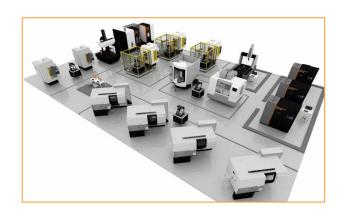
# Renishaw Capital Markets Day 2023 Welcome

Will Lee
Chief Executive



# Transforming Tomorrow Together

We make it possible to create the products, materials and therapies that will define our world in the decades to come and touch billions of lives



Machine shop



Semiconductor manufacturing equipment



Laboratory & clinic



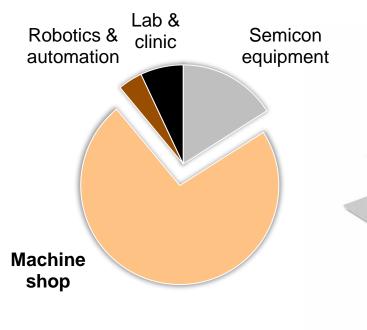
Robotics and automation



Workshop: Markets & strategy



# Renishaw in the machine shop



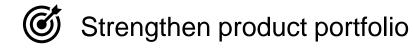
- ▲ Higher product performance
- ▲ Shop-floor metrology
- ▲ Enhanced automation
- ▲ Autonomous factories

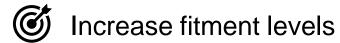




## Sensors

## Enhance our leading position

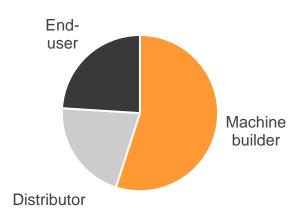






#### **PRODUCTS**

- CMM sensors
- Machine tool probes
- Calibration
- Enclosed encoders



#### Track record of growing fitment levels



Global apparent machine tool consumption CAGR 2010-2023<sup>1</sup>



Renishaw machine tool sensors revenue CAGR 2010-2023<sup>2</sup>

#### Driven by continual product innovation



Intuitive probing apps



NC4+ Blue tool setter



FORTiS™ encoder



Workshop: Sales strategy

#### **Notes**

- 1. Compound annual growth rate of Machine tool apparent consumption between 2010 and 2023, source: Oxford Economics Global Machine Tool Survey (autumn 2022 forecast)
- 2. Compound annual growth rate of Renishaw machine tool sensor revenue from FY2010 to FY2023



# Metrology systems

## Build market-leading position



Product innovation



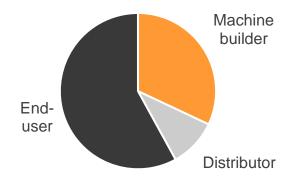
Practical software



Smart factory solutions

#### **PRODUCTS**

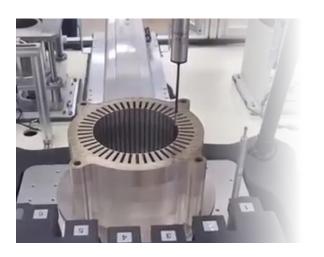
- CMM systems
- Gauging systems
- Metrology software
- Renishaw Central



#### Growth in 5-axis, high-speed, multi-sensor CMM systems



#### Wider use of flexible gauges for EV shop-floor metrology







Workshop: Sales strategy



# Metrology systems

## Build market-leading position

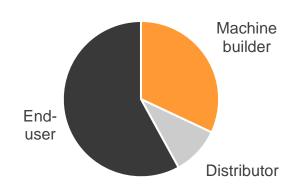




Smart factory solutions

#### **PRODUCTS**

- CMM systems
- Gauging systems
- Metrology software
- Renishaw Central







EQUATOR™ gauge

Updates to control process

Turned parts for gauging

**CNC** turning centre

**NEW:** MODUS™ IM Gauge & Control

New generation of easy-to-use metrology software



Workshop: IM software strategy



## Metrology systems

## Build market-leading position



Product innovation



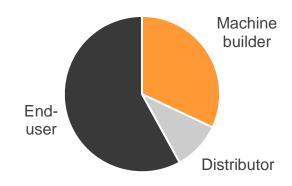
Practical software



Smart factory solutions

#### **PRODUCTS**

- CMM systems
- Gauging systems
- Metrology software
- Renishaw Central





**NEW: Renishaw CENTRAL** 

Accurate, actionable data across the shop floor



Workshop: IM software strategy



# Additive manufacturing

## Build market-leading position

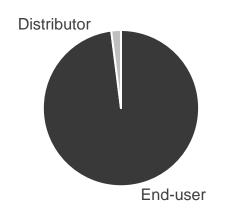


Key account growth

Minimise embodied carbon

#### **PRODUCTS**

- AM machines
- Build preparation software
- Process monitoring

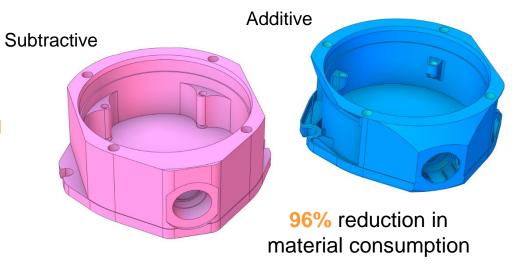


#### **NEW:** Faster builds & improved melting precision

Patented optical system verification using sphere array and MeltVIEW sensors



Additive enables dramatic reduction in part volume, material consumption and embodied carbon

