

# **Turvo International Co., LTD**

## **2Q25 Investor Conference**

**Stock Ticker : 2233**

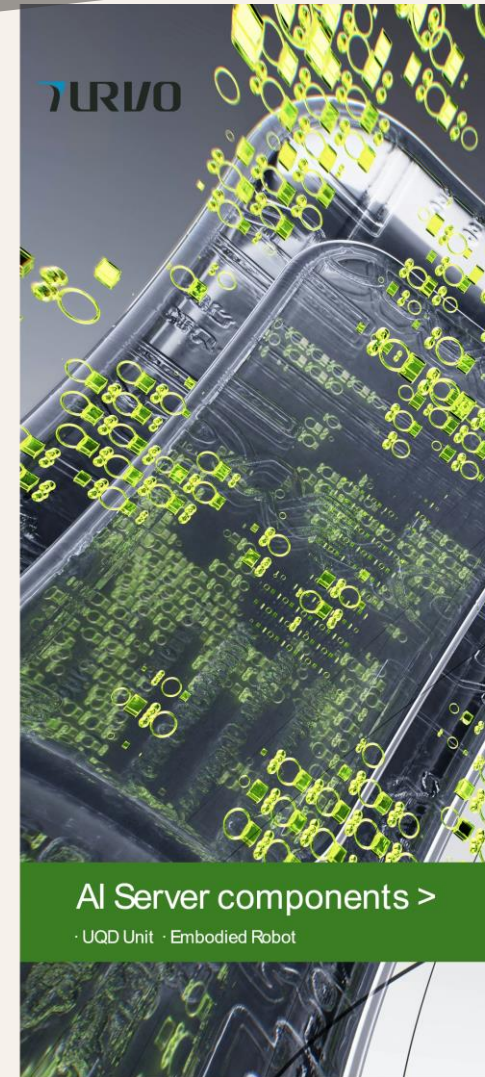
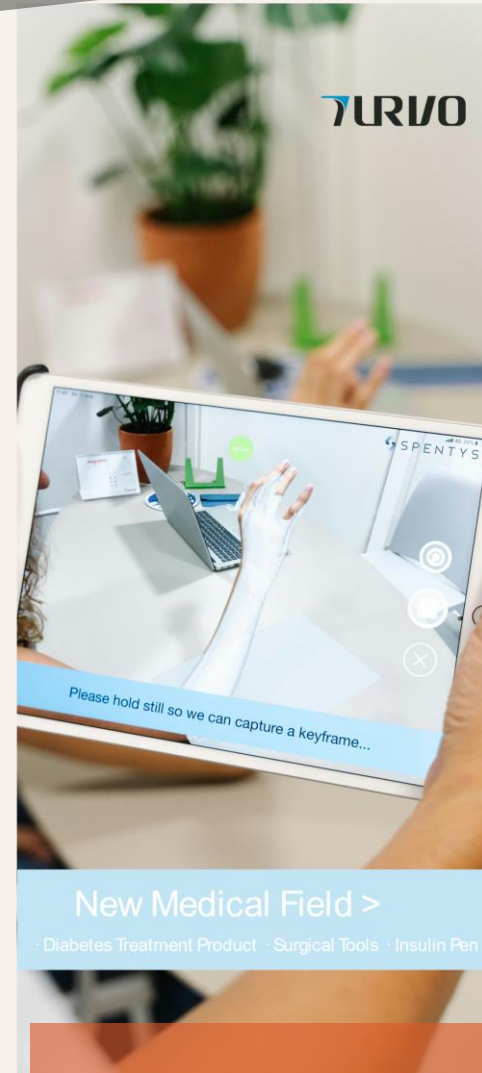
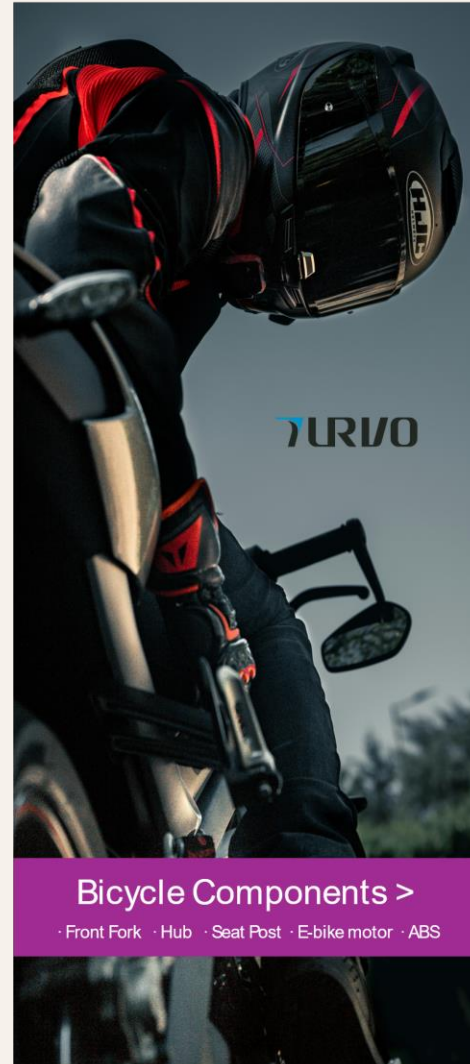
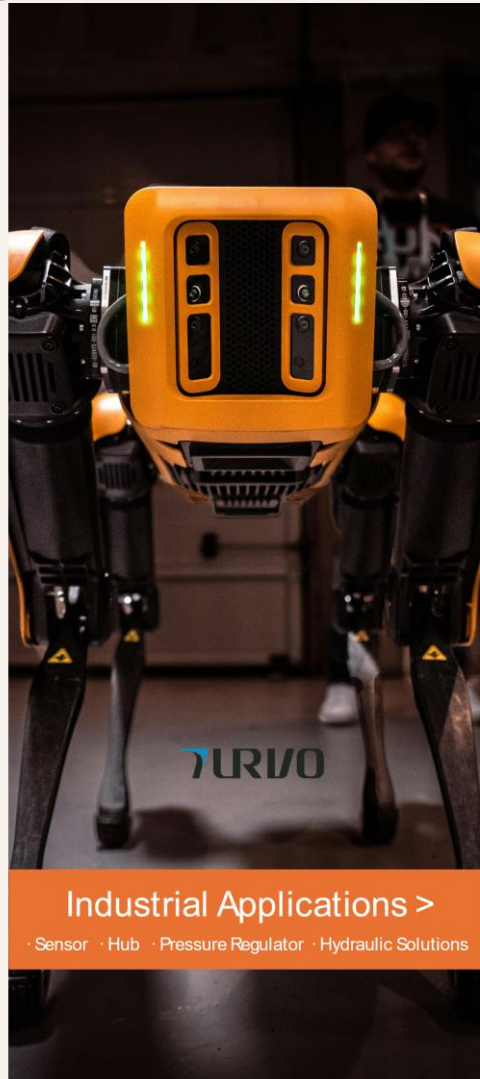
**Speaker : Alex Tsai**  
**General manager**

