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# REGIONAL REVIEW: ASIA PACIFIC

Being an active and responsible member of the communities in which we operate is a core value at Ford.

We demonstrate it by helping to alleviate shared social, economic and environmental problems and playing our part in creating a better world.

For example, the effects of global problems like climate change show themselves in different ways and to varying degrees in different locations. At the same time, technology is accelerating the pace of change in many areas of human activity, driving fundamental shifts in consumer trends in our markets. Our corporate strategies provide a framework for regional programs that reflect this fast-moving picture at the same time as addressing local circumstances and needs.

This section aims to give a flavor of material sustainability issues having an impact on our regional business units, and describes some key initiatives and programs supporting our corporate strategies.

# **Asia Pacific**

This section offers a regional perspective and an overview of initiatives to implement the corporate sustainability strategy in our Asia Pacific regional business unit.

"Sustainability is core to everything we do in the Asia Pacific region and across the globe. China and other markets in this region are delivering an increasingly important portion of our revenue and profits globally. As we continue to pursue our growth plans, we are committed, as always, to going further the right way. That is what sustainability means to us at Ford. Not only creating great products and a strong business, but also working for a better world by investing in future mobility solutions and local communities, demonstrating environmental responsibility and building relationships founded in trust and transparency."

#### **Dave Schoch**

Group Vice President and President, Asia Pacific

#### At a Glance

- 23,600 employees1
- 19 manufacturing plants
- > Please see Ford's Annual Report 2016 for further information on our regional business units, including key financial metrics for Asia Pacific and Africa

1. Total headcount, salaried and hourly employees in our Asia Pacific region.

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# Strategy and Governance

# **Investing in Innovation**

As we continue our transformation into an auto and mobility company, we are investing to drive innovation and strengthen our research and development (R&D) capability across the Asia Pacific region.

In China, we are investing more than RMB 1.3 billion in the Ford Research and Engineering Center in Nanjing to strengthen and expand its engineering and vehicle testing capabilities.

The investment supports an advanced vehicle test track set to open later this year, new vehicle testing facilities, including for electric vehicles, and the addition of a MakerSpace, a hands-on creative work area designed for employees to collaborate and test new ideas.

In India, we will invest \$195 million in a new Global Technology and Business Service Center in Chennai. The new center will serve as a hub for product development, mobility solutions and business services for India and other markets around the world. Expected to be completed by early 2019, it will become Ford's third global product development center in Asia Pacific.

In Australia, Ford has transformed its head office in Melbourne into a new product development center as part of a \$50 million capital investment to enhance vehicle engineering capability and drive innovation. In addition, we expanded our R&D investment in 2017 by 50 percent to \$450 million to support increased vehicle development programs.

# **Our Electrification Strategy**

As part of our China electrification plans, we announced two new electric vehicles – the Mondeo Energi plug-in hybrid and an all-new fully electric small SUV with an estimated range of more than 450 km. The Mondeo Energi will be locally manufactured in China next year through Ford's Changan Ford joint venture; this is in addition to the China-produced Mondeo Hybrid, which went on sale late last year.

By 2025, we will provide a comprehensive range of electric vehicles in China with plans to electrify 70 percent of all Ford nameplates sold, including the full range of nameplates produced by Changan Ford.

We will begin locally manufacturing electrified powertrains by 2020 in line with our commitment to bring the best global technology to China. To support our growing electrified lineup and the development of next-generation electric vehicle technologies, we will also expand our electrified powertrain engineering capabilities at the Ford Research and Engineering Center in Nanjing.

> Read more about our electrification strategy in China

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# **Pursuing Emerging Opportunities in Mobility**

#### FordPass, China

FordPass is core to our strategy to become both an auto and a mobility company, and has now been officially launched in China. FordPass is like having a personal assistant for mobility needs and offers consumers in the region a richer ownership experience and an array of features.

These include MyDealer (dealer locator, click-to-call dealer), MyVehicle (vehicle health alert, maintenance schedule, service history, warranty information), Ford Guide (click-to-call or click-to-chat for personal one-on-one assistance), Parking (search, directions), a fuel station locator and a vehicle pickup and delivery service to take vehicles to dealerships for servicing.

