



AURORAL

AURORAL SINTER METALS CO., LTD.