**Date : June 27, 2025**

# Disclaimer

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- The actual future operating results, financial conditions and business results of the company may differ from the forecast information, which may be due to various factors, including but not limited to market demand, various policies and regulations and changes in the overall economic situation, and other risks and other factors beyond the control of the Company.
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Seize the Opportunity

# Agenda:

- **Company Background**
- **Financial Performance**
- **Core Competency**
- **Business Strategy**
- **Sustainable Development**





# Company Background

## Establishment Date

December 29, 1987

## Capital Amount

TWD\$602,881 (thousand)

## Location

No.27, Jing 2 Rd., Wuci Dist.,  
Taichung City 435, Taiwan

## Main Products

Precision metal components for **Automobiles, Bicycles, Medical devices and Industrial applications and TUF ONE Planetary Reducers**

## Number of Employees

1,164 (as of May 31, 2025)



**Dongguan Plant**

**Main Products: Auto, Industrial and Medical**



**Taichung Headquarter**

**Main Products: Bike, Industrial, Medical and TUF ONE**



**Zhejiang Plant**

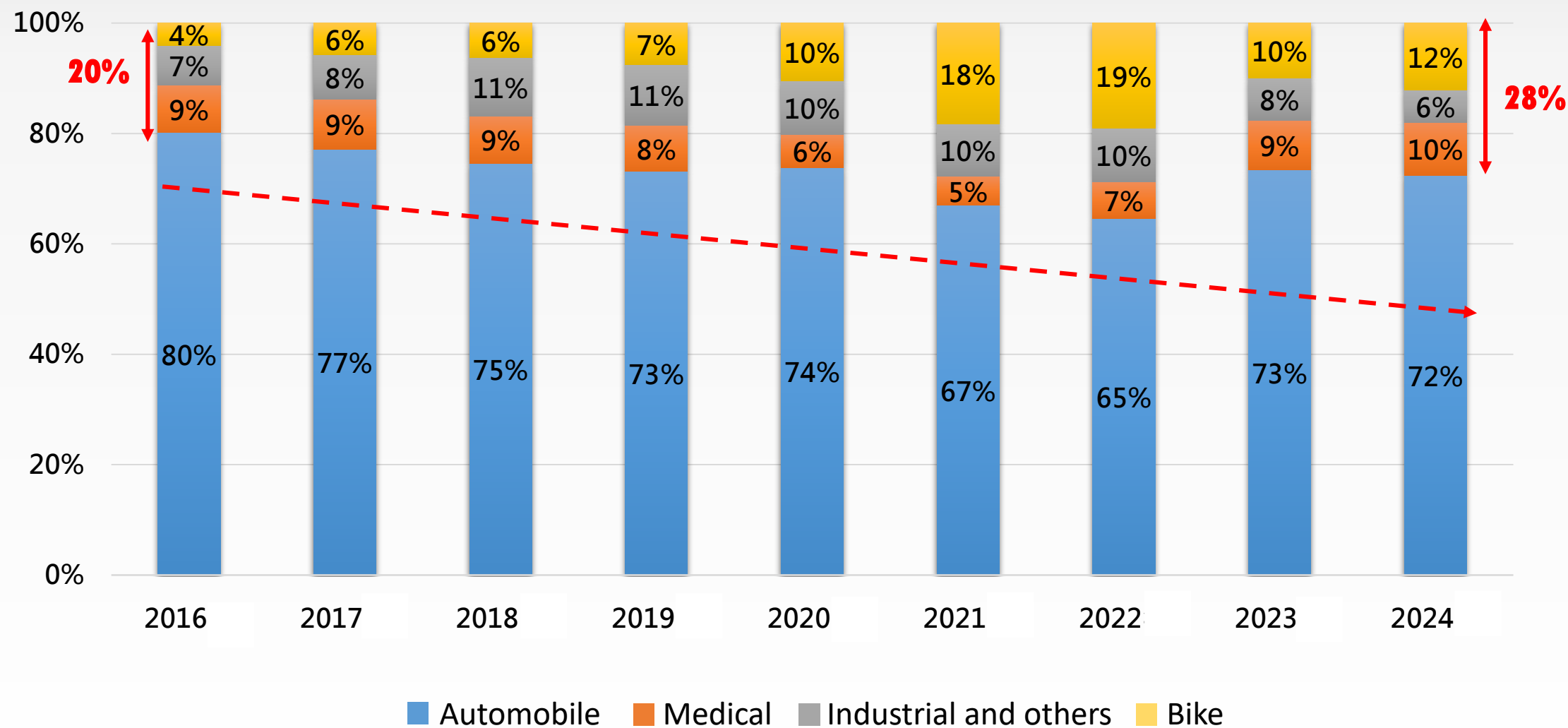
**Main Products: Auto, Industrial 、NVQD**

