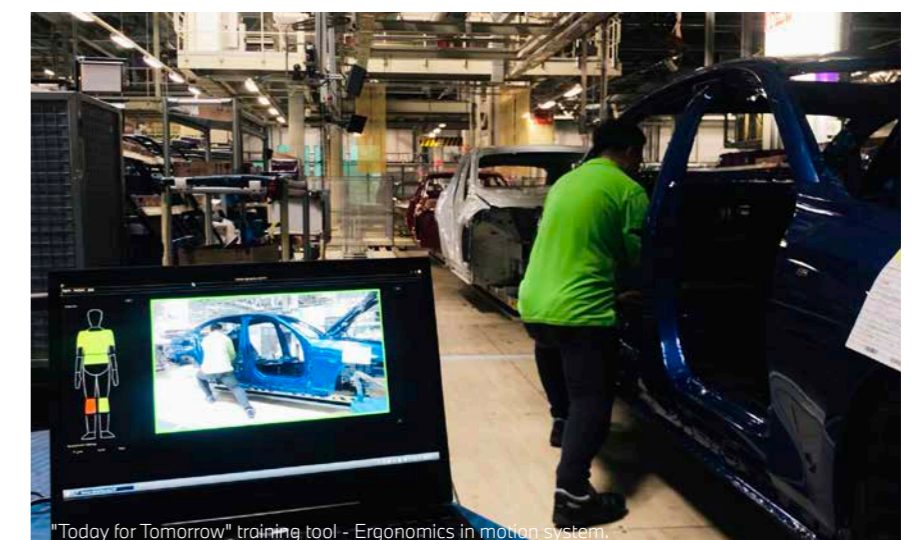
The Burn What You Eat campaign promotes balanced nutrition and healthy diet, and educates associates on the topic of daily caloric intake and energy balance. In 2019, we continued to share information on WeChat and in food service facilities, with printed calorie labels in coffee bars and canteens to inform healthy choices.



Today for Tomorrow > NEXT

"Today for Tomorrow > NEXT" enables our employees to stay healthy and perform well with increasing age. The focus of the programmes are musculoskeletal disorders. It currently includes measures for employees and leaders in the fields of preventative ergonomic behaviour and ergonomic improvement of the workplace.

At BMW Brilliance, Today for Tomorrow > NEXT was launched in October 2019 at Tiexi Assembly Shop as a pilot programme. Our medical team conducted over 150 workplace analyses and offered suggestions for alternative postures, job rotation, and ergonomic workplace improvements.



"Today for Tomorrow" training tool - Ergonomics in motion system.



National Intangible Cultural Heritage Item visited by 2019 BMW China Culture Journey - Traditional Dyeing, Weaving and Embroidery Skills of Li Nationality.

CORPORATE SOCIAL RESPONSIBILITY

BMW Brilliance has a vision of acting through our CSR programmes to contribute to a better and brighter China, addressing social issues and making long-term contributions to the Chinese society in partnership with our stakeholders. We can be a catalyst for change, inspiring and enabling our dealers, our customers, and our employees to join in community efforts on issues such as children's traffic safety, education for left-behind and migrant children, and support for Intangible Cultural Heritage. Over the years we have worked to deepen our engagement and build on our experience, developing ongoing programmes that will enable our communities for years to come.

2019 was an important milestone in the journey of our CSR development, as the 10th anniversary of the China Charity Federation BMW Warm Heart Fund and the 15th anniversary of BMW Children's Traffic Safety Education (CTSE), our earliest and most impactful CSR flagship programme in China. Over the last 15 years, our strategic focus has shifted from making charitable donations to an emphasis on creating shared value and enabling communities and individuals. We focus on social needs, and use different creative ways to address social issues. Although our strategy have evolved over time, the primary purpose of our CSR efforts stays the same —to contribute to building a better society in a positive and innovative way.

"At BMW Brilliance, we believe that for a company to grow from Good to Great, it must stand for more than just sales performance and profitability. A Great company should also be a responsible company, which engages with society and social issues."

Dr. Johann Wieland
President and CEO
BMW Brilliance

OUR CSR STRATEGY AND APPROACH

Our CSR strategy is to create shared value for members of society to help address social issues and improve social welfare. BMW Brilliance can leverage the influence of our brand, our industry knowledge, and our experience as a responsible corporate citizen, through designing innovative approaches, to enable communities and individuals. We also create tools and resources that foster more extensive engagement and participation in our programmes, such as initiating BMW Children's Traffic Safety Ambassador and publishing the Children's Traffic Safety Education Guidebook and the Joyful Sports Guidebook to extend the knowledge and success of our CSR programmes even more broadly. We sustain and expand our CSR flagship programmes as a demonstration of our long-term commitment to the Chinese society.

2,628,710

No. of beneficiaries reached by our CSR programmes in 2019, which has increased by over 30x as compared to 2018.

We take a strategic approach to CSR programmes that is in line with the BMW Group's Corporate Social Responsibility strategy, designing initiatives that build on our unique competencies to address real social issues while creating shared value for the society and our business. In pursuit of this, we seek innovative solutions to enable stakeholders to learn, share and act together against some of the most pressing societal challenges. We also make sure our approach is socially inclusive to broaden stakeholder engagement and create connections that build a proactive community.

BMW has always been committed to establish roots in the Chinese society and implementing long-term commitments with practical actions, creating lasting social impact. We are proud of the social impacts we made in 2019 – having engaged over 1,000 employees, 80 dealers and more than 17,000 customers in our CSR activities, and achieved over 30-fold increase in beneficiaries, reaching 2,628,710 people with our CSR programmes.

Figure 28
Our CSR Strategy



WHAT-
Our 3 CSR Flagship Programmes

Designed to address social issues and improve social welfare, in a way that creates shared value and lasting social impacts for employees, dealers, customers and communities.

HOW-
Our Strategic Approach

We seek innovative solutions to enable stakeholders to learn, share and act together against social challenges, and create shared value for the society and our business.

WHO-
Our Stakeholders

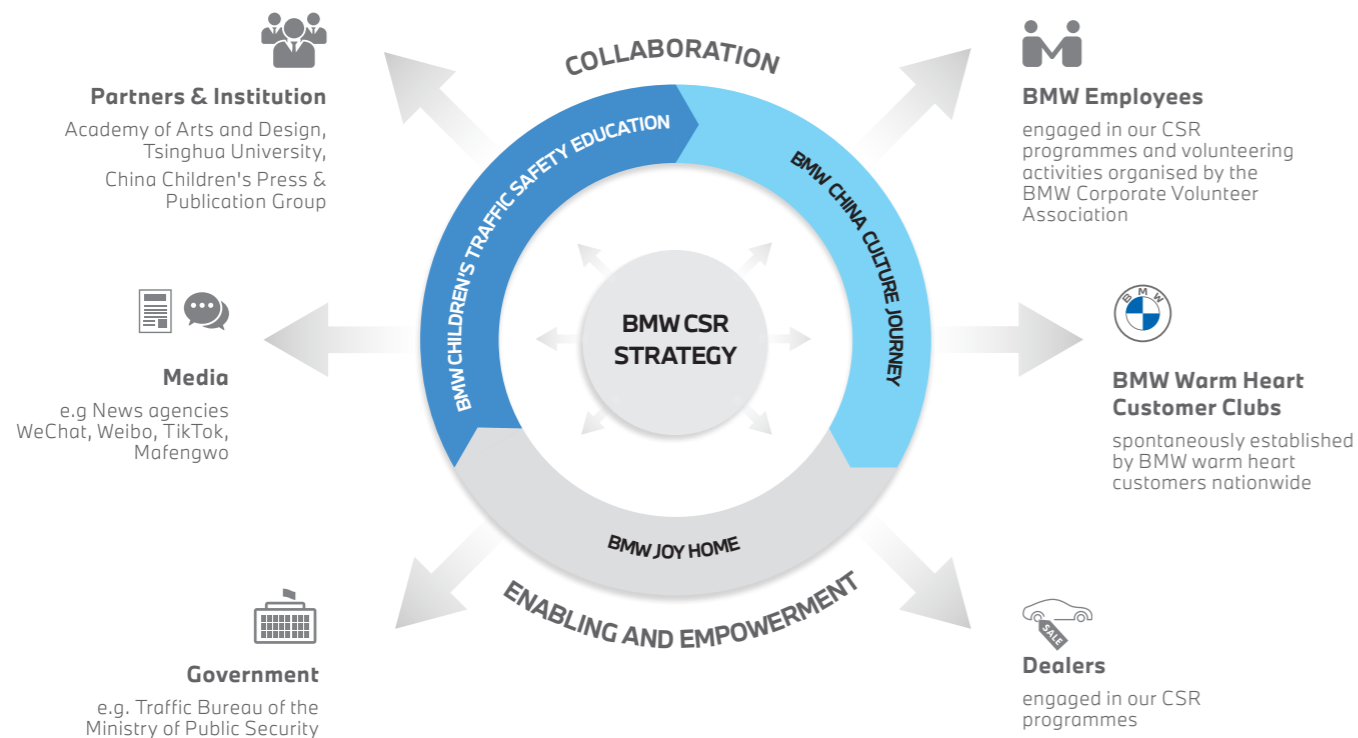
We build deeper and stronger connections with a wide range of stakeholders through our CSR activities, to build a proactive community that is engaged to help others.