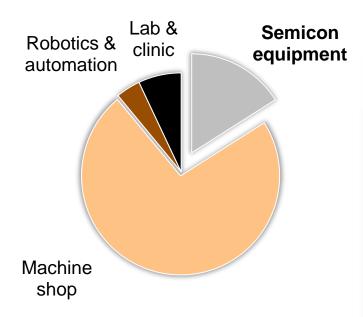




Workshop: Net Zero (incl. use of AM)



## Renishaw in the semicon fab



- ▲ New high-spec devices
- ▲ Consumer devices, cloud, AI, 5G
- ▲ Enhanced fab automation
- ▲ Reshoring of manufacturing





#### SEMICON EQUIPMENT

## Sensors

## Enhance our leading position



Strengthen product portfolio



Win new customers

#### Track record of winning new customers



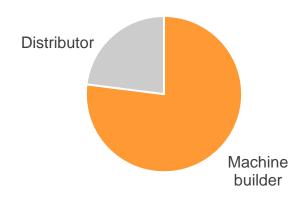
Semiconductor capital equipment expenditure CAGR 2010-2023<sup>1</sup>



Renishaw position encoder revenue CAGR 2010-2023<sup>2</sup>

#### **PRODUCTS**

- Optical encoders
- Magnetic encoders
- Laser encoders



#### Underpinned by an innovative product range



Optical encoders



Laser encoders



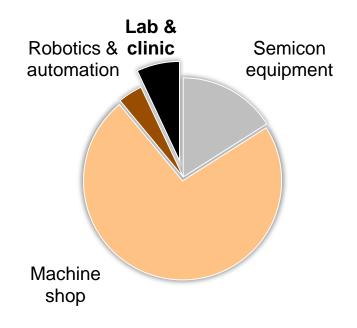
Workshop: Sales strategy

#### **Notes**

- 1. Compound annual growth rate of Semiconductor capital equipment expenditure between 2010 and 2023, source: Statistica / Semi.org
- 2. Compound annual growth rate of Renishaw optical, magnetic and laser position encoder revenue from FY2010 to FY2023



## Renishaw in the lab & clinic

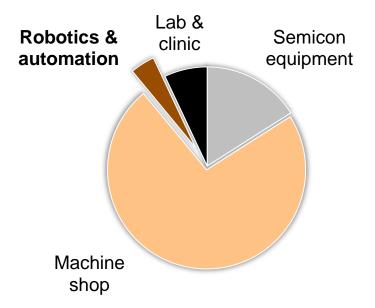


- ▲ Steady growth in research globally
- ▲ Rising battery research
- ▲ Raman increasingly used for control of industrial processes
- New therapies for neurological disorders





## Renishaw in robotics & automation



- ▲ High labour costs & skills shortages
- ▲ Re-shoring of manufacturing
- ▲ Warehouse automation
- ▲ Collaborative robotics





#### **ROBOTICS & AUTOMATION**

## **Industrial Automation**

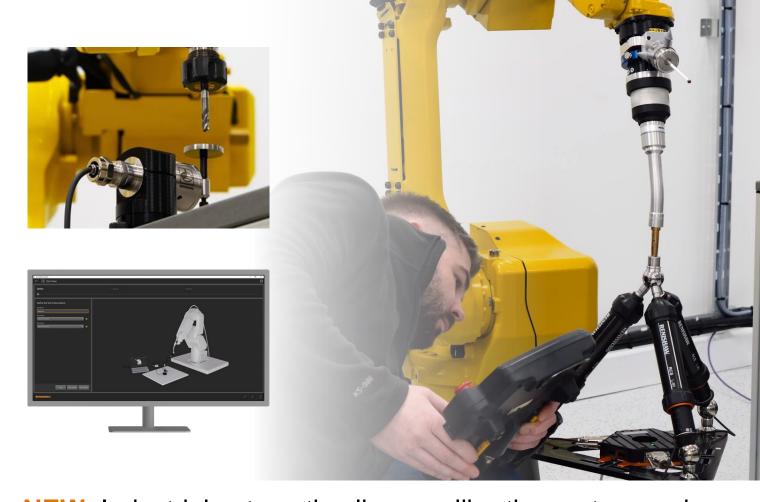
## Drive long-term growth





Unmet customer needs

Innovative, patented solutions



**NEW:** Industrial automation line – calibration, set-up and diagnostics of industrial robots

Enable robots to be used for higher accuracy tasks

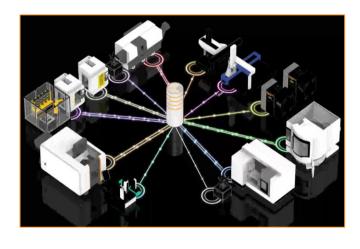


Workshop: Robot metrology



# Our strategic direction







Sensors Systems New markets