# Annual Operating Performance

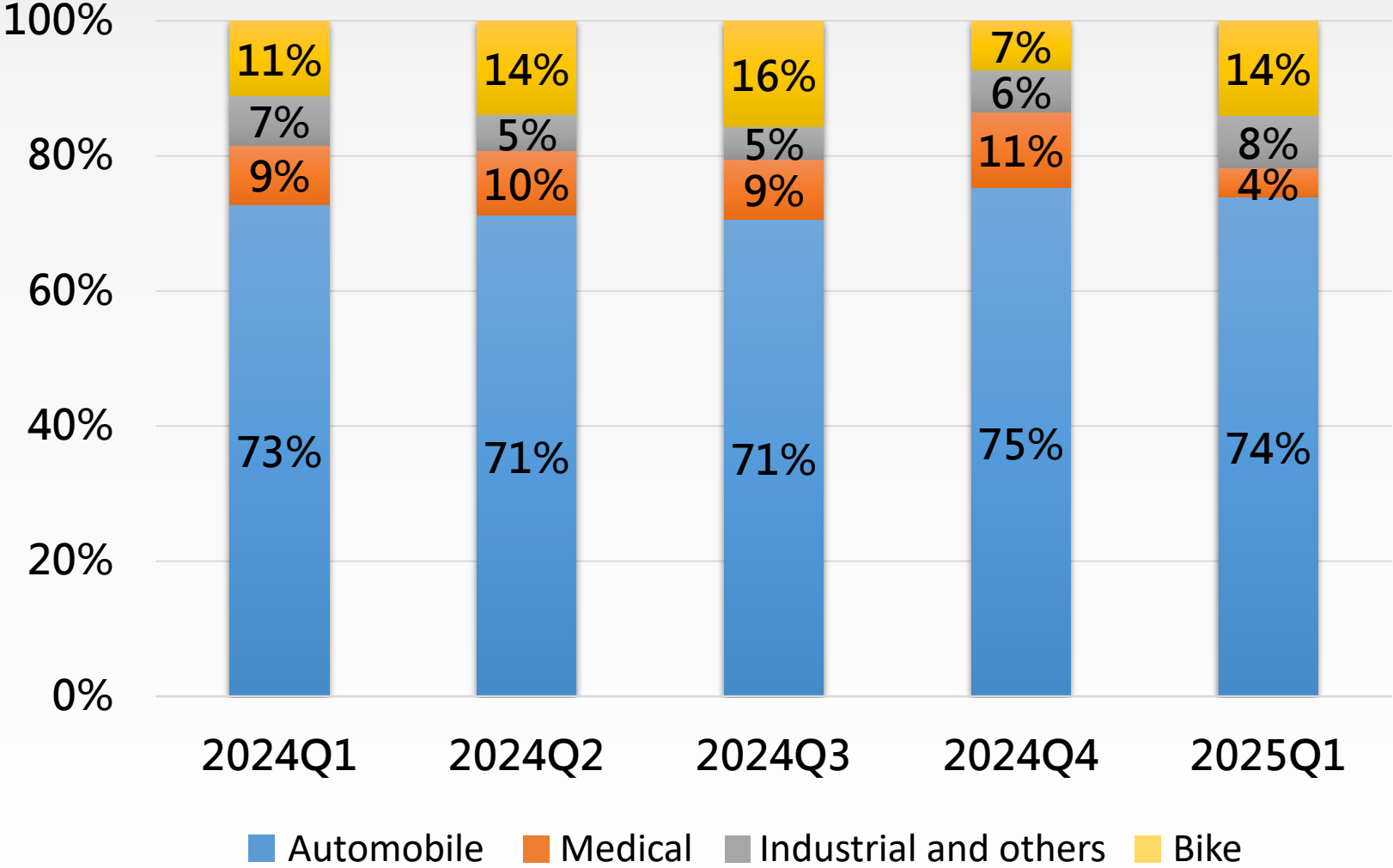
Unit: NTD Millions

Fiscal Year	2020	2021	2022	2023	2024	2025Q1
Operating Revenue	2,538	3,233	3,350	3,337	3,659	879
Gross Profit	823	1,149	1,104	1,091	1,360	266
GPM (%)	32.43%	35.55%	32.94%	32.70%	37.18%	30.30%
Operating Profit	405	649	545	532	688	118
OPM (%)	15.95%	20.08%	16.26%	15.93%	18.82%	13.39%
Net Profit	359	530	614	530	658	121
EPS (NT\$)	6.23	9.01	10.32	8.86	10.96	2.02
Cash Dividend (NT\$)	3.75	5.40	6.00	5.30	7.00	N/A
Payout Ratio (%)	60.19%	59.93%	58.14%	59.82%	63.87%	N/A