BUILDING DEEPER CONNECTIONS WITH STAKEHOLDERS

As we face the future, we continue to engage stakeholders more broadly in our CSR activities, and BMW Brilliance is also exploring more deeply and working with partners to create shared value and contribute to the sustainable development of the Chinese society.

Many different stakeholder groups participate in our CSR programmes, including our employees, dealers and our customers, along with media, key technical and implementing partners, NGOs, and government entities. This year, we expanded our connections with stakeholders and communities through innovations in our flagship BMW CSR programmes, establishing 20 BMW Children's Traffic Safety Education (CTSE) Ambassador Training Bases. The China Charity Federation-BMW Warm Heart Fund, as always, is powering our stakeholder engagement efforts and social contributions.

Figure 29
Network of stakeholders engaged through BMW CSR Programmes



POWERED BY CCF-BMW WARM HEART FUND

中华慈善总会宝马爱心基金
CCF · BMW Warm Heart Fund

Joint fund established in 2008 by BMW Brilliance, BMW China and China Charity Federation, a dedicated platform to coordinate CSR contributions and stakeholder engagement.

An accumulative of 2,866,602 beneficiaries have been reached through BMW CSR activities by the end of 2019.

1 BMW Corporate Volunteer Association

Coordinates BMW Brilliance associates' engagement in four types of volunteering activities:

- BMW Children's Traffic Safety Ambassador
- BMW JOY Home Joyful Sports Games
- Volunteering Activities Initiated by BMW Brilliance Trade Union
- Shenyang Associate Social Responsibility Project

In 2019, we have 212 associate volunteers registered and participated in 10 corporate volunteering activities with a cumulative 1,915 volunteer service hours.

BMW Children's Traffic Safety Ambassador

17 associates volunteered in BMW Children's Traffic Safety Ambassador, with a total of 128 volunteer service hours.

BMW JOY Home Joyful Sports Games

71 associates volunteered in BMW JOY Home Joyful Sports Games, with a total of 568 volunteer service hours.

Volunteering Activities Initiated by BMW Brilliance Trade Union

94 associates volunteered in Trade Union-initiated social volunteering activities, with a total of 1,210 volunteer service hours.

Shenyang Associate Social Responsibility Project (ASR)

Launched in 2008 to engage Shenyang associates in social volunteering activities in Shenyang community.

30 associates volunteered in ASR activities with a total of 120 volunteer hours.

2 BMW Warm Heart Customer Clubs

Spontaneously established by BMW warm heart customers nationwide for social volunteering activities in local communities.

19 BMW Warm Heart Customer Clubs with more than 5,000 core members.

213 BMW Warm Heart Customer Clubs-initiated social volunteering activities in 2019.

3 BMW Dealer

80 dealers were involved in BMW CSR activities in 2019, and a total of 648 CSR activities were initiated by dealers in 2019.





CTSE Roadshow pop-up event in Xi'an.

Alongside with the ambassador training, we held CTSE Roadshow pop-up events in 5 cities with a new format – inside shopping centres with an open-door space so the public could come and go freely in a friendly and relaxed atmosphere. Children and parents learned about traffic safety through situational experiences and VR technology. This allowed our events to directly reach 6,165 people and indirectly influence more than 700,000 people. We also released a series of BMW Good Driver posters to promote civilised driving behaviours on the official Weibo account of the China Traffic Channel, which led to an active online discussion and participation from the Traffic Bureau of the Ministry of Public Security and local traffic police, influencing over 1.7 million people.

BMW CHINA CULTURE JOURNEY

As the iconic program of BMW corporate social responsibility, BMW China Culture Journey has been launched since 2007, which is committed to exploring Chinese traditional culture and promoting the inheritance and development of intangible cultural heritage. Guided by the principle of "teaching a man how to fish rather than giving him a fish", the program builds bridges geared to integrate intangible cultural heritage into modern life.

This year, we announced the upgrade of the Tsinghua BMW Innovation Centre for Intangible Cultural Heritage Safeguarding, co-founded by BMW and Tsinghua University's Academy of Arts and Design three years ago, to further promote the innovative transformation and development for intangible cultural heritage safeguarding. As a benefit from this partnership, we unveiled the new BMW 7 Series Halo Edition at the Chengdu Motor Show in September 2019, the result of a 12-month exploration and development between BMW and the Tsinghua University's Academy of Arts and Design. The customised model is a perfect fusion of Chinese craftsmanship with BMW's engineering design, to explore the new definition of "luxury" in the East based on the combination of modern design concepts and Chinese traditional aesthetics, demonstrating BMW's philosophy for corporate social responsibility—Create Shared Value.

BMW CSR PROGRAMMES

Our CSR flagship programmes address social issues in three areas: improving road safety through traffic safety education for adults and children, supporting China's Intangible Cultural Heritage through connections to our customers and consumers, and providing enhanced education and sports opportunities for left-behind and migrant children.

BMW CHILDREN'S TRAFFIC SAFETY EDUCATION

For 15 years, the BMW Children's Traffic Safety Education (CTSE) programme has been promoting public awareness of traffic safety, raising awareness of children and families about safe behaviour and activities around roads and vehicles, which is essential as vehicle use in China has grown rapidly. As a leader in China's automotive industry, we are being a strong voice to drive safe practices on and around roadways.

Building on our years of CTSE experience and know-how, we co-published the Children's Traffic Safety Education Guidebook in 2019 with the Traffic Safety Research Centre of the Ministry of Public Security and the China Children's Press & Publication Group, with high-quality practical content including teaching plans and educational resources to enable teachers and volunteers. The CTSE Guidebook was endorsed by the Traffic Bureau of the Ministry of Public Security as standard training material and distributed to traffic police nationwide.

Keeping in mind the principle of "helping people to help others", we established the first CTSE Ambassador Training Base in Changsha in March 2019. With the support Changsha Traffic Police, the local primary schools and media, we were able to live-broadcast the first CTSE training and reached to an astonishing number of over 2 million students in Changsha. By the end of 2019, 20 CTSE Ambassador Training Bases were established in 9 major cities, 628 volunteers were trained to become CTSE Ambassadors, delivering more than 67 children's road safety experience courses that reached a total of 2.24 million people.



Children's Traffic Safety Education Guidebook

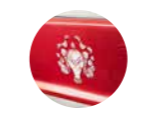
- The guidebook includes practical content on:
- Children traffic safety education guidelines
 - Teaching approach and skills
 - Becoming a volunteer for children traffic safety
 - Best practice and case studies of CTSE



Dragon-shaped Jade Pattern



Suzhou Embroidery



Mother-of-pearl Inlay



Professor Lu Xiao-bo (4th from the right), Dean of Tsinghua University's Arts and Design Academy, led his team composed of the Academy's teachers and students to design the new BMW 7 Series Halo Edition.

2019 BMW China Culture Journey continued to explore Intangible Cultural Heritage. In July 2019, we visited over 20 Intangible Cultural Heritage items in Hainan Province. During the tour, three representative Intangible Cultural items and five inheritors were selected into the Tsinghua BMW Innovation Centre for Intangible Cultural Heritage Safeguarding, and have been mentored to co-design and develop ICH-based products for commercial sales that will help to stimulate rural employment and contribute to poverty alleviation.

Following the Culture Journey to Hainan, we released our fourth ICH-themed tour guide (BMW China Culture Journey Tour Guide in Hainan) at the end of 2019 to promote local cultural tourism and ICH preservation. This year, we leveraged a diverse range of communication platforms, including social and national media platforms such as TikTok, where videos of the programme were streamed to reach a broader audience and younger generation, with more than eight million views during the six-day journey.

