

Turvo International Co., LTD

1Q25 Investor Conference

Stock Ticker: 2233

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Director, Financial Management Division

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Agenda

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

Number of Employees

1,201 (as of Dec 31, 2024)



Dongguan Plant

Main Products: Auto, Industrial and Medical



Taichung Headquarter

Main Products: Bike, Industrial, Medical and TUF ONE



Zhejiang Plant

Main Products: Auto, Industrial

Core Competency

1

Professional Precision Metal Parts Processing

2

Introducing Advanced Equipment to Improve Production Efficiency and Quality

3

Diverse Quality Certification Systems to Establish Long-Term Partnerships with Clients

4

Customized Solutions for International Corporations to Fulfill Global Orders

ISO 13485
Medical Devices
Quality
Management
System



IATF 16949
Automotive
Quality
Management
System
Certification

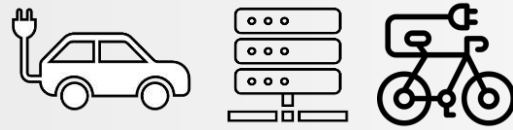


ISO9001
Quality
Management
System
Certification



Business Strategy

Turning to Become



Expand Core Applications

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

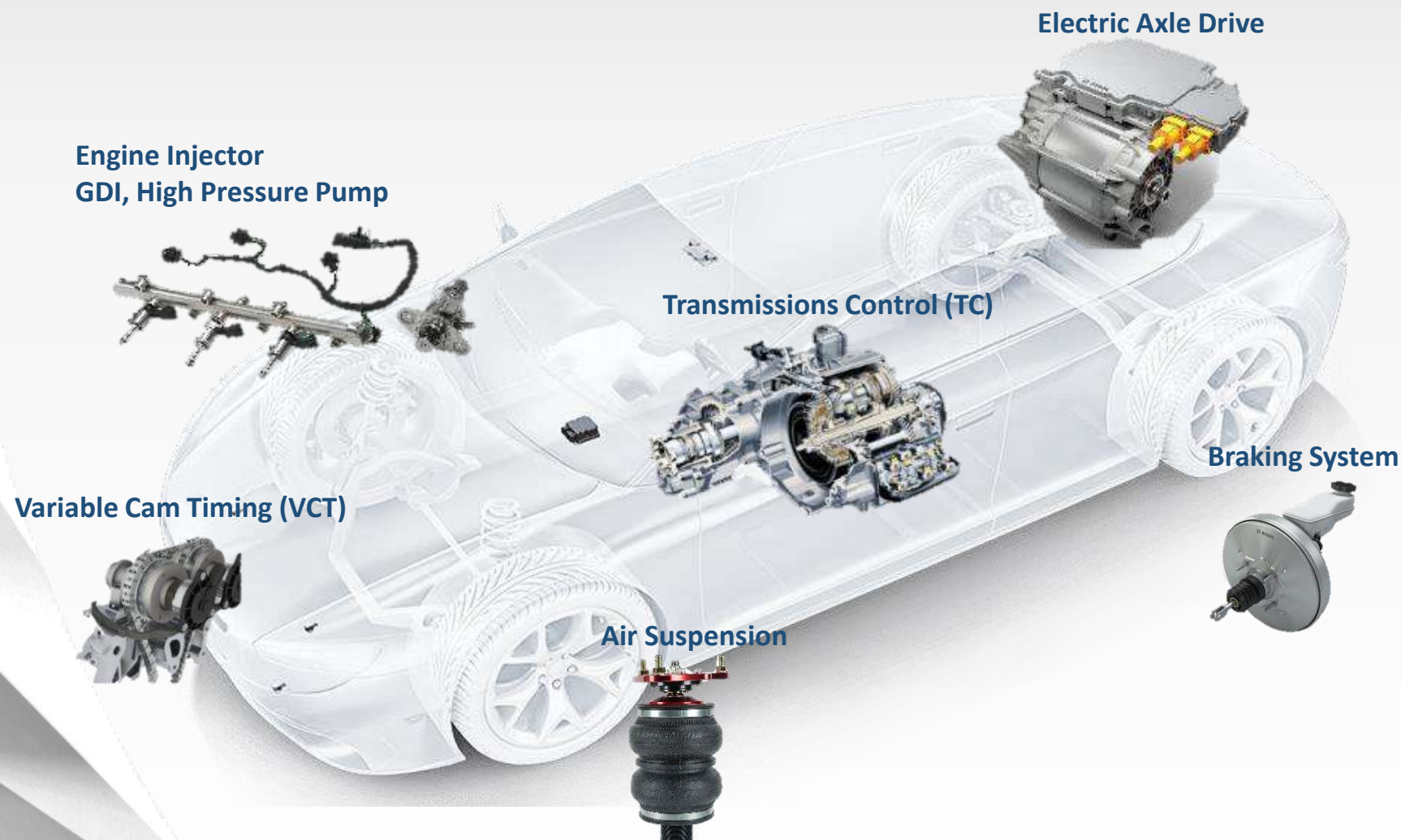
Proactive and Continuous Innovation

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

Launch OBM Products

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