# Annual Revenue by Application



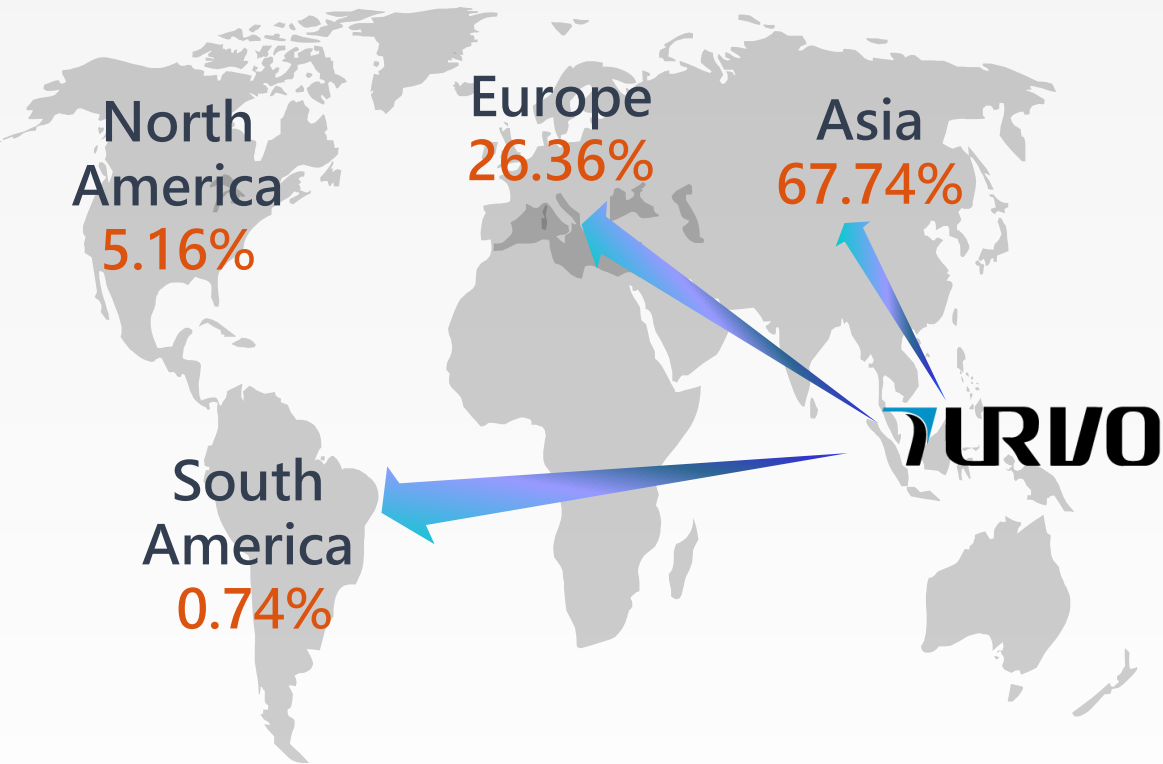
# Quarterly Revenue by Application



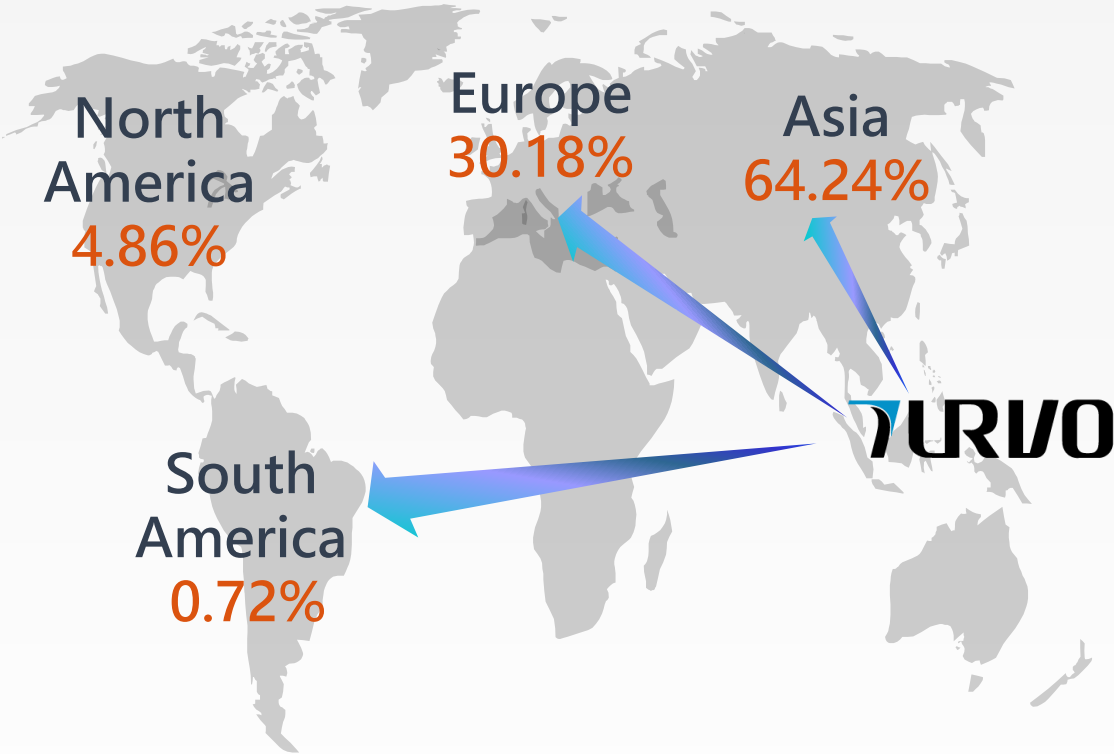


# Revenue by Region

2024



2025Q1



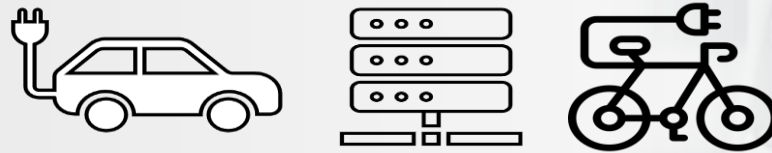
# Business Strategy

## Turning to Become



### Expand Core Applications

- Automobile components
- Bicycle components
- Medical products
- Industrial applications



### Proactive and Continuous Innovation

- Develop new products to satisfy customers' needs
- Accelerate the expansion of non-fuel vehicle products (Hybrid/NEV/BEV)
- e-Bike
- AI application, e-VTOL

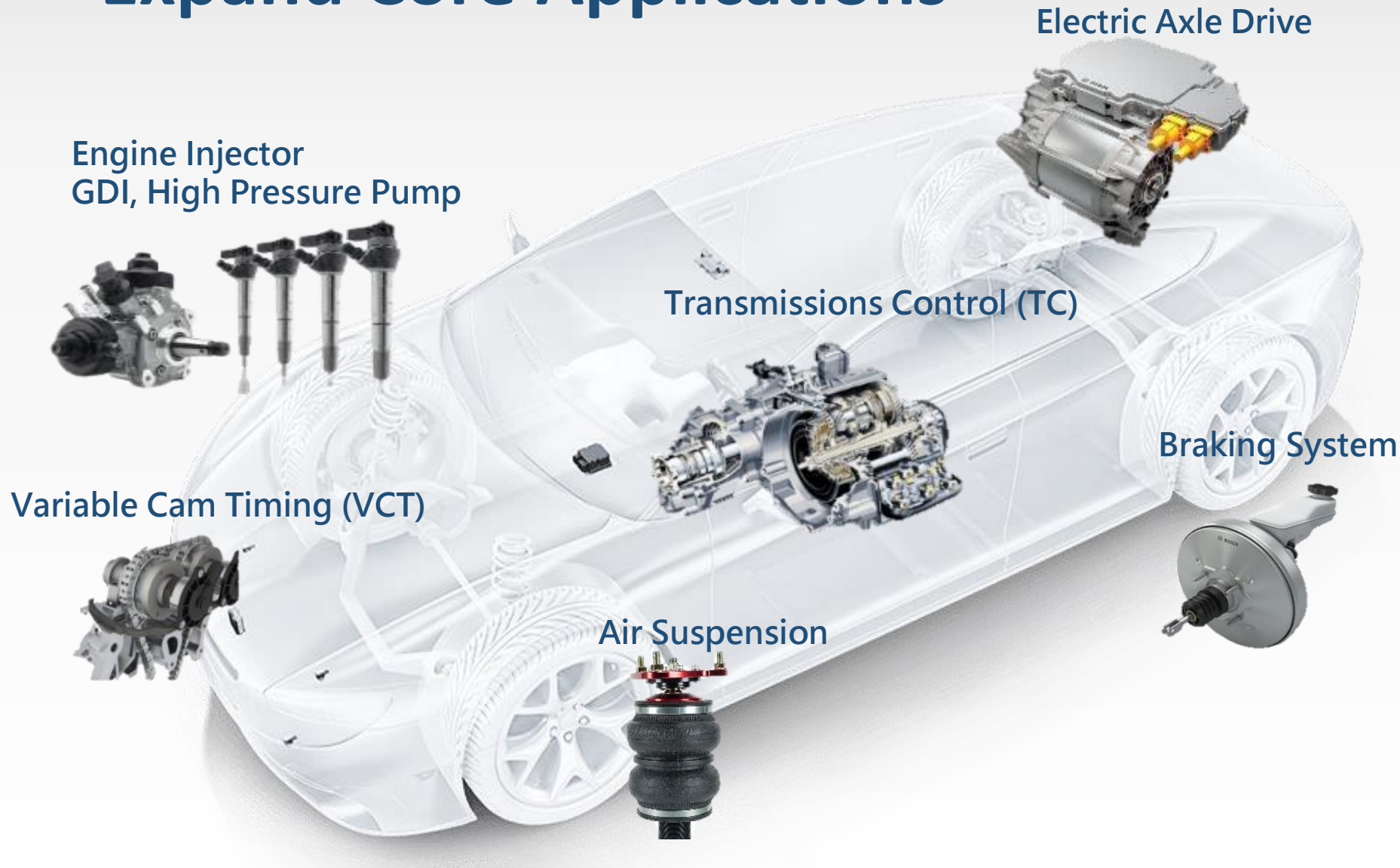


### Launch OBM Products

- Planetary Reducers
- RV Reducers
- Harmonic Reducers (Humanoid-related)