The programme's explorations and achievements from the past years were showcased in the 2019 BMW China Culture Journey Intangible Cultural Heritage Exhibition, featuring almost 250 works of 17 ICH inheritors who were trained at the Innovation Centre, all designed and developed with the concept of "integrating intangible cultural heritage into modern life". Two pop-up events were also held in Beijing. The exhibition and pop-up stores attracted over 2,500 people and generated more than RMB 247,000 worth of sales to support the success and development of the ICH inheritors.

BMW China Culture Journey has also received more active involvement from dealers, engaging customers in ICH experience activities to enhance the inheritance and protection of Chinese traditional culture. In 2019, 151 dealer events were organised to promote local ICH with over 50 dealers involved. Through our brand influence, we are building stronger connections among dealers, customers and other stakeholders, contributing to local communities with regards to ICH-themed cultural experience activities.



2019 BMW China Culture Journey Intangible Cultural Heritage Exhibition.

3

Intangible Cultural Heritage items were selected from the Cultural Journey to Hainan to join the Tsinghua BMW Innovation Centre for Intangible Cultural Heritage Safeguarding:

- Traditional Dyeing, Weaving and Embroidery skills of Li Nationality
- Coconut Carving
- Dongpo Bamboo Hat manufacture Skill



2019 BMW JOY HOME Joyful Sports Games.

BMW JOY HOME



Joyful Sports Guidebook

The guidebook covers:

- 30 teaching plans of sports games with detailed teaching instructions
- 10 teaching demo videos
- Teaching approach and skills

Since BMW JOY Home launched in 2011, the programme has made significant contributions to help left-behind and migrant children in China's disadvantaged areas to obtain equal educational opportunities. Over the past eight years, 75 BMW JOY Homes have been established in 29 provinces, municipalities and autonomous regions in China, and over 400 activities have been organised, with nearly 10,000 BMW customers, dealers and associates participating as volunteers through our enhanced stakeholder engagement efforts. More than 80,000 left-behind and migrant children have benefited from these activities.

Since 2017, BMW JOY Home has upgraded the strategy from donations to enabling and shifted focus onto Joyful Football and Joyful Sports, which promote the healthy physical and mental development of left-behind and migrant children, using football and sports to improve public welfare and equip them for the future. 2019 was a landmark year with the launch of the Joyful Sports Guidebook and 10 teaching demo videos, funded by China Charity Federation-BMW Warm Heart Fund. The Joyful Sports Guidebook enables rural teachers and public volunteers with professional sports guidance and demo videos designed to help them organise sports and games for left-behind and migrant children, and to promote the educational concept on Joyful Sports more widely. A total of 12 Joyful Sports events were organised in 10 BMW JOY Home schools nationwide, engaging BMW associates and customers as volunteers.

In 2019, we continued to enhance the Joyful Football on-campus training by engaging more stakeholders. 20 new Joyful Football teams were set up this year, and 10-day on-campus football trainings were organised in 20 BMW JOY Home schools, with professional coaches providing football training for left-behind and migrant children. In July 2019, the second BMW JOY Home Football Tournament Summer Camp was held in Shenyang with 10 teams participating, including 100 students and 20 teachers. These students not only received football training and competed in football matches, but also attended classes and summer camp activities, and visited the BMW Brilliance Plant Tiexi in Shenyang and Shenyang Science Palace.

Our CSR awards and recognitions in 2019.



BMW Brilliance

- BMW Brilliance was honoured for 2019 Best Enterprise Practices for achieving Sustainable Development Goals (SDGs) by UN Global Compact Network China
- BMW was honoured as 2019 China's Corporate Citizen Responsibility Brand Top 60
- Recognised as More Than a Market Finalist by the German Chamber of Commerce in China
- 2019 Responsible Corporate by China Newsweek in 15th Corporate Social Responsibility Forum: China



BMW Children's Traffic Safety Education

- The Cultural Industry Promotion Award of the 4th Boyuan Award from Global Times
- CSR Gold Award and 2019 Golden Flag Grand Award
- "Silver Award" in Social Influence at the 6th SuQin Awards Ceremony
- Outstanding CSR at the 4th Social Value Co-Creation Awards



BMW China Culture Journey

- Most Outstanding Contribution Award of the 5th CSR Chinese Culture Award
- CSR Gold Award at the 2019 Golden Flag Award
- Gold Award in Social Innovation at the 6th SuQin Awards Ceremony
- Selected by the State Council's Poverty Alleviation Office as one of the "Top 50 Enterprise-Initiated Poverty Alleviation Programme Case Studies"



BMW JOY Home

- CSR Gold Award and 2019 Golden Flag Grand Award
- Gold Award in Cause Marketing at the 6th SuQin Awards Ceremony



Art Space in BMW Brilliance Plant Powertrain.

SUPPORTING THE COMMUNITIES IN WHICH WE WORK

In addition to nationwide programmes, BMW Brilliance organises local community initiatives around our facilities to promote social and intellectual development in Shenyang. In 2019, these included an Art Plant Project, the BEST Vocational Training, Shenyang Associate Social Responsibility Project and volunteering activities initiated by BMW Brilliance Trade Union.

BMW Brilliance Art Plant Project

BMW Brilliance is deeply rooted in Shenyang with a long-term commitment to cultural development and fulfillment of corporate social responsibility. We engage in cultural cooperation through multiple angles, including art as an extension of industry.

Following the 2019 Shenyang Art Festival, BMW Brilliance held the unveiling ceremony of our Art Spaces, enabling a dialogue between art and industry. We also announced the Art Plant project, with art spaces to be set up in Plant Dadong, Plant Tiexi, Plant Powertrain and R&D Centre to showcase the beauty of industrial manufacturing in diverse ways. Unique art works created by Professor Yang Ye of the School of Fine Arts and Design of Shenyang Normal University, as well as representative works from other art institutions in Shenyang were showcased. The main Art Space in Plant Tiexi was open to the public during the 2019 Shenyang Art Festival weekends with a limited number of admissions free of charge, and a Weekend Theme Tour programme that created more visiting experiences.



BMW EDUCATION OF SALES & SERVICE TALENTS (BEST)

The BEST programme was developed by the BMW China Training Academy in response to a national call for the development of vocational training. It incorporates dual-education vocational training, an approach that was credited

The BEST programme was developed by the BMW China Training Academy in response to a national call for the development of vocational training. It incorporates dual-education vocational training, an approach that was credited with reinforcing and sustaining the rapid development of Germany's economy. Through the BEST program, BMW is leveraging its pioneering role and leading vision in the industry to bring the latest and best professional skills to Chinese young people, with hope of a bright future.

Since the launch of the BEST programme in 2006, it has equipped numerous talents with product knowledge and professional skills to join China's automotive industry. We have set up 17 training bases across 13 provinces and one municipality directly under the central government, in cooperation with over 460 dealers nationwide. Of the 8,000 graduates, over 50% have now joined BMW dealerships as a reliable force for high-quality aftersales services.

2019 also marked the BEST programme's expansion to mega-cities, with the opening of BMW Group Beijing and Shenzhen Training Base, and Shanghai training base is planned to open soon. With the rapid growth of NEV market, we are planning to integrate NEV content into BEST, catering to the changing needs of the fast-growing NEV China market, and providing dealers with qualified NEV staff.

Shenyang Associate Social Responsibility Project

Shenyang Associate Social Responsibility Project (ASR) is a social public welfare project initiated by our Shenyang associates to "devote love and care for others". Over the past 10 years, the project has grown to a routine volunteer programme which all our Shenyang employees can participate in to offer care and help to those in the Shenyang community that need it most. This year, 30 associate volunteers from our production facilities visited the Shenyang Social Welfare Home – a social support area for the disabled and a recuperation area for outstanding veterans, and shared love and spiritual care by distributing daily necessities, accompanying them and listening to the stories of their youth.

BMW Brilliance Trade Union-initiated Volunteering Activities

The BMW Brilliance Trade Union is committed to public welfare and helps elderly and left-behind children in local communities through volunteering activities. Seeing the desire for knowledge from these children and the lack of local educational resources, this year the Union organised a left-behind children care event – "Grow with My Home Country for a Beautiful Future" at Dashi Town Central School, one of BMW JOY Home schools in Liaoning Province, in conjunction with the 70th anniversary of the People's Republic of China. Our associate volunteers brought the children a special themed class to encourage these children to step out of the mountains and create their future, and the Union awarded scholarships to students and rewards to teachers who have dedicated their youth teaching in the depth of the mountains for years.