#### Shuttle Services, China

Shuttle services can help address a significant pain point for commuters in the growing megacities in Asia Pacific. By servicing the distance between home and office, shuttles offer a more convenient, affordable and comfortable alternative to mass transit. Our projects include:

- GoRide on-demand shuttle trial program, Shanghai This offers commuters a last-mile solution built around pickup at a subway station. In addition to dynamic routes, we also offer a fixed route option to provide commuters with a further choice.
- Panda Dynamic Shuttle experiment, Dalian With Panda Shuttle
   (an established shuttle bus company in Dalian, China) and Tsinghua
   University, we have developed a scheduling tool to provide more
   flexible and effective transport services during high- and low demand periods.
- > Watch a video about the Dynamic Shuttle experiment.

#### Car Sharing, India

Our investment in India's leading car-sharing company Zoomcar supports our vision of future services that will make it easier for people to move in cities using different forms of transportation. Ford has been Zoomcar's largest supplier of vehicles and both companies have worked closely on a number of mobility experiments, including a car-sharing experiment in Bangalore.

This provides added insights on the mobility needs of consumers who want to experience the benefits of car ownership by sharing a single vehicle among a number of drivers.

#### Smart Parking, Shanghai

Shanghai is one of the busiest cities in the world. We partnered with Cheyaoshi, a valet parking mobile app, on a smart parking experiment aimed at helping employees at our Asia Pacific headquarters in Shanghai to find parking in the very busy Lujiazui financial district where our offices are located. Employees can take up to 20 minutes a day to find parking, so we offered our employees a flexible valet parking service to alleviate the pressures. We are using insights from the experiment to help develop mobility solutions in our markets.

> Watch a video about the smart parking experiment.

# **Customers and Products**

# Vehicle Technologies to Enhance Fuel Economy, Safety and In-Car Experience

Ford's advanced, award-winning EcoBoost engine technology delivers significant fuel-efficiency gains, without sacrificing performance, and reduced  $\text{CO}_2$  emissions in gasoline-powered vehicles. By performance, we mean not only peak power, but all aspects of performance such as low end torque and responsiveness.

We sold more than half a million EcoBoost engines in Asia Pacific in 2016, with China accounting for a large number of these. EcoBoost engines are available in 14 vehicles in China, including the 1.0-liter for EcoSport, Focus and Taurus.

In connectivity, customer experience and driver assist, Ford vehicle innovations include the following:

- Ford's SYNC 3, our in-car connectivity system, was launched in Asia Pacific in 2016. This updated version of SYNC offers an improved user experience with simpler voice commands and has now been rolled out to customers in 10 markets across the Asia Pacific region.
- We continue to expand our portfolio of SYNC AppLink partner apps in the region. We have a growing portfolio of AppLink partners in China, India, Australia, New Zealand, Thailand and Taiwan that help drivers stay connected while also keeping them entertained and informed.
- We have begun testing vehicle-to-vehicle and vehicle-to-everything
  features in Shanghai, which aim to help drivers navigate through
  busy street crossings. These features will, in future, help assist drivers
  to perfectly time the speed at which they approach traffic lights to
  minimize encountering red lights and more safely make left turns, saving
  time and fuel, and helping to reduce the risk of collisions at intersections.

# **Operations**

# **Energy Efficiency and GHG Emissions Reduction**

Ford facilities in Asia have continued to reduce  $CO_2$  emissions in their manufacturing processes. Compared with 2015, they have reduced  $CO_2$  emissions per vehicle produced by almost 10 percent, and in the past seven years by nearly 40 percent.

As part of continuously improving energy efficiency across the region, one Changan Ford plant in Chongqing applied new 3-wet painting technology in 2016. The technology helps improve paint durability, enhance overall paint efficiency and reduce volatile organic compound emissions. In addition, this single project is estimated to help the plant reduce energy consumption by 10 million kilowatt hours per year – which is equivalent to the electricity consumption of 18,600 individuals in China over a year.

# Water Stewardship in Our Facilities

In 2016, Ford Asia Pacific used 15 percent less water to produce each vehicle compared to 2015 – a saving equivalent to two bathtubs of water for every vehicle made. Over the past seven years, we have halved our water usage per vehicle produced in the region, through a range of initiatives:

In India, our plants in Chennai have achieved zero liquid discharge and have also installed equipment to harvest rainwater to further reduce the use of drinking water. In 2016 alone, 3,000 cubic meters of rainwater was collected. At our Sanand facilities in India, we have invested in wastewater treatment and use 100 percent of this water for recycling and reuse within the property.