# Business Strategy

## – Expand Core Applications



 **BOSCH**  
**DENSO**

**BORGWARNER**  
 **PHINIA**

**UAES** 联合汽车电子有限公司  
United Automotive Electronic Systems Co., Ltd.

**SCHAEFFLER**

**HITACHI**  
Inspire the Next

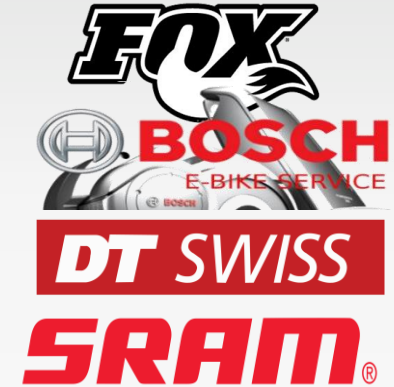
**AISIN**

# Business Strategy – Expand Core Applications



## Bicycle Components

- Shock absorbers
- Front forks
- Hubs
- Seat post parts



## Medical Components

- Core components of insulin injectors



## Industrial Automation

- Global industrial automatic sensors
- Hydraulic control systems





# Business Strategy

## – Proactive and Continuous Innovation

Fuel Cell & Thermal Management System

ADAS Sensor

Braking System

Non-Fuel Vehicle  
Products /  
Shared Component  
End Applications



e-Bike



Last Man Standing  
Business Strategy

AI robot

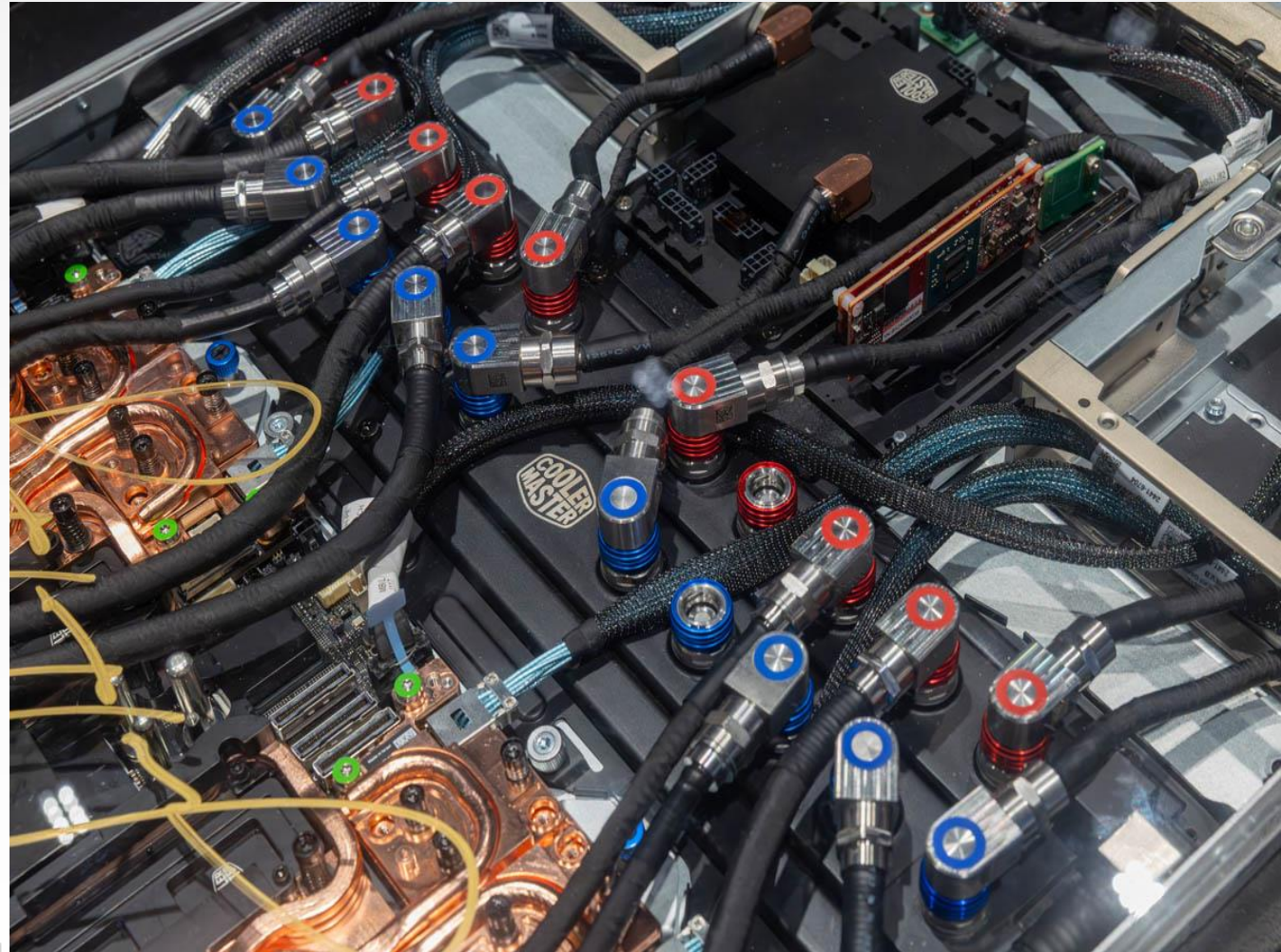




# Business Strategy

- Proactive and Continuous Innovation

NVIDIA-GB300 application





# Develop our own reducer brand



# Our own brand TUF ONE's performance in recent years

- ✓ Mar. 2023 Taipei International Machine Tool Show
- ✓ Apr. 2023 Hannover Industrial Fair
- ✓ Mar. 2024 Taipei International Machine Tool Show
- ✓ Apr. 2024 Hannover Industrial Fair
- ✓ Aug. 2024 Taipei Automation Show
- ✓ Nov. 2024 Shanghai International Import Expo
- ✓ Mar. 2025 Taipei International Machine Tool Show

**COMING SOON ~**

**Nov. 2025 SPS European Industrial Automation  
Exhibition in Nuremberg**





# Our own brand TUF ONE

## –Proactive and Continuous Innovation

Harmonic reducer  
developmen



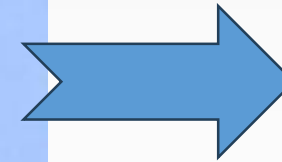
- RV Reducer
- Semiconductor Equipment Application
- e-VTOL



# Drone e-VTOL system key



e-VTOL drone



## drone electric propulsion system



propeller



planetary gearbox



motor

# Key Components for Humanoids

## 1. Head

FSD Chips  
System algorithms, visual navigation,  
language, and motion control modules



## 2. Sensors

Image sensors  
Lens  
mmWave radars

## 3. Linear Actuators

Frameless torque motors  
Torque force sensors  
★ **Planetary roller screws**  
Single row radial ball bearings