FORECAST 2020

Stepping into 2020, we will conduct talent preparation for the Tiexi New Plant and the Plant Dadong Expansion projects, with a stronger talent acquisition programme and internal talent preparation.

We will implement follow-up measures based on the 2019 employee survey results, with instant employee feedback gathered through the JOY Q-Lab Employee Engagement Mini-Survey tool.

To ensure our employee health, we will launch a six-month campaign to support overweight associates to change their lifestyle. Pilot for Today for Tomorrow>NEXT will be completed and prepared for further implementation in other workshops. Besides the routine programmes, we will also roll out two new campaigns: sleep quality for production employees who are working in shifts and hearing protection.

Building on the positive feedback from stakeholders and the public on the BMW CTSE Ambassador Training Bases, in 2020 we will develop more volunteers as trainers, and increase the number of training bases across the country. We will leverage our insights and influence to extend traffic safety education for adults and children and roll out a new initiative based on emerging social issues.

We are seeking innovations in our enabling models by sharing know-how and resources among our CSR flagship programmes. In 2020, we plan to launch an online children's traffic safety education platform, under the guidance of Traffic Management Bureau of the Ministry of Public Security.

We will launch an online management platform for the BMW Corporate Volunteer Association to manage volunteer recruitment and registration, recording of volunteer service hours, and issuing of volunteer certificates.

In 2020, the BMW BEST programme will expand its partnering schools to 18, and open new training base in Shanghai to cope with the high demand of growth needs from our dealer networks. Furthermore, education content related to NEV service will be officially integrated to cater to the fast-growing NEV business in China.



05

APPENDIX

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ABOUT THIS REPORT

The BMW Brilliance 2019 Sustainability Report provides stakeholders with comprehensive information about the company's sustainability ambitions and progress. The topics included here have been selected and weighted in accordance with the findings of a systematic materiality process. The content of the report was prepared in compliance with the GRI Standards of the Global Reporting Initiative, applying the "Core" option. Using the Global Reporting Initiative Content Index helps to show how we are implementing the requirements of the UN Global Compact.

REPORTING PERIOD

This is BMW Brilliance's seventh Sustainability Report, covering the calendar year from 1st January to 31st December 2019. The last BMW Brilliance Sustainability Report, covering our 2018 performance and activities, was released in September 2019. The next Sustainability Report will be published in mid-2021. BMW Brilliance reports on an annual basis.

REPORTING SCOPE

The sustainability performance data in the report include the following production and operation sites of BMW Brilliance: our plants in Shenyang, as well as our branch offices in Beijing and Shanghai, and our five sales regional offices.

The content and data of the report relate primarily to BMW Brilliance. We have made no changes in the methods used to collect and measure the data on our sustainability performance. There was no change to the list of material topics and topic boundaries of the report during this reporting period. The targets set within the report build on the indicators presented in previous years. Additional targets on Greenhouse Gas Emissions apply to the production and operation sites of BMW Brilliance were added in this Report. Joint Initiatives with BMW China Automotive Trading Ltd. or the BMW Group are included in the areas of customer Relationship management, employee training and development, and corporate social responsibility.

THIRD-PARTY ASSURANCE

PricewaterhouseCoopers Zhong Tian LLP has provided limited assurance on selected key data in this Report.

KEY PERFORMANCE INDICATORS

	2015	2016	2017	2018	2019	Change from previous years %
BUSINESS ACTIVITIES						
Revenues from operations (in RMB million)	94,881	98,436	113,197	141,918	172,692	21.7
Tax (in RMB billion)	20	21	25	31	35	12.9
Automobiles produced (in unit)	288,055	305,845	396,888	490,151	534,990	9.1
Automobiles wholesaled (in unit)	287,488	310,041	386,556	465,192	544,549	17.1
Engine produced (number)	281,288	282,776	393,110	491,488	478,588	-2.6
Authorised dealer outlets nationwide (number)	515	558	598	625	647	3.5
PRODUCTS AND SERVICES						
Average fleet CO ₂ emissions (in g/km)	165.4	159.2	146.9	139	137.8	-0.9
Corporate average fuel consumption (in l/100 km)	6.95	6.69	6.17	5.84	5.79	-0.9
Upstream chain CO ₂ emissions of BMW Brilliance automobiles (in t)	1,989,117	2,099,198	2,675,910	3,408,077	3,981,487¹	16.8
Production CO ₂ emissions of BMW Brilliance automobiles (in t)	253,183	342,724	278,195	317,486	110,743^{2,3}	-65.1
Utilisation phase CO ₂ emissions of BMW Brilliance automobiles (in t)	7,138,095	7,292,407	8,735,582	10,219,060	11,058,404⁴	8.2
Disposal CO ₂ emissions of BMW Brilliance automobiles (in t)	158,141	167,212	195,298	245,409	267,321⁵	8.9
New Energy Vehicles wholesaled (in unit)	1,249	480	1,983	21,438	32,246	50.4
New Energy Vehicles dealer outlets in China (number)	122	173	234	336	450	33.9
Public charging pillars provided in China (number)	512	1,718	65,708	81,585	130,405	59.8
Spare parts recycled (number)	-	-	56,362	217,500	124,600	-42.7
Spare parts recycled (in t)	-	-	826	800	563	-29.6
PRODUCTION AND VALUE CREATION						
Total Greenhouse gas emissions (in t)	9,538,536	9,901,541	11,884,985	14,190,033	15,417,955	8.7
Scope 1 Greenhouse gas emissions (in t)	24,057	33,570	37,448	35,733	42,141²	17.9
Scope 2 Greenhouse gas emissions (in t)	229,126	309,154	240,747	281,753	68,602³	-75.7
Scope 3 Greenhouse gas emissions (in t)	9,285,353	9,558,817	11,606,790	13,872,546	15,307,212⁶	10.3
Share of renewable electricity (in %)	-	-	25	43	100⁷	132.6
CO ₂ emissions per vehicle produced (in t/vehicle)	0.88	1.13	0.70	0.63	0.20^{2,3}	-68.3
Total energy consumption (in MWh)	478,424	623,419	734,268	841,518	974,642	15.8

	2015	2016	2017	2018	2019	Change from previous years %
PRODUCTION AND VALUE CREATION						
Total fuel consumption from non-renewable resources (in MWh)	132,325	183,422	184,408	196,553	233,127	18.6
Total electricity consumption (in MWh)	202,558	295,867	393,565	475,702	557,572	17.2
Total heating consumption (in MWh)	143,539	144,130	156,295	169,263	183,943	8.7
Energy consumption per vehicle produced (in MWh/vehicle)	1.66	2.05	1.83	1.65	1.63	-1.2
Volatile organic compounds (VOC) per vehicle produced (in kg/vehicle)	0.45	0.40	0.54	0.56	0.52	-7.1
Total water consumption (in m ³)	-	-	1,173,531	1,214,892	1,332,876	9.7
Water consumption per vehicle produced (in m ³ /vehicle)	2.18	2.58	2.68	2.47	2.40	-2.8
Process wastewater per vehicle produced (in m ³ /vehicle)	0.46	0.46	0.39	0.42	0.44	4.8
Total waste (in t)	33,299	46,033	71,976	85,237	87,013	2.1
Total waste for recycling (in t)	30,658	44,091	69,029	81,276	83,004	2.1
Total waste for disposal (in t)	2,641	1,942	2,947	3,961	4,009	1.2
Waste for disposal per vehicle produced (in kg/vehicle)	9.17	6.42	7.43	8.05	7.47	-7.2
Total non-hazardous waste (in t)	27,300	40,286	63,812	74,073	76,814	3.7
Non-hazardous waste for recycling (in t)	26,659	39,067	62,230	72,152	73,346	1.7
Non-hazardous waste for disposal (in t)	641	1,219	1,582	1,921	1,897	-1.2
Total hazardous waste (in t)	5,999	5,747	8,164	11,164	10,199	-8.6
Hazardous waste for recycling (in t)	3,999	5,024	6,799	9,124	8,113	-11.1
Hazardous waste for disposal (in t)	2,000	723	1,365	2,040	2,086	2.3
Local content suppliers in China (number)	319	345	359	378	394	4.2
Purchasing volume in China (in RMB billion)	23.5	23.9	26.7	43.1	49.7	15.3

Note:

- Emissions from the upstream chain are calculated based on the carbon footprint of representative vehicles from the product lines.
- Direct CO₂ emissions generated by fossil fuel consumption at BMW Brilliance plants, excluding the fossil fuel consumption of construction and on-site suppliers. The coefficients used for calculation are from Emission Factors for Electricity, District Heating and Fuels issued by Application of German Association of the Automotive Industry (VDA).
- Indirect CO₂ emissions generated by the consumption of purchased electricity and heating at the BMW Brilliance plants, excluding purchased electricity and heating consumption of construction and on-site suppliers. For calculation of the Scope 2 GHG emissions, "market-based" methodology is used in accordance with GHG Protocol Scope 2 Guidance issued by the World Resources Institute.
- The fleet emissions are extrapolated from the average fleet emissions of BMW Brilliance products sold in a given year. The calculation was based on an average mileage of 150,000 kilometers.
- Emissions from disposal processes are calculated based on the carbon footprint of representative vehicles from the product lines.
- Indirect CO₂ emissions generated in the upstream supply chain, the utilisation phase and the disposal of automobiles produced by BMW Brilliance for sales in mainland China market of the year. Emissions from the supply chain and the disposal are based on the carbon footprints of representative vehicles from the product lines, calculated by Thinkstep's LCA tool GoBi. Emissions from the utilisation phase are based on the average fleet emissions of automobiles delivered of BMW Brilliance and an average mileage of 150,000 kilometres per vehicle.
- Including the generation of solar power electricity, the purchase of wind power electricity and International Renewable Energy Certificates (I-RECs).

	2015	2016	2017	2018	2019	Change from previous years %
EMPLOYEES AND SOCIETY						
Total workforce at year-end (number)	16,573	16,286	16,686	18,925	19,824	4.8
Female employees in total workforce (number)	2,117	2,094	2,129	2,268	2,389	5.3
Female employees in total workforce (in %)	12.8	12.9	12.8	12.0	12.1	0.8
Male employees in total workforce (number)	14,456	14,192	14,557	16,657	17,435	4.7
Male employees in total workforce (in %)	87.2	87.1	87.2	88.0	87.9	-0.1
Employees, age <30 (number)	9,890	8,711	7,805	8,276	7,486	-9.5
Employees, age <30 (in %)	59.7	53.5	46.8	43.7	37.8	-13.5
Employees, age 30-50 (number)	6,585	7,472	8,771	10,526	12,192	15.8
Employees, age 30-50 (in %)	39.7	45.9	52.6	55.6	61.5	10.6
Employees, age >50 (number)	98	103	110	123	146	18.7
Employees, age >50 (in %)	0.59	0.63	0.66	0.65	0.74	13.8
Production employees (number)	11,785	11,551	11,971	13,844	14,311	3.4
Production employees (in %)	71.1	70.9	71.7	73.2	72.2	-1.4
Non-production employees (number)	4,788	4,735	4,715	5,081	5,513	8.5
Non-production employees (in %)	28.9	29.1	28.3	26.9	27.8	3.3
Employees in Shenyang (number)	15,899	15,601	15,994	18,175	19,068	4.9
Employees in Shenyang (in %)	95.9	95.8	95.9	96.0	96.2	0.2
Employees in Beijing (number)	674	685	692	750	756	0.8
Employees in Beijing (in %)	4.1	4.2	4.2	4.0	3.8	-5.0
Employees in management positions (number)	1,035	1,094	1,146	1,256	1,367	8.8
Employees in management positions (in %)	6.3	6.7	6.9	6.6	6.9	4.5
Employees in non-management positions (number)	15,538	15,192	15,540	17,669	18,457	4.5
Employees in non-management positions (in %)	93.8	93.3	93.1	93.4	93.1	-0.3
Female employees in management positions (number)	285	311	346	377	418	10.9
Female employees in management positions (in %)	27.5	28.4	30.2	30.0	30.6	2.0
Chinese employees in management positions (number)	808	897	974	1,080	1,169	8.2
Chinese employees in management positions (in %)	78.1	82.0	85.0	86.0	85.5	-0.6
Share of employees with fixed contracts (in %)	0.9	0.8	0.6	0.5	0.5	0.0
Total new employee hires (number)	1,929	363	1,330	3,266	1,756¹	-46.2
Total new employee hires (in %)	11.6	2.2	8.0	17.3	8.9¹	-48.6
Female new employees (number)	329	113	182	310	261	-15.8
Female new employees (in %)	2.0	0.7	1.1	1.6	1.3	-18.8
Male new employees (number)	1,600	250	1,148	2,956	1,495	-49.4
Male new employees (in %)	9.7	1.5	6.9	15.6	7.5	-51.9

	2015	2016	2017	2018	2019	Change from previous years %
EMPLOYEES AND SOCIETY						
New employees in Shenyang (number)	1,801	270	1,205	3,096	1,629	-47.4
New employees in Shenyang (in %)	10.9	1.7	7.2	16.4	8.2	-50.0
New employees in Beijing (number)	128	93	125	170	127	-25.3
New employees in Beijing (in %)	0.8	0.6	0.8	0.9	0.6	-33.3
New employees, age <30 (number)	1,384	212	1,037	2,534	1,222	-51.8
New employees, age <30 (in %)	8.4	1.3	6.2	13.4	6.2	-53.7
New employees, age 30-50 (number)	523	141	280	722	518	-28.3
New employees, age 30-50 (in %)	3.2	0.9	1.7	3.8	2.6	-31.6
New employees, >50 (number)	22	10	13	10	16	60.0
New employees, >50 (in %)	0.13	0.06	0.08	0.05	0.08	60.0
Attrition rate (in %)	3.8	3.3	4.5	4.8	3.6	-25.0
Voluntary attrition rate (in %)	2.9	2.6	3.1	3.7	2.6	-29.7
Involuntary attrition rate (in %)	0.9	0.6	1.4	1.2	1.1	-8.3
Training days of training organised by the Human Resources Department (in day)	35,205	27,851	34,314	33,804	24,311	-28.1
Average days of further training per employee (in day/person)	2.20	1.70	2.10	1.79	1.23	-31.3
Average training days for employees in production (in day/person)	1.10	1.10	1.30	1.00	0.77	-23.0
Average training days for employees in non-production (in day/person)	4.70	3.20	4.40	4.00	2.39	-40.3
Average training days for employees in management positions (in day/person)	3.10	3.20	3.40	3.70	1.14	-69.2
Average training days for employees in non-management positions (in day/person)	2.10	1.60	2.05	1.70	1.87	10.0
Training attendee satisfaction rate (in %)	97.0	97.0	97.0	97.0	98.2	1.2
Accident frequency rate (per one million hours worked)	1.06	0.54	0.43	0.28	0.17	-39.3
Beneficiaries of BMW CSR activities (number)	9,400	36,200	21,000	80,292	2,628,710²	3,173.9
Accumulative beneficiaries of BMW CSR activities (number)	100,400	136,600	157,600	237,892	2,866,602	1,105.0
Expenditure on social commitment activities (in RMB)	-	-	17,064,616	15,575,085	16,513,831	6.0
Total employee participants of CSR activities (number)	-	-	-	-	212³	-
Total hours of volunteer service (in hour)	-	-	-	-	1,915³	-
Graduates of dual-education vocational training reinforcing the talent pool for dealerships in China (number)	4,328	5,222	6,377	7,473	8,381	12.2

Note:

- Figures related to new employees from 2017 onwards are not directly comparable to figures from previous years due to changes in calculation method. New employees figures before 2017 are those who joined BMW Brilliance during the year and still worked with BMW Brilliance at year-end. Figures from 2017 to 2019 are those who joined BMW Brilliance during the year, regardless of whether they still worked with BMW Brilliance at year-end or not.
- In 2019, BMW Brilliance organised multiple training programmes on traffic safety through online platforms, which enabled a significant increase in the number of beneficiaries of our CSR activities.
- Figures are only available since 2019, as the BMW Corporate Volunteer Association was founded in the end of 2018.

GRI CONTENT INDEX

The following table lists the GRI Standards Disclosures and their location in the BMW Brilliance's Sustainability Report. This report was prepared in accordance with the GRI Standards: Core option. The compliance with the GRI Standards has not been externally assured.

