

# Development of Toyota Boshoku 2050 Environmental Vision

As an automotive parts manufacturer of Toyota Group, Toyota Boshoku develops and manufactures seats, interior & exterior and unit components globally.

We formulated the 2050 Environmental Vision based on the belief that it is necessary to take a long-term perspective toward environmental issues and tackle them at an even higher level.

Over 50,000 company members of Toyota Boshoku group are working together to produce attractive products all over the world.



Vision

We will work together with all stakeholders with the aim of creating a sustainable global environment where children can lead their lives with a smile.

#### Tovota Boshoku's

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Stretch Environmental Goals to 2050

### Climate Change



Challenge of achieving zero CO<sub>2</sub> emissions in Toyota Boshoku group



Challenge of achieving zero CO<sub>2</sub> emissions in the product life cycle

### Resource Depletion



Challenge of minimising natural resources usage

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Challenge of minimising wastes produced by the Toyota Boshoku group

#### **Water Scarcity**



Challenge of achieving zero wastewater in the Toyota Boshoku group production processes by water recycling.

#### **Biodiversity Crisis**



Challenge of planting 1.32 million trees as part of reforestation activities

### Climate Change

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# Challenge of achieving zero CO<sub>2</sub> emissions in the Toyota Boshoku group

Abnormal weather conditions have frequently been experienced in many parts of the world. There is a report that says the global average temperature is likely to rise by 2.6–4.8 °C by 2100 from pre-industrial levels. Toyota Boshoku group will take on the challenge of achieving zero  $CO_2$  emissions from all of our plants by 2050. We will strive to reduce  $CO_2$  emissions significantly through the development of innovative production technology, the development of products and material engineering, the improvement of plants and the utilisation of renewable / next generation energy.

\* 1 Fifth Assessment Report, IPPC, 2014

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# Challenge of achieving zero CO<sub>2</sub> emissions in the product life cycle

Instead of focusing only on the reduction of  $CO_2$  emissions during our auto parts production process, Toyota Boshoku will take on the challenge of achieving zero  $CO_2$  emissions in all stages of product life cycle from production to use, disposal and recycling of products. We will strive to produce clean products and offer eco-friendly interior products through the production of materials with low  $CO_2$  emissions, the development of heat-insulating interior materials and highly efficient engine-related components and the promotion of manufacturing process with the minimum  $CO_2$  emissions.

### **Resource Depletion**

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## Challenge of minimising natural resources usage

If the surge in demand and the massive extraction of resources continue along with the increase of global population, they will exceed the current reserves of many of the resources including fossil fuels and minerals by 2050<sup>-3</sup>. The Toyota Boshoku group will take on the challenge of minimising natural resources usage through the promotion of readily disassemblable and recyclable design, the development of recycling technologies to realise a material cycle and the replacement of materials with a wider range of plant-derived materials.

\*3 World to face resource-constraints by 2050, National Institute for Materials Science, 2007

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# Challenge of minimising wastes produced by the Toyota Boshoku group

Toyota Boshoku group has vigorously driven the 3R activities (Reduce: To reduce the amount of wastes, Reuse: To use repeatedly, Recycle: To recycle disposed materials as useful resources), and has achieved zero direct landfill waste'4 since 2007. Moving forward, we will take on the challenge of minimising wastes produced by the Toyota Boshoku group by expanding the activities globally and embarking on various efforts including the design and method development enabling efficient use of resources, the development of recycling technologies and 100% material recycling (to make parts from parts).

\*4 Toyota Boshoku defines zero direct landfill wastes as the ratio of waste ended up in landfills being under 0.5%.

### **Water Scarcity**

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Challenge of achieving zero wastewater in the Toyota Boshoku group production processes by water recycling

It is expected that the number of people suffering from water scarcity and water stress" will reach 4 billion by 2050 due to the climate change and the surge in global population (7.2 billion in 2013 => 9.7 billion in 2050). The Toyota Boshoku group currently uses water in product cleaning and painting processes. Moving forward, we will take on the challenge of "achieving zero wastewater in the Toyota Boshoku group production processes by water recycling" through the establishment of a circulation system by replacing the existing processes with water-less process, purifying and recycling wastewater as well as using rainwater.

\*2 Water consumption / Potential river water consumption  $\doteqdot$  1: High water stress

### **Biodiversity Crisis**

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# Challenge of planting 1.32 million trees as part of reforestation activities

Our life and culture have been supported by benefits brought by biodiversity. However, the world is now losing 13 million ha of forests'5 every year, which is equivalent to about a third of Japan's land. Toyota Boshoku will take on the challenge of planting 1.32 million trees as part of reforestation activities by harnessing its group network to contribute to the habitat conservation for endemic species in individual regions and countries, the protection of forests and the restoration of abundant habitats.

\*5 Global Forest Resources Assessment 2010: FRA 2010, Food and Agriculture Organization of the United Nations (FAO)