## 4. Rotary Actuators

Frameless torque motors  
Torque force sensors  
★ **Harmonic reducers**  
Cycloid reducers  
Cross roller bearings

## 5. Hands

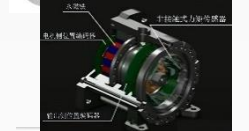
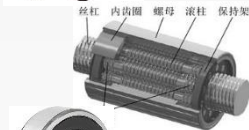
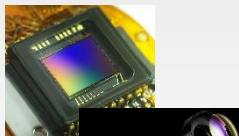
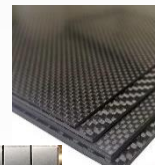
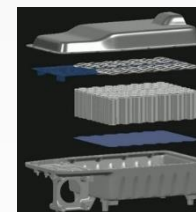
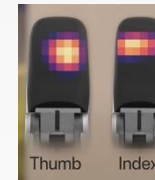
Coreless motors  
★ **Micro planetary reducers**  
6D force sensors

## 6. Battery Pack

Power battery

## 7. Others

Structural components  
Communication  
Thermal management





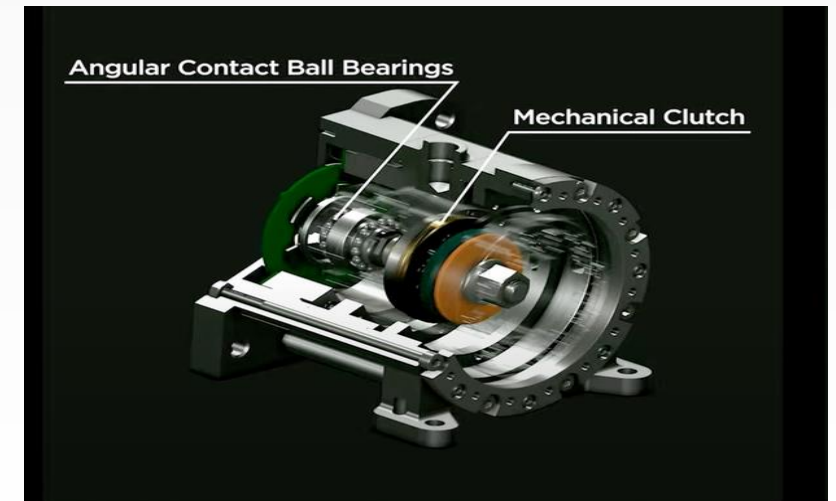
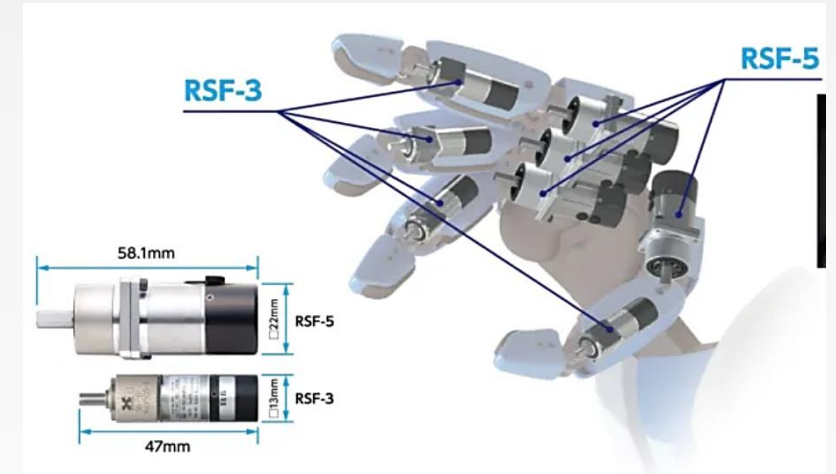
# Humanoid – Future Demand for Reducers

According to Morgan Stanley, Tesla Optimus Gen2's **current BoM is \$50-60k per unit** (ex-software)

CEO Elon Musk estimated targeted Optimus selling price is ~\$20k (~NTD 650k) and predicted that **by 2027, the production of Optimus will reach at least 500k units**. Eventually, an estimated 20 to 30 billion robots could be operating worldwide.

The usage of reducers for Optimus:  
**16** Harmonic Reducers  
**16** Planetary Reducers

Rotary Actuator:  
Planetary (Harmonic) Reducers



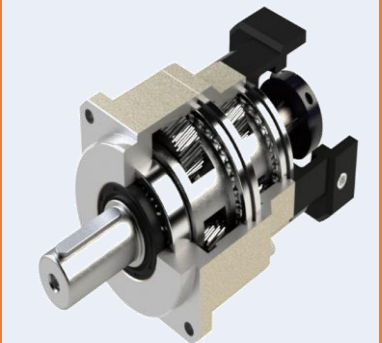


# TUF ONEreducer planning and application

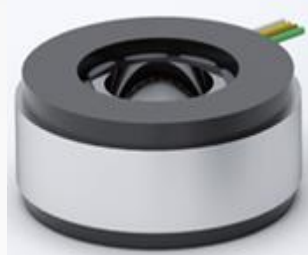
**TUF ONE  
Harmonic Reducer**



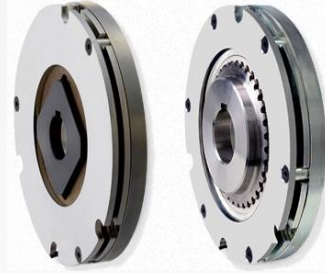
**TUF ONE  
Planetary Reducer**



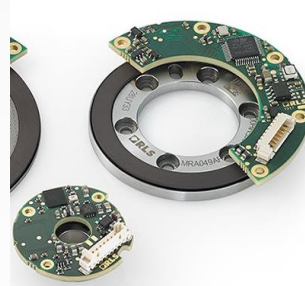
**Frameless DD  
Motor**



**Component**



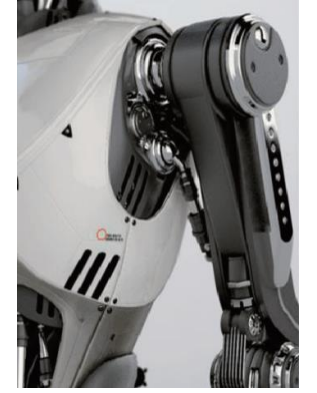
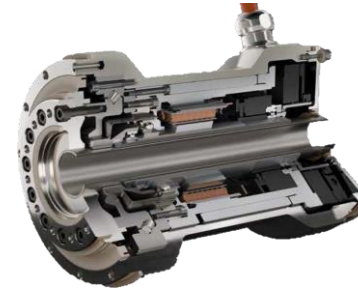
**Braking**