General Disclosures					
GRI Standard	Disclosure	Page number	Comments or omissions	UN Global Compact	
GRI 102: General Disclosures Approach 2016 (continued)	Organisational profile				
	102-1	Name of the organisation	pp. 8-10, 127		
	102-2	Activities, brands, products, and services	pp. 8-13		
	102-3	Location of headquarters	pp. 8-9, 127		
	102-4	Location of operations	pp. 8-9		
	102-5	Ownership and legal form	pp. 8-9		
	102-6	Markets served	pp. 8-9		
	102-7	Scale of the organisation	pp. 8-9, 12-13		
	102-8	Information on employees and other workers	pp.86-87,108-111	<p>d: Not included in the total number of employees an interns. They assist in administrative tasks. There are no self-employed workers.</p> <p>e: There are no significant variations (such as seasonal variations) in the employment numbers of BMW Brilliance.</p> <p>f: The small number of employees in other regional locations next to Shenyang and Beijing are integrated into the Beijing figures, as those locations legally belong to the Beijing offices.</p>	Principle 6
	102-9	Supply chain	pp. 72-78		
	102-10	Significant changes to the organisation and its supply chain	pp. 72-73		
	102-11	Precautionary Principle or approach	pp. 17-23		Principle 7
102-12	External initiatives	pp. 42-50, 67-70, 74, 78, 94-104			

General Disclosures					
GRI Standard	Disclosure	Page number	Comments or omissions	UN Global Compact	
GRI 102: General Disclosures Approach 2016 (continued)	Organisational profile (continued)				
	102-13	Membership of associates	-	<p>CAAM (China Association of Automobile Manufacturers)</p> <p>CAEFI (China Association of Enterprises with Foreign Investment)</p> <p>IAC (The Investment Association of China)</p> <p>LNAEFI (Liaoning Association of Enterprises with Foreign Investment)</p> <p>SYAEFI (Shenyang Association of Enterprises with Foreign Investment)</p> <p>BAEFI (Beijing Association of Enterprises with Foreign Investment)</p> <p>ABNEA (Association of Beijing New Energy Automotive)</p> <p>AHK (German Chamber of Commerce in China)</p> <p>EFQM (European Foundation for Quality Management)</p> <p>Road Vehicle Committee of China Intelligent Transportation Systems Association (ITS China)</p> <p>CBCSD (China Business Council for Sustainable Development)</p>	
	Strategy				
	102-14	Statement from senior decision-maker	pp. 4-5		
	102-15	Key impacts, risks, and opportunities	pp. 20	Description of key sustainability impacts, risks and opportunities can be found throughout the content of this report and in Strategy.	
	Ethics and integrity				
	102-16	Values, principles, standards, and norms of behaviour	-	<p>The 12 Basic Principles are:</p> <p>Customer Orientation, Peak Performance, Responsibility, Effectiveness, Adaptability, Dissent (Frankness), Respect and Trust and Fairness, Associates, Leading by example, Sustainability, Society, and Independence. Core Values: Responsibility, Appreciation, Transparency, Trust, and Openness.</p> <p>Norms of Behaviour:</p> <ul style="list-style-type: none"> - Associate Handbook including an Ethics and Code of Conduct section - Legal Compliance Code- Corruption and Prevention Guideline - Corporate Hospitality and Gift Instruction - Anti-Fraud Policy and Fraud Response Guideline 	Principle 6, 10
	102-17	Mechanisms for advice and concerns about ethics	pp. 27-30		
	Governance				
	102-18	Mechanisms for advice and concerns about ethics	pp.22, 28	According to the Articles of Association of BMW Brilliance, the highest authority of BMW Brilliance is the Board of Directors (BoD). The BoD has the power to make decisions on all major and important matters of BMW Brilliance as provided in the Articles of Association. A management organisation, the Board of Management (BoM), is established under the BoD, and is responsible for and in charge of the day-to-day operation and management of BMW Brilliance.	

General Disclosures

GRI Standard	Disclosure	Page number	Comments or omissions	UN Global Compact	
GRI 102: General Disclosures Approach 2016 (continued)	Stakeholder engagement				
	102-40	List of stakeholder groups	pp.25, 96-97		
	102-41	Collective bargaining agreements	pp. 85-86	100% of local employees are members of the BMW Brilliance Trade Union, and all Union members are covered by the Collective Contract on Labour Remuneration. This excludes expatriates, who are not eligible for the Trade Union.	Principle 3
	102-42	identifying and selecting stakeholders	pp. 24		
	102-43	Approach to stakeholder engagement	pp. 24-25, 96-97		
	102-44	Key topics and concerns raised	pp. 24-25, 96-97		
	Reporting practice				
	102-45	Entities included in the consolidated financial statements	pp. 107		
	102-46	Defining report content and topic boundaries	pp. 19-21, 107		
	102-47	List of material topics	pp. 19, 21		Principles 7, 8, 9, 10
	102-48	Restatements of information	-	Where necessary and possible, restatements are explained in footnotes to the respective graphs.	
	102-49	Changes in reporting	pp. 107		
	102-50	Reporting period	pp. 107		
	102-51	Date of most recent report	pp. 107		
	102-52	Reporting cycle	pp. 107		
	102-53	Contact point for questions regarding the report	pp. 127		
102-54	Claims for reporting in accordance with the GRI standards	pp. 107			
102-55	GRI Content index	pp. 112-119			
102-56	External assurance	pp. 120-123			

Specific Disclosures for Material Topics

GRI Standard	Disclosure	Page number	Comments or omissions	UN Global Compact
Product & services safety				
GRI 103: Management Approach 2016	103-1	Explanation of the material Topic and its boundary	pp. 19, 21, 35	
	103-2	The management approach and its components	pp. 36-38, 47	
	103-3	Evaluation of the management approach	pp. 36-38, 47	
GRI 416: Customer Health and Safety 2016	416-1	Assessment of the health and safety impacts of product and service categories	pp. 36-39, 50	
	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	-	BMW Brilliance did not have significant non-compliance with laws / regulations in 2019 that resulted in a financially material impact.
Sustainable product portfolio & research and development				
GRI 103: Management Approach 2016	103-1	Explanation of the material Topic and its boundary	pp. 19, 21, 35	Principles 7, 8, 9
	103-2	The management approach and its components	pp. 40-46	
	103-3	Evaluation of the management approach	pp. 40-42	
GRI 305: Emissions 2016	305-5	Reduction of GHG emissions	pp. 40-42	
Automation & digitalisation				
GRI 103: Management Approach 2016	103-1	Explanation of the material Topic and its boundary	pp. 19, 21, 31, 53	Principle 10
	103-2	The management approach and its components	pp. 32, 54-57	
	103-3	Evaluation of the management approach	pp. 54-55	

Specific Disclosures for Material Topics

GRI Standard	Disclosure	Page number	Comments or omissions	UN Global Compact
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Compliance, corruption, anti-competitive behaviour & business ethics

GRI 103: Management Approach 2016	103-1	Explanation of the material Topic and its boundary	pp. 19, 21, 27, 72	
	103-2	The management approach and its components	pp. 28-29, 65, 73-75	
	103-3	Evaluation of the management approach	pp. 28, 76-77	
GRI 205: Anti-corruption 2016	205-2	Communication and training about anti-corruption policies and procedures	pp. 27-29	<p>We define governance bodies as those committees which receive active regular reports by the compliance function. All committee members are informed about BMW Brilliance's anti-corruption policies and procedures. All committee members who are BMW Brilliance employees have also received training on anti-corruption. Committee members representing our shareholders are not covered by the training programme of BMW Brilliance, but are covered by the compliance programmes of BMW Group and Brilliance Group respectively.</p> <p>Our compliance training includes mandatory online training for all non-production employees, additional classroom training for new employees and managers, and special workshops and training for specific target groups (e.g. Sales, Purchasing, and Finance).</p> <p>c: Information unavailable: The number of business partners that policies and procedures have been communicated to is not reported.</p>
GRI 206: Anti-competitive Behaviour 2016	206-1	Legal actions for anti-competitive behaviour, anti-trust, and monopoly practices	-	In 2019, there were no legal actions regarding anti-competitive behaviour or violations of anti-trust and monopoly legislation.
GRI 414: Supplier Social Assessment 2016	414-2	Negative social impacts in the supply chain and actions taken	pp. 74, 76-77	Principles 1, 2, 3, 4, 5, 6, 10

Charity & corporate citizenship

GRI 103: Management Approach 2016	103-1	Explanation of the material Topic and its boundary	pp. 19, 21, 94	Principle 10
	103-2	The management approach and its components	pp. 94-96	
	103-3	Evaluation of the management approach	pp. 94-95	