In China, Ford reduced water use per vehicle produced by almost 50 percent compared with 2011, while local partner Changan Ford's plants recycled and reused nearly 370,000 cubic meters of wastewater in 2016.

Over the past year in Thailand, Ford installed filters for cooling tower operations at the company's joint venture Auto Alliance Thailand (AAT), which will save around 7,000 cubic meters of water per year. Ford Thailand Manufacturing increased its water efficiency by coordinating its fire hydrant testing schedule with its irrigation schedule, saving around 5,000 cubic meters of water per year.

In Vietnam, Ford is using green building and landscaping practices to reduce our water impact even further. A new natural stormwater management system saves more than 2,400 cubic meters of water per year.

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## **CASE STUDY**

# Sanand Water Conservation, India

Our Sanand vehicle assembly and engine plants in India have one of Ford's largest and most advanced water and wastewater treatment facilities. After being treated, 30 to 35 percent of gray water from office washrooms, canteen and manufacturing operations is recycled for use in the paint shop and other processes.

# 100% of treated gray water at our Sanand facility is recycled and reused within the property.

We have invested in a fully automatic irrigation system, enabling us to use the remainder of the treated wastewater to maintain lawns and planting, further reducing our freshwater consumption. The system irrigates the green spaces at regular intervals depending on the climatic conditions.

These measures saved 219,000 cubic meters of freshwater in 2016 and mean that there is zero wastewater discharge at the Sanand plant. We will continue to focus on ways to reduce freshwater consumption, including optimizing manufacturing processes and developing rainwater harvesting techniques.

# **Reducing Waste to Landfill**

For every car produced in Ford's Asia Pacific region in 2016, there was over 90 percent less waste sent to landfills compared to 2011. Currently, 13 of our Asia Pacific manufacturing plants are zero waste to landfill (ZWTL) facilities.

In China, in 2016, Ford sent nearly 60 percent less waste per vehicle to landfills compared to 2015. Key plants in the Jiangling Motor Corporation and Changan Ford have all remained ZWTL facilities.

In India, all Ford plants have retained their ZWTL status. Our plant in Vietnam was declared a ZWTL facility in 2016.

#### **CASE STUDY**

## Recycling Bank Project, Thailand

In Thailand, our joint venture Auto Alliance Thailand (AAT) achieved zero waste to landfills in 2016. This was helped by a recycling bank project targeting the segregation of 100 percent of waste, including improving recycling bins and engaging with employees. More than 8,000 people participated in this project, including employees from AAT and its local supplier. The project helped recycle a total of 80,000 kilograms of waste in 2016 and AAT sold the recycled materials through a local recycling bank committee.

# People and Communities

## **Contributing to Our Communities**

# **Education and Scholarships**

We have been investing in STEAM (Science, Technology, Engineering, Arts and Math) programs in India, China and Australia since 2014, and are looking to expand this support to other Asia Pacific markets. The goal is to encourage young men and women to cultivate an interest in STEAM fields and keep them engaged throughout the education process. Our key STEAM programs in Asia Pacific include the following:

• In Australia, supporting the country's first all-girl robotics team; in India, funding a new robotics lab at an elementary school; and in Nanjing, China, sponsoring a robotics lab in a local school and providing technical mentoring for the school's robotics team to join the regional competitions

- In China, running educational programs in schools, including English language classes and workshops on design thinking
- Giving Ford Blue Oval scholarships to outstanding students pursuing majors in STEAM subjects through Ford Fund, the philanthropic arm of Ford Motor Company
- > Watch a video about STEAM in Asia Pacific, featuring Sean Newell, leader for Ford STEAM programs in the region

#### Water Projects in the Community

In 2016, we contributed more than \$340,000 to projects in Thailand, China, India and several other countries to provide communities with access to clean water, to protect or restore water management systems and to educate future generations about the importance of one of our most precious natural resources.

# Ford Conservation and Environmental Grants, China (CEGC)

The Ford CEGC program makes funds available to the frontline environmental groups who need them most. In 2016, RMB 2 million was granted to 28 environmental projects and the awards were given at a ceremony attended by representatives from the various organizations. Of the 28 projects, nine were directly related to water. Over the past 17 years since we launched the program, RMB 22.1 million has been granted to 410 projects being carried out by individuals, community and nonprofit groups in China.