**Encoder**



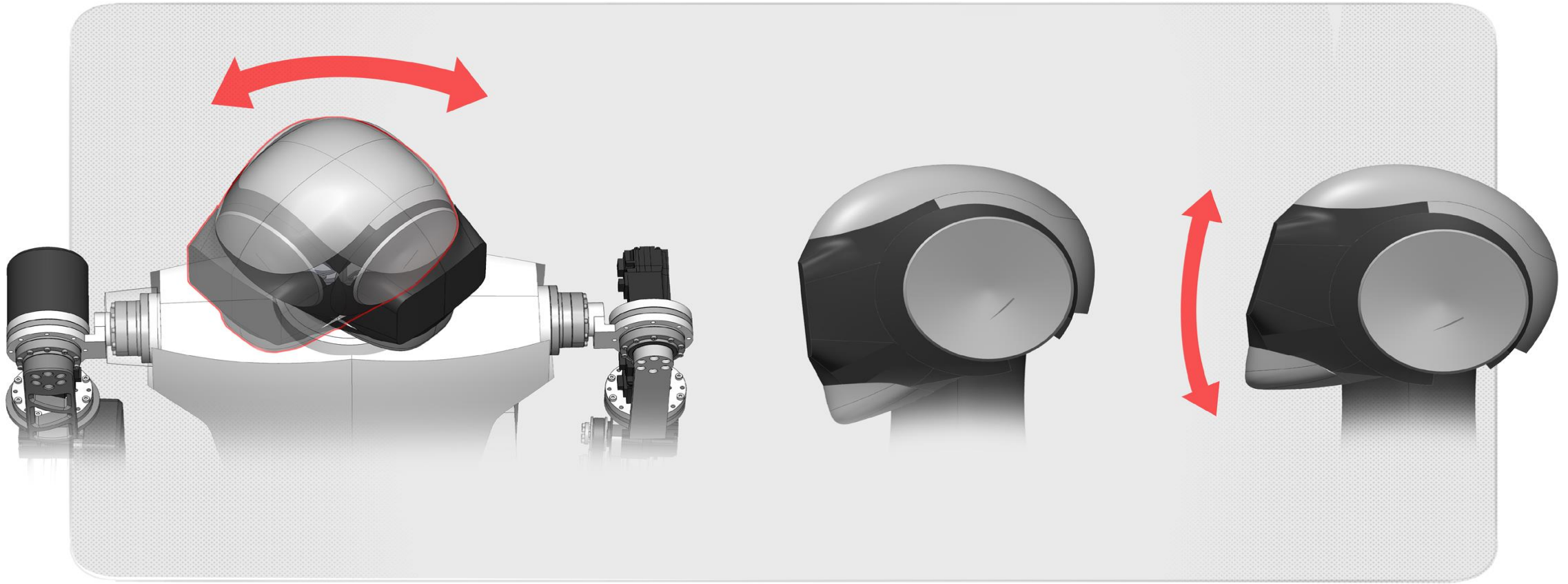
**[Diagram]  
Humanoid Robot Drive System**