Specific Disclosures for Material Topics

GRI Standard	Disclosure	Page number	Comments or omissions	UN Global Compact
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Transparency

GRI 103: Management Approach 2016	103-1	Explanation of the material Topic and its boundary	pp. 19, 21, 27, 54-55, 72-73	
	103-2	The management approach and its components	pp. 27-28, 58-59, 73-75	
	103-3	Evaluation of the management approach	pp. 28, 58-59, 73-75	

Energy consumption & renewable energy

GRI 103: Management Approach 2016	103-1	Explanation of the material Topic and its boundary	pp. 19, 21, 61	Principle 7, 8, 9
	103-2	The management approach and its components	pp. 61, 63	
	103-3	Evaluation of the management approach	pp. 63, 109	
GRI 302: Energy 2016	302-1	Energy consumption within the organisation	pp. 108-109	
	302-2	Energy consumption outside of the organisation	pp. 108-109	
	302-4	Reduction of energy consumption	pp. 14, 63, 108-109	
GRI 308: Supplier Environmental Assessment 2016	308-2	Negative environmental impacts in the supply chain and actions taken	pp. 75-76	Principle 7, 8

Air pollution

GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its boundary	pp. 19, 21, 61	Principles 7, 8, 9
	103-2	The management approach and its components	pp. 58-59, 61, 64	
	103-3	Evaluation of the management approach	pp. 14, 64, 109	
GRI 308: Supplier Environmental Assessment 2016	308-2	Negative environmental impacts in the supply chain and actions taken	pp. 76-77	Principles 7, 8

Specific Disclosures for Material Topics

GRI Standard	Disclosure	Page number	Comments or omissions	UN Global Compact
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Greenhouse gas emissions & climate change

GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its boundary	pp. 19, 21, 40, 53, 61, 67, 72	Principles 7, 8, 9
	103-2	The management approach and its components	pp. 40-41, 58-59, 61-63, 67-70, 78	
	103-3	Evaluation of the management approach	pp. 14-15, 40, 61-62, 67-69, 108-109	
GRI 305: Emissions 2016	305-1	Direct (Scope 1) GHG emissions	pp. 14, 61, 108	
	305-2	Energy indirect (Scope 2) GHG emissions	pp. 14, 61, 108	
	305-3	Other indirect (Scope 3) GHG emissions	pp. 14, 61, 108	
	305-4	GHG emissions intensity	pp. 14, 62, 67, 69, 109	
	305-5	Reduction of GHG emissions	pp. 14, 62, 67, 69, 108-109	
GRI 308: Supplier Environmental Assessment 2016	308-2	Negative environmental impacts in the supply chain and actions taken	pp. 75-77, 78	Principles 7, 8

Waste & effluents

GRI 103: Management Approach 2016	103-1	Explanation of the material Topic and its boundary	pp. 19, 21, 53	Principle 7, 8, 9
	103-2	The management approach and its components	pp. 58-59, 65-66	
	103-3	Evaluation of the management approach	pp. 14, 65-66, 109	
GRI 306: Effluents and Waste 2016	306-1	Water discharge by quality and destination	pp. 14, 66, 109	
	306-2	Waste by type and disposal method	pp. 15, 65, 109	
GRI 308: Supplier Environmental Assessment 2016	308-2	Negative environmental impacts in the supply chain and actions taken	pp. 75-77	Principles 7, 8

Specific Disclosures for Material Topics

GRI Standard	Disclosure	Page number	Comments or omissions	UN Global Compact
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Access to labour

GRI 103: Management Approach 2016	103-1	Explanation of the material Topic and its boundary	pp. 19, 21, 81	Principle 6
	103-2	The management approach and its components	pp. 82-93	
	103-3	Evaluation of the management approach	pp. 15, 86-88, 91, 110-111	
GRI 401: Employment 2016	401-1	New employee hires and employee turnover	pp. 14, 110-111	a: Total number of new employees hires: 1,756. b: Confidentiality constraints: The total number of employee turnover, as well as the breakdown by age group, gender and region (total numbers and rates) are not reported.

Responsible human resources management

GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its boundary	pp. 19, 21, 81	Principle 6
	103-2	The management approach and its components	pp. 82-93	
	103-3	Evaluation of the management approach	pp. 15, 86-88, 91, 110-111	
GRI 404: Training and Education 2016	404-1	Average hours of training per year per employee	pp. 110-111	a: Information unavailable: Average training days by gender are not reported.
	404-2	Programs for upgrading employee skills and transition assistance programs	pp. 87-89	

LIMITED ASSURANCE REPORT



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Independent practitioner's assurance report

To the Board of Management of BMW Brilliance Automotive Ltd.

We have been engaged to perform a limited assurance engagement on the selected 2019 key data as defined below in the 2019 Sustainability Report of BMW Brilliance Automotive Ltd. (the "Company").

Selected key data

The selected key data in the Company's 2019 Sustainability Report that is covered by this report is as follows:

- Automobiles produced (in unit)
- Automobiles wholesaled (in unit)
- Authorised dealer outlets nationwide (number)
- Average fleet CO₂ emissions (in g/km)
- Corporate average fuel consumption (in l/100km)
- Scope 1 Greenhouse gas emissions (in t)
- Scope 2 Greenhouse gas emissions (in t)
- Scope 3 Greenhouse gas emissions (in t)
- Share of renewable electricity (in %)
- CO₂ emissions per vehicle produced (in t/vehicle)
- Total energy consumption (in MWh)
- Energy consumption per vehicle produced (in MWh/vehicle)
- Volatile organic compounds (VOC) per vehicle produced (in kg/vehicle)
- Total water consumption (in m³)
- Water consumption per vehicle produced (in m³/vehicle)
- Process wastewater per vehicle produced (in m³/vehicle)
- Total waste (in t)
- Waste for disposal per vehicle produced (in kg/vehicle)
- Total non-hazardous waste (in t)
- Total hazardous waste (in t)
- Local content suppliers in China (number)
- Purchasing volume in China (in RMB billion)
- Total workforce at year-end (number)
- Female employees in total workforce (in %)
- Employees in management positions (in %)
- Female employees in management positions (in %)
- Chinese employees in management positions (in %)
- Total new employee hires (in %)
- Attrition rate (in %)
- Training days of training organised by the Human Resources Department (in day)

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- Average days of further training per employee (in day/person)
- Training attendee satisfaction rate (in %)
- Accident frequency rate (per one million hours worked)
- Beneficiaries of BMW CSR activities (number)
- Expenditure on social commitment activities (in RMB)
- Total employee participants of CSR activities (number)
- Total hours of volunteer service (in hour)

Our assurance was with respect to the year ended 31 December 2019 information only and we have not performed any procedures with respect to earlier periods or any other elements included in the 2019 Sustainability Report.

Criteria

The criteria used by the Company to prepare the selected key data in the 2019 Sustainability Report is set out in the definitions of the key data on Appendix 5.5 in the 2019 Sustainability Report (the "basis of reporting").

The Board of Management's Responsibilities

The Board of Management of the Company is responsible for the preparation of the selected key data in the 2019 Sustainability Report in accordance with the basis of reporting. This responsibility includes designing, implementing and maintaining internal control relevant to the preparation of the selected key data in the 2019 Sustainability Report that is free from material misstatement, whether due to fraud or error.

Our Independence and Quality Control

We have complied with the independence and other ethical requirement of the International Code of Ethics for Professional Accountants (including International Independence Standards) issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

Our firm applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Practitioner's Responsibilities

It is our responsibility to express a conclusion on the selected key data in the 2019 Sustainability Report based on our work.

LIMITED ASSURANCE REPORT



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We conducted our work in accordance with the International Standard on Assurance Engagements 3000 (Revised) "Assurance Engagements Other Than Audits or Reviews of Historical Financial Information". This standard requires that we plan and perform our work to form the conclusion.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for a reasonable assurance engagement. Consequently the level of assurance in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. Accordingly, we do not express a reasonable assurance opinion about whether the Company's 2019 selected key data in the 2019 Sustainability Report has been prepared, in all material respects, in accordance with the basis of reporting. Our work involves assessing the risks of material misstatement of the selected key data in the 2019 Sustainability Report whether due to fraud or error, and responding to the assessed risks. The extent of procedures selected depends on our judgment and assessment of the engagement risk. Within the scope of our work, we have performed the following procedures in Beijing Office, Tiexi Plant, Dadong Plant and Powertrain Plant of the Company:

- 1) Interviews with relevant departments of the Company involved in providing information for the selected key data within the Sustainability Report;
- 2) Analytical procedure;
- 3) Examination, on a test basis, of documentary evidence relating to the selected key data on which we report;
- 4) Recalculation; and
- 5) Other procedures deemed necessary.