Business Strategy – Expand Core Applications



BOSCH

DENSO



BorgWarner

UAES

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

SCHAEFFLER

HITACHI
Inspire the Next

AISIN

TURVO
Turning to Become

Business Strategy – Expand Core Applications



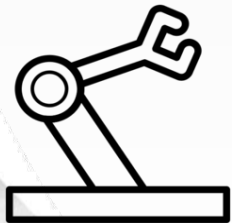
Bicycle Components

- 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



Surgical
Instruments

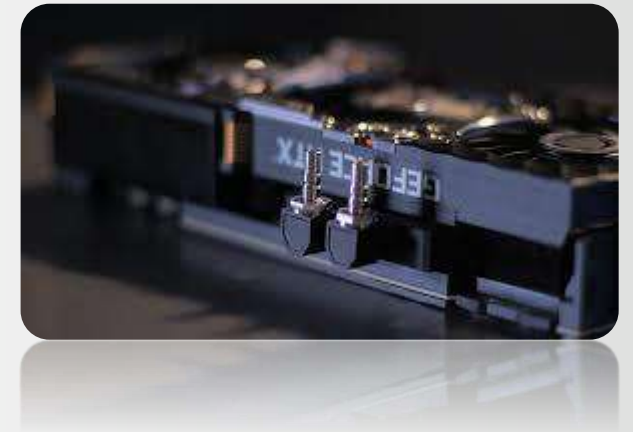


Business Strategy – Proactive and Continuous Innovation

UQD for AI Server Liquid Cooling System



End application: AI Server Cooling Module



Business Strategy – Proactive and Continuous Innovation

Latest Update for Planetary Reducers



TURVO
Turning to Become

Business Strategy – Proactive and Continuous Innovation

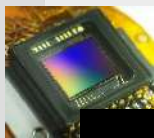
Harmonic Reducer
RV Reducer



Semiconductor Equipment
Application
eVTOL



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



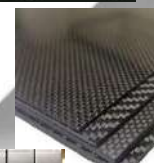
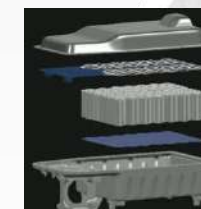
6. Battery Pack

Power battery



7. Others

Structural components
Communication
Thermal management



Humanoid – Future Demand for Reducers

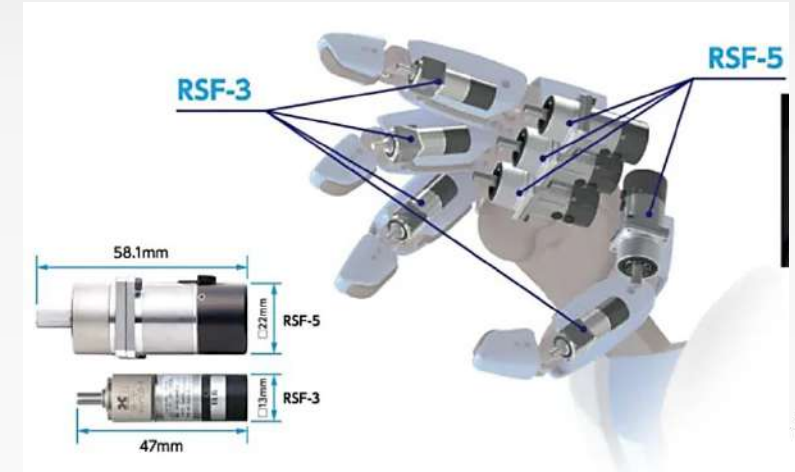
According to Morgan Stanley, Tesla Optimus Gen2's current BoM is \$50-60k per unit (ex-software)

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.