**[Diagram]  
Robotic Dog Drive System**



# SPS European Industrial Automation Exhibition in Nuremberg



# SPS European Industrial Automation Exhibition in Nuremberg



DISPLAY



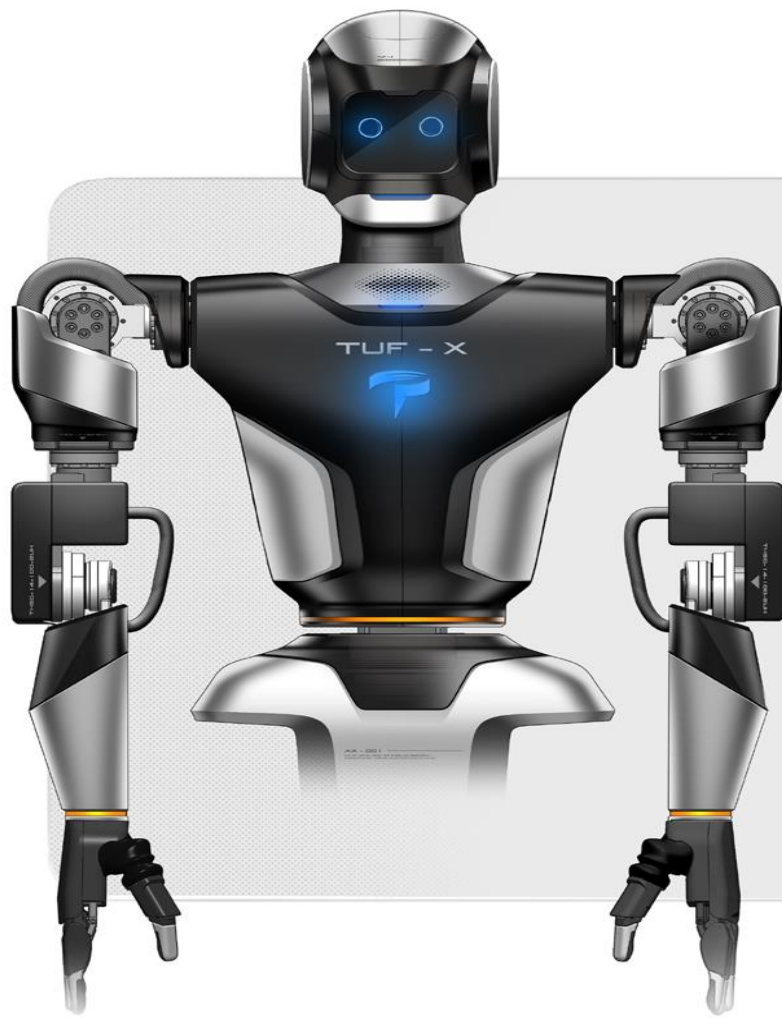
SOUND



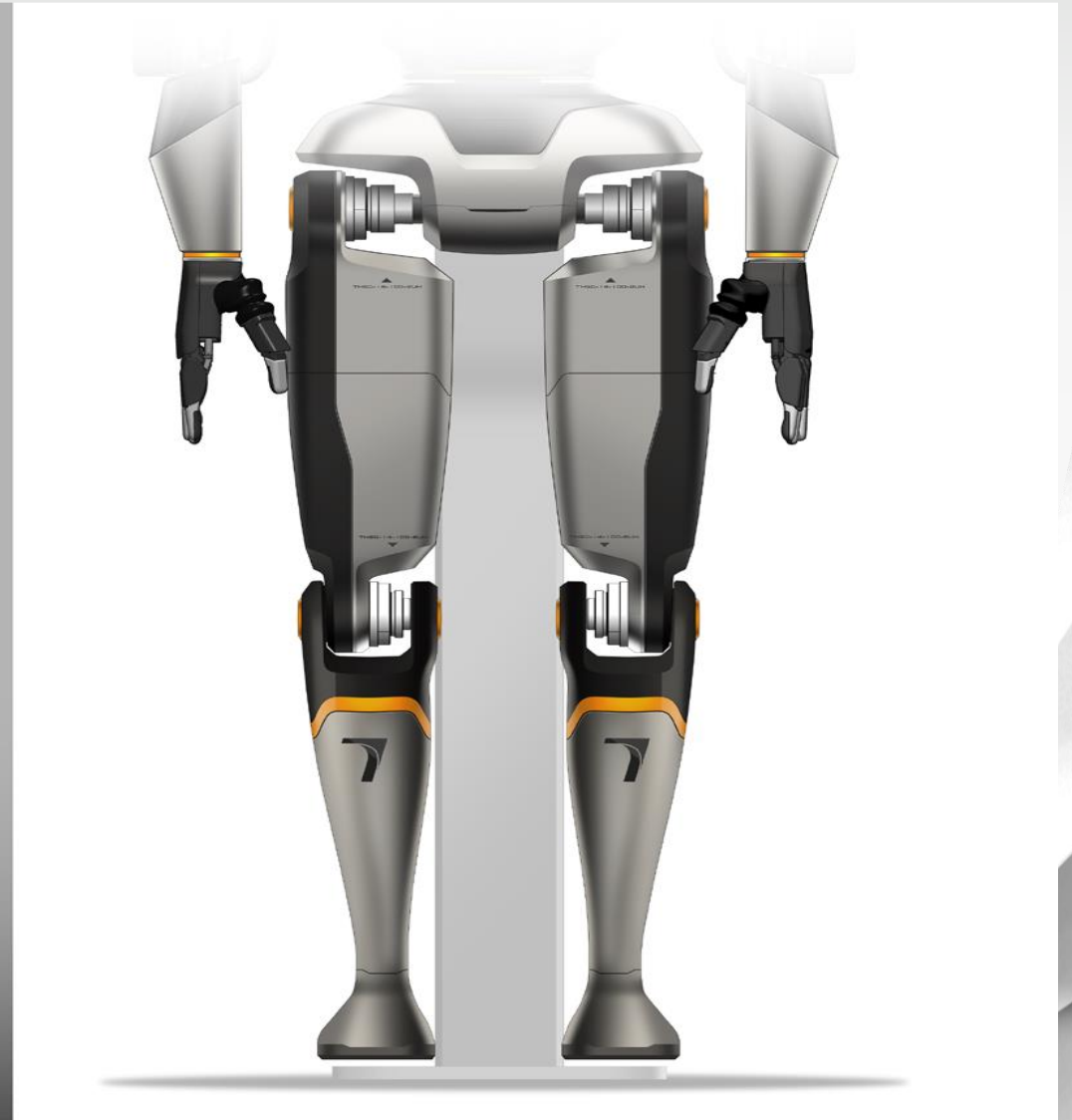
MOUTH



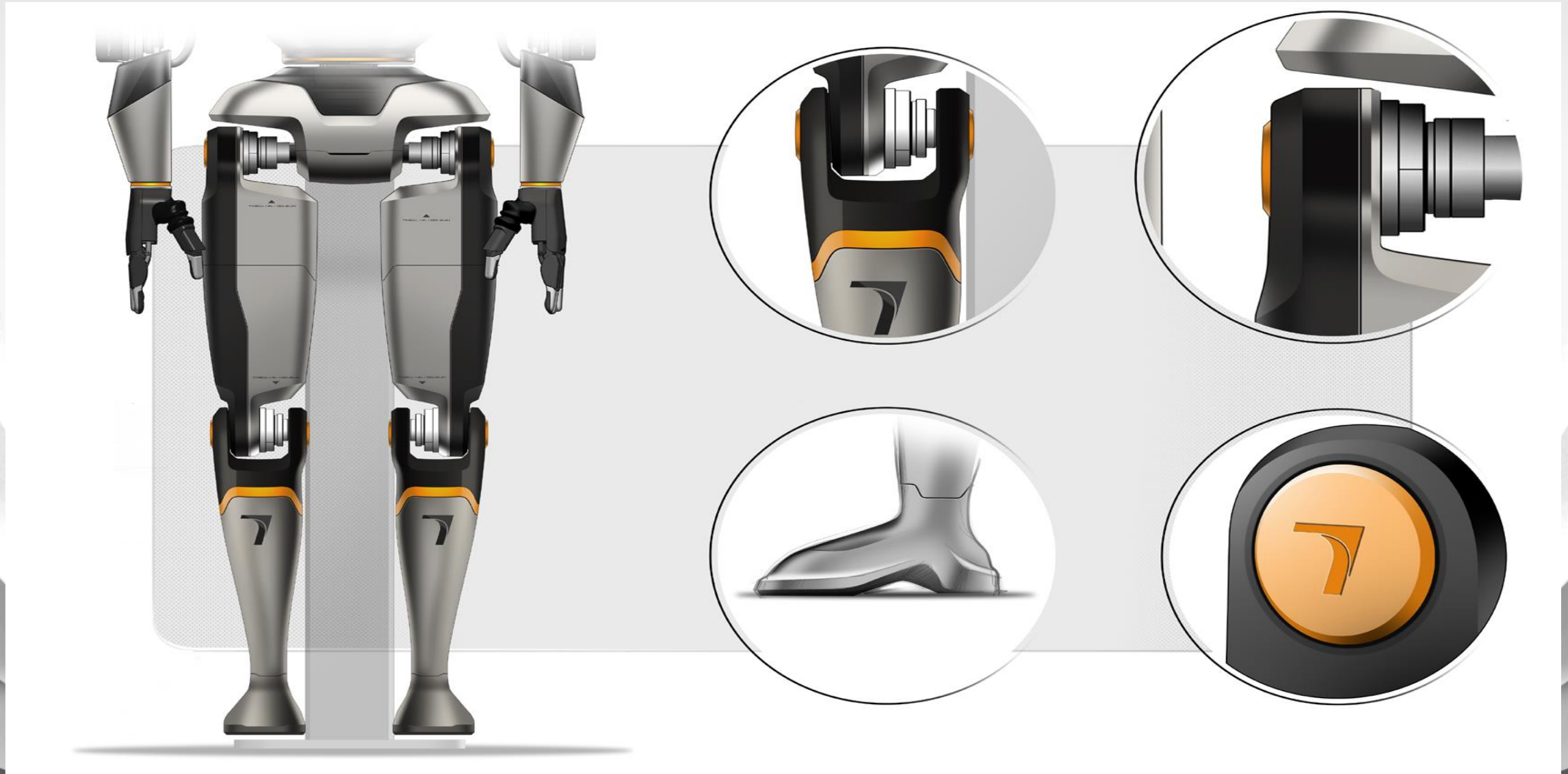
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# For our environment

ISO14064-1 Carbon Inventory



EU launches carbon border adjustment mechanism



SBTi



CDP

# Q & A