Inherent Limitation

The absence of a significant body of established practice on which to draw to evaluate and measure non-financial information allows for different, but acceptable, measures and measurement techniques and can affect comparability between entities.

Conclusion

Based on the procedures performed and evidence obtained, nothing has come to our attention that causes us to believe that the 2019 selected key data in the 2019 Sustainability Report is not prepared, in all material respects, in accordance with the basis of reporting.

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Restriction on Use

Our report has been prepared for and only for the Board of Management of the Company and for no other purpose. We do not assume responsibility towards or accept liability to any other person for the content of this report.


Price Waterhouse Coopers Zhong Tian LLP
Shanghai, China
June 29, 2020

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BASIS OF REPORTING

Automobiles produced (in unit)	BMW and ZINORO automobiles produced by BMW Brilliance for mainland China market and that obtained the certificate of vehicle of the year. The data is publicized on the website of the Ministry of Industry and Information Technology of the People's Republic of China.	CO ₂ emissions per vehicle produced (in t/vehicle)	Production-relevant CO ₂ emissions per vehicle produced in BMW Brilliance plants, excluding CO ₂ emissions from energy consumption of R&D, Plant Dispatch Area (PDA), construction, on-site third-party suppliers and other non-production relevant energy consumption of the plants.
Automobiles wholesaled (in unit)	BMW Brilliance wholesale volume in mainland China of the year, including BMW Brand and ZINORO Brand.	Total energy consumption (in MWh)	Total energy consumption of the year in BMW Brilliance plants, including purchased electricity, purchased heating and natural gas.
Authorised dealer outlets nationwide (number):	Number of authorised dealer outlets in operation in mainland China at year-end, excluding MINI and BMW Motorrad dealer outlets.	Energy consumption per vehicle produced (in MWh/vehicle)	Production-relevant energy consumption per vehicle produced in BMW Brilliance plants, excluding the energy consumption of R&D, PDA, construction, on-site third-party suppliers and other non-production relevant energy consumption of the plants.
Average fleet CO ₂ emissions (in g/km)	Average CO ₂ emissions of automobiles produced by BMW Brilliance for sales in mainland China market of the year.	Volatile organic compounds (VOC) per vehicle produced (in kg/vehicle)	Production-relevant VOC per vehicle produced in BMW Brilliance plants.
Corporate average fuel consumption (in l/100 km)	Average fuel consumption of automobiles produced by BMW Brilliance for sales in mainland China market of the year. The calculation is based on the <i>GB 27999-2014 Fuel Consumption Evaluation Methods and Targets for Passenger Cars of the People's Republic of China</i> . The data is publicised on the website of the Ministry of Industry and Information Technology of the People's Republic of China.	Total water consumption (in m ³)	Total fresh water consumption of the year in BMW Brilliance plants.
Scope 1 Greenhouse gas emissions (in t)	Direct CO ₂ emissions generated by fossil fuel consumption at BMW Brilliance plants, excluding the fossil fuel consumption of construction and on-site suppliers. The coefficients used for calculation are from <i>Emission Factors for Electricity, District Heating and Fuels issued by Application of German Association of the Automotive Industry (VDA)</i> .	Water consumption per vehicle produced (in m ³ /vehicle):	Production-relevant water consumption per vehicle produced in BMW Brilliance plants, excluding the water consumption of R&D, PDA, construction, on-site third-party suppliers and other non-production relevant water consumption of the plants.
Scope 2 Greenhouse gas emissions (in t)	Indirect CO ₂ emissions generated by the consumption of purchased electricity and heating purchased at the BMW Brilliance plants, excluding purchased electricity and heating consumption of construction and on-site suppliers. For calculation of the Scope 2 CO ₂ emissions calculation, "market-based" methodology is used in accordance with <i>GHG Protocol Scope 2 Guidance issued by the World Resources Institute</i> .	Process wastewater per vehicle produced (in m ³ /vehicle)	Production-relevant process wastewater per vehicle produced in BMW Brilliance plants.
Scope 3 Greenhouse gas emissions (in t)	Indirect CO ₂ emissions generated in the upstream supply chain, the utilisation phase and the disposal of automobiles produced by BMW Brilliance for sales in mainland China market of the year. Emissions from the supply chain and the disposal are based on the carbon footprints of representative vehicles from the product lines, calculated by Thinkstep's LCA tool GaBi. Emissions from the utilisation phase are based on the average fleet emissions of automobiles delivered of BMW Brilliance and an average mileage of 150,000 kilometres per vehicle.	Total waste (in t)	Production-relevant non-hazardous and hazardous waste for recycling and for disposal of the year in BMW Brilliance plants.
Share of renewable electricity (in %)	The ratio of renewable electricity consumed to the total electricity consumption of BMW Brilliance Shenyang Production Region. The renewable electricity includes the generation of solar power electricity, the purchase of wind power electricity and the International Renewable Energy Certificates (I-RECs).	Waste for disposal per vehicle produced (in kg/vehicle)	Production-relevant waste for disposal per vehicle produced in BMW Brilliance plants.
		Total non-hazardous waste (in t)	Production-relevant non-hazardous waste for recycling and for disposal of the year in BMW Brilliance plants.
		Total hazardous waste (in t)	Production-relevant hazardous waste for recycling and for disposal of the year in BMW Brilliance plants.
		Local content suppliers in China (number)	Total number of parts suppliers and raw material suppliers of the year including the run-out suppliers of the year.
		Purchasing volume in China (in RMB billion)	The amount of purchasing volume, including tax, paid by BMW Brilliance to parts suppliers and raw material suppliers in mainland China of the year.
		Total workforce at year-end (number)	Number of permanent employees at year-end, excluding interns and third-party contractors.

BASIS OF REPORTING

Female employees in total workforce (in %)	The ratio of female permanent employees at year-end to the permanent workforce at year-end.
Employees in management positions (in %)	The ratio of permanent employees in management positions at year-end to the permanent workforce at year-end.
Female employees in management positions (in %)	The ratio of female permanent employees in management positions at year-end to total permanent employees in management positions at year-end.
Chinese employees in management positions (in %)	The ratio of Chinese permanent employees in management positions at year-end to total permanent employees in management positions at year-end.
Total new employee hires (in %)	The ratio of newly hired permanent employees of the year to the permanent workforce at year-end.
Attrition rate (in %)	The number of voluntary and involuntary turnover divided by the number of monthly average permanent employees of the year.
Training days of training organised by the Human Resources Department (in day)	Total training days of LRG (learning resources guide) training, department training and language training organised by Human Resources Department of the year.
Average days of further training per employee (in day/person)	Average training days for permanent employees participating in the training organised by the Human Resources Department.
Training attendee satisfaction rate (in %)	Average training satisfaction evaluated by employees who have attended training organised by the Human Resources Department.
Accident frequency rate (per one million hours worked)	The scope only covers directly contracted employees in BMW Brilliance plants. It is calculated by the number of accidents with one day lost time or more divided by the total working hours (in million) of the year.
Beneficiaries of BMW CSR activities (number)	Number of times people benefited from CSR activities organized by BMW CSR team and BMW Brilliance Labor Union in mainland China and BMW Brilliance Shenyang Associate Social Responsibility Program.
Expenditure on social commitment activities (in RMB)	Expenditure on social commitment by BMW Brilliance and China Charity Federation-BMW Warm Heart Fund.
Total employee participants of CSR activities (number)	Total number of times employees attending voluntary activities held by BMW Corporate Volunteer Association in mainland China.
Total hours of volunteer service (in hour)	Total hours that employee volunteers spend on voluntary activities held by BMW Corporate Volunteer Association in mainland China, including direct service hours and indirect service hours. Direct service hours refer to activity hours, and indirect service hours refer to the hours that volunteers spend on transportation, on-site preparation and lunch hours during the activities.

WE LOOK FORWARD TO HEARING FROM YOU.

FURTHER INFORMATION AND PUBLICATIONS ARE AVAILABLE AT:

<http://www.bmw-brilliance.cn/cn/en/csr/download.html>

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RESOURCE CONSERVATION

The paper used for the Sustainability Report was produced in accordance with the FSC international standard: The pulp originate from responsibly managed forest.