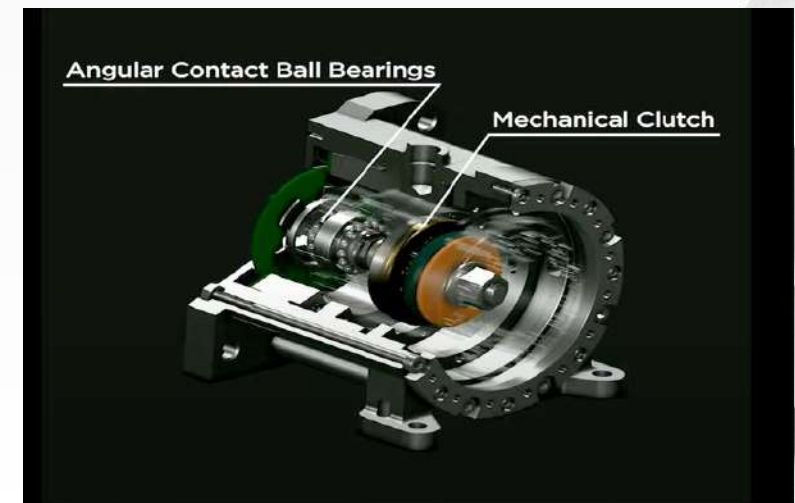
The usage of reducers for Optimus:
16 Harmonic Reducers
16 Planetary Reducers



Rotary Actuator: Planetary (Harmonic) Reducers



Rotary Actuator: Reducers

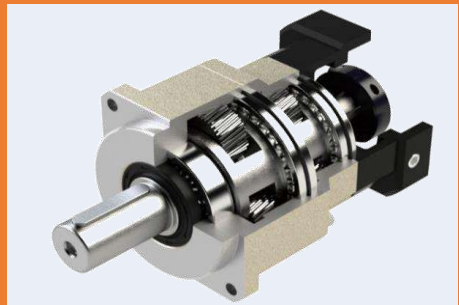


TUF ONE Reducer – End Applications

TUF ONE
Harmonic Reducer



TUF ONE
Planetary Reducer



Frameless DD
Motor



Component



Braking



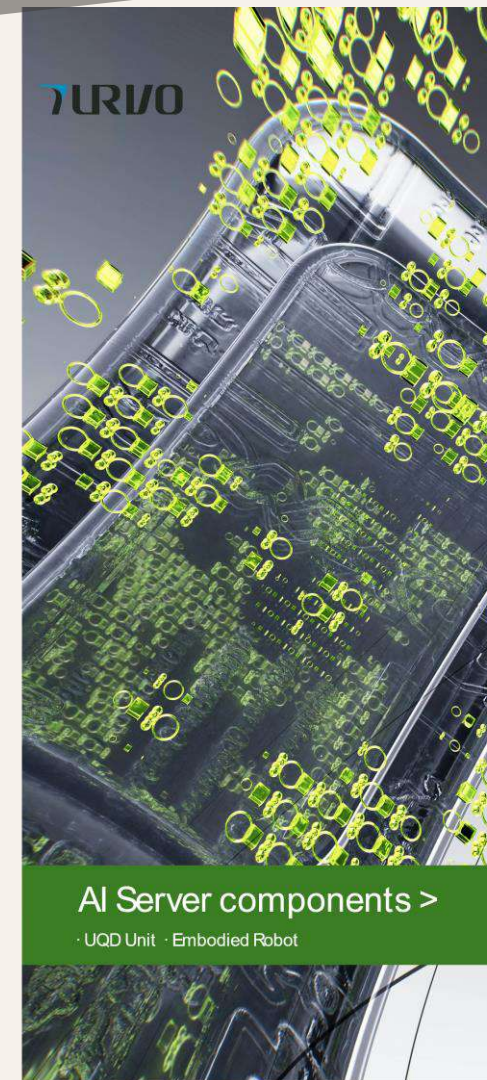
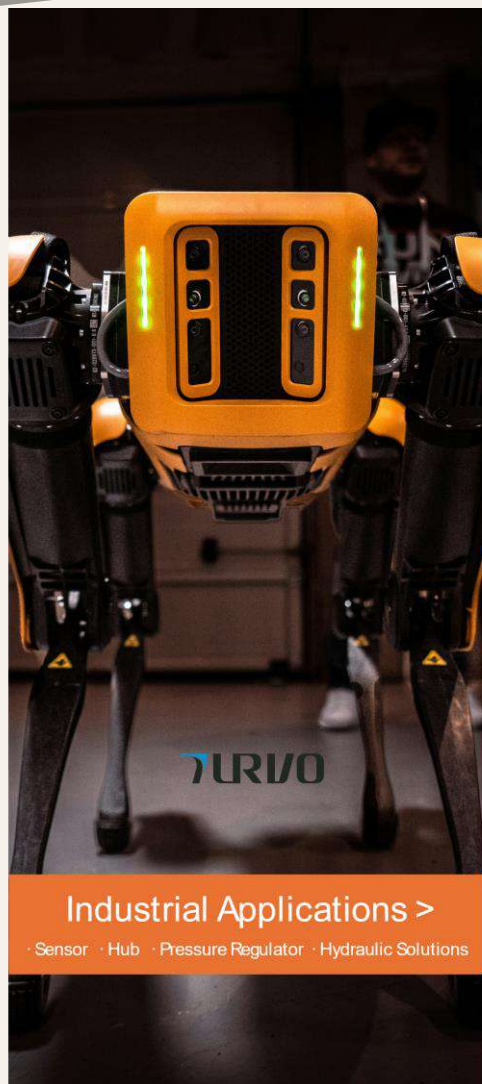
Encoder