# Level Up! Project to Support Capability-Building for NGOs in China

We launched our Level Up! program in China in 2012 to provide environmental NGO professionals with skills, tools and resources needed to grow their organizations. In 2016, the program covered more than 200 NGOs in 27 provinces in China and provided a total of 760 training hours.

## Ford Project Better World, India

Ford is working with World Vision, the international children's charity, to help connect remote and impoverished communities in India with health care and education services. We have provided World Vision with two specially equipped Ford Endeavour SUVs – a Mobile Health vehicle and a Mobile Library – which also have Ford's OpenXC platform to help the organization provide its services reliably and efficiently.

In the first four months following handover of the vehicles, the Mobile Library reached approximately 7,580 people. In the same period, the Mobile Clinic worked closely with the Tamil Nadu health authorities to support the government's measles-rubella campaign. Approximately 3,100 children across 16 villages received the vaccination.

#### **Employee Volunteering**

Every year, Ford employees in Asia Pacific take part in a wide range of volunteering activities focused on environmental protection, education, health, safety and disaster relief, to support growth of local communities and fulfill our commitment to making a better world for all.

#### China

Ford employees donated a total of 6,393 service hours to support local communities in 2016, which benefited more than 1,700 people. Below is a small selection of the many volunteering activities that took place in China in 2016:

- Supported by employees and professional agronomists, our Community Gardening Plan promoted urban planting and growing in local neighborhoods, nursing homes and schools
- Our employees took part in many education support initiatives

   including acting as teaching assistants in a workshop to help schoolchildren learn about safety in cars and on the road
- A series of "pink" events held during World Breast Cancer Prevention and Treatment Month saw employees and customers raise funds and increase awareness of the disease

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#### India

In 2016, a total of 3,000 employees contributed nearly 10,000 service hours in 41 programs that addressed education, health, environment, women's empowerment and humanitarian support. For example, Ford volunteers worked with local schools to organize a Science Fair in Sanand and an Inter School Arts Exhibition in Chennai to help deliver holistic education for almost 2,000 students.

#### **Thailand**

In partnership with Habitat for Humanity, 93 Ford volunteers built houses for underprivileged families in the community surrounding Ford's manufacturing plant in Rayong Province.

Ford employees and dealers travelled to Mun Nai Island in Rayong to release sea turtles back to the ocean and donated a solar water pump to the Marine and Coastal Resources Research and Development Center, as a part of our long-term effort in raising awareness of the need for environmental conservation.

#### Korea

In partnership with the Make-A-Wish Foundation, Ford Korea employees and dealers across the country participated in the Wish Bear-Making program to make 180 teddy bears for local children with incurable diseases.

#### **Taiwan**

Ford volunteers partnered with a local NGO partner JingChuan Organization in providing road safety education in local schools, utilizing their expertise and knowledge in vehicle safety. Ford has taken part in this program for three consecutive years, which has benefited more than 2,500 students in total.

#### Malaysia

Ford employees and our local distribution partner Sime Darby Auto Connexion continued their charitable giving to the elderly and less fortunate at the Lovely Nursing Centre in Petaling Jaya, Selangor, Malaysia. Volunteers cleaned the center and donated groceries and household supplies.

#### **Diversity and Inclusion**

It is vitally important for Ford to attract the brightest talent and increase the diversity of our workforce, including in technology and engineering fields.

With this in mind, we have programs focused on increasing recruitment and training for women engineers in our Asia Pacific region. The number of women at Ford operations across Asia Pacific has risen more than 125 percent over the past five years, and there are more women in our senior leadership roles.

#### > Read about our female-friendly policies and diversity programs in the region

We are also bringing our commitment to diversity and inclusiveness to life with a focus on differently abled employees. In India, for example, we are working with the local NGO Blind People's Association, Ahmedabad (BPA), to support the recruitment and integration of visually impaired people in the workplace. Our Sanand Vehicle Assembly and Engine Plant started hiring differently abled people in 2016 and provides improved facilities and infrastructure to meet specific needs, including washrooms, walkways, signages, shuttle buses and IT systems. Supervisors conducted onboarding and training for the new employees to ensure smooth transition and integration into the workforce.

In 2017, we have extended this initiative to the other Asia Pacific markets, focused on encouraging more differently abled people to join our workforce. A review of facilities across the region is also being undertaken to ensure that our workplace is user-friendly for differently abled employees and in compliance with our local and global safety standards.