[Diagram]
Humanoid Robot Drive System



[Diagram]
Robotic Dog Drive System

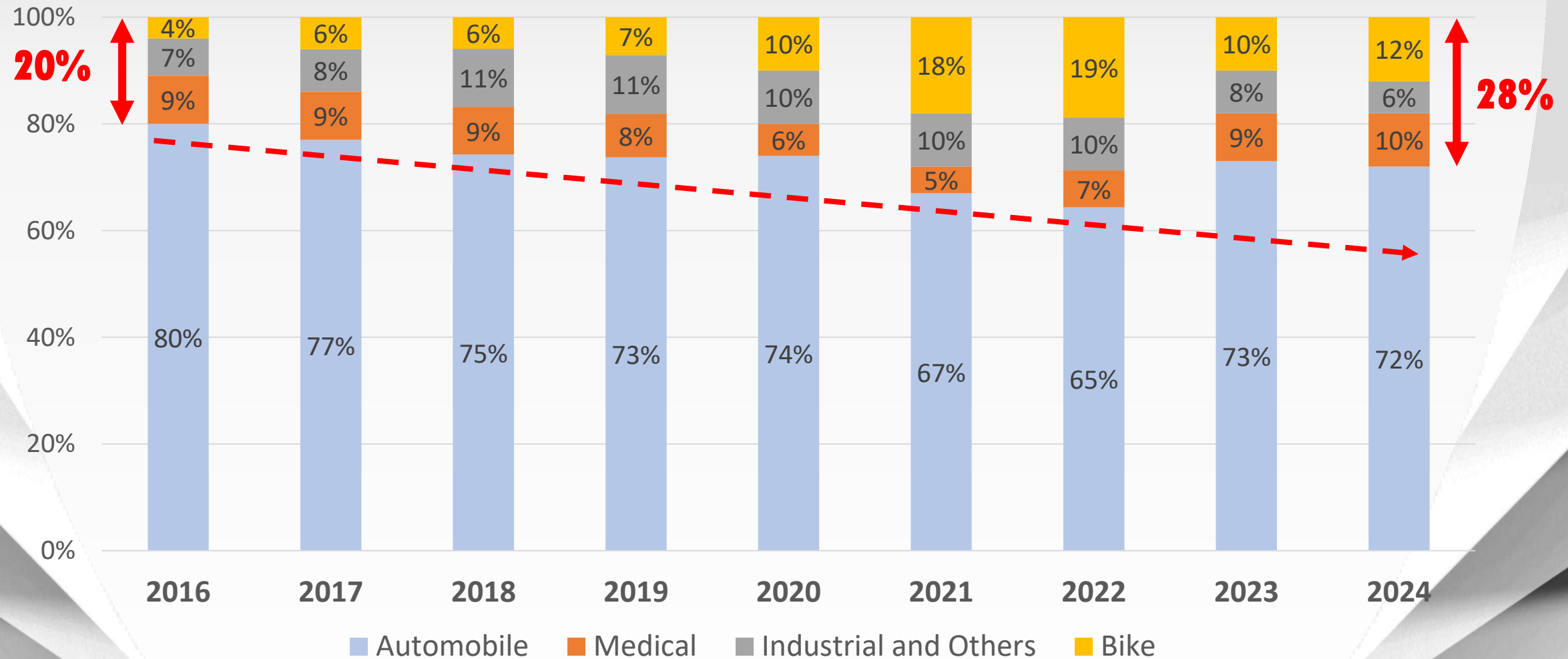




Seize the Opportunity

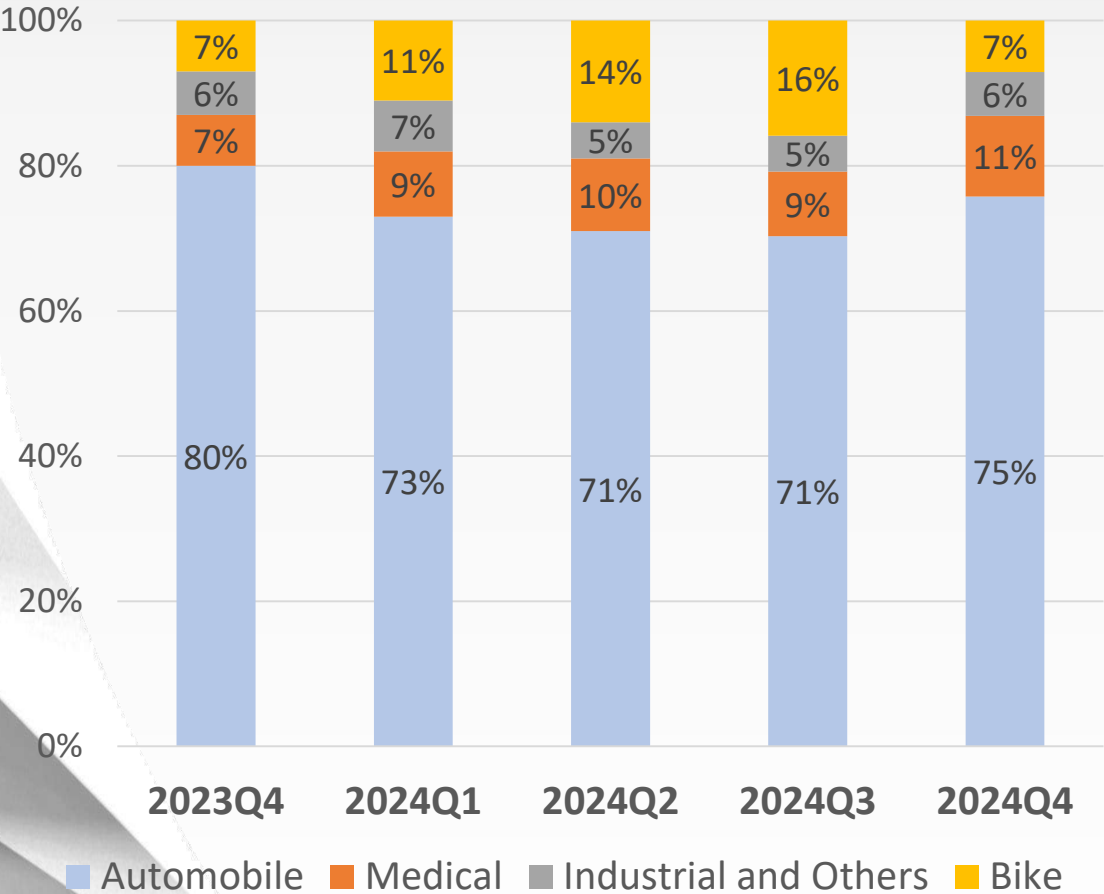
Advance Steadily

Annual Revenue by Application

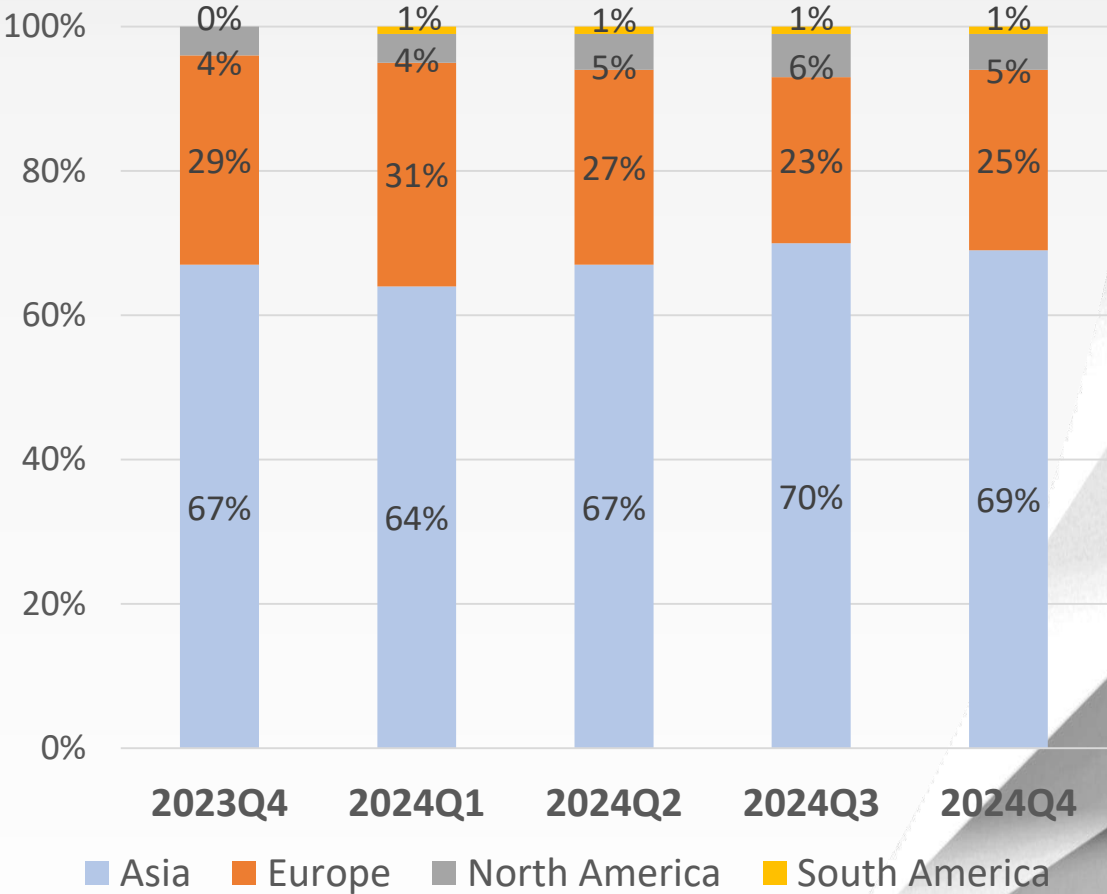


Quarterly Revenue by Application & Region

By Application



By Region



Annual Operating Performance

Unit: NTD Millions

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

Sustainable Development

Turvo has begun applying for SBTi (Science Based Targets initiatives) and has submitted a commitment letter to the SBTi, which has been announced on the organization's official website.

Turvo has implemented specific environmental protection and energy-saving measures in its operations to "protect the environment, save energy, and love the Earth." **The new Taichung plant obtained the Company's first silver-level green building certification in January 2025, making progress toward net-zero carbon emissions.**

1st Green Building – New Taichung Plant



Enhancing Green Energy Installations
Installing solar energy systems, smart meters, and activated carbon air pollution treatment equipment



Reducing Pollution Sources
Installing recycling systems on production lines, and using eco-friendly materials for cleaning processes



Reducing Waste
Reducing household waste, and using eco-friendly packaging materials



Reducing Water Consumption
Recycling and reusing production wastewater

Thank You

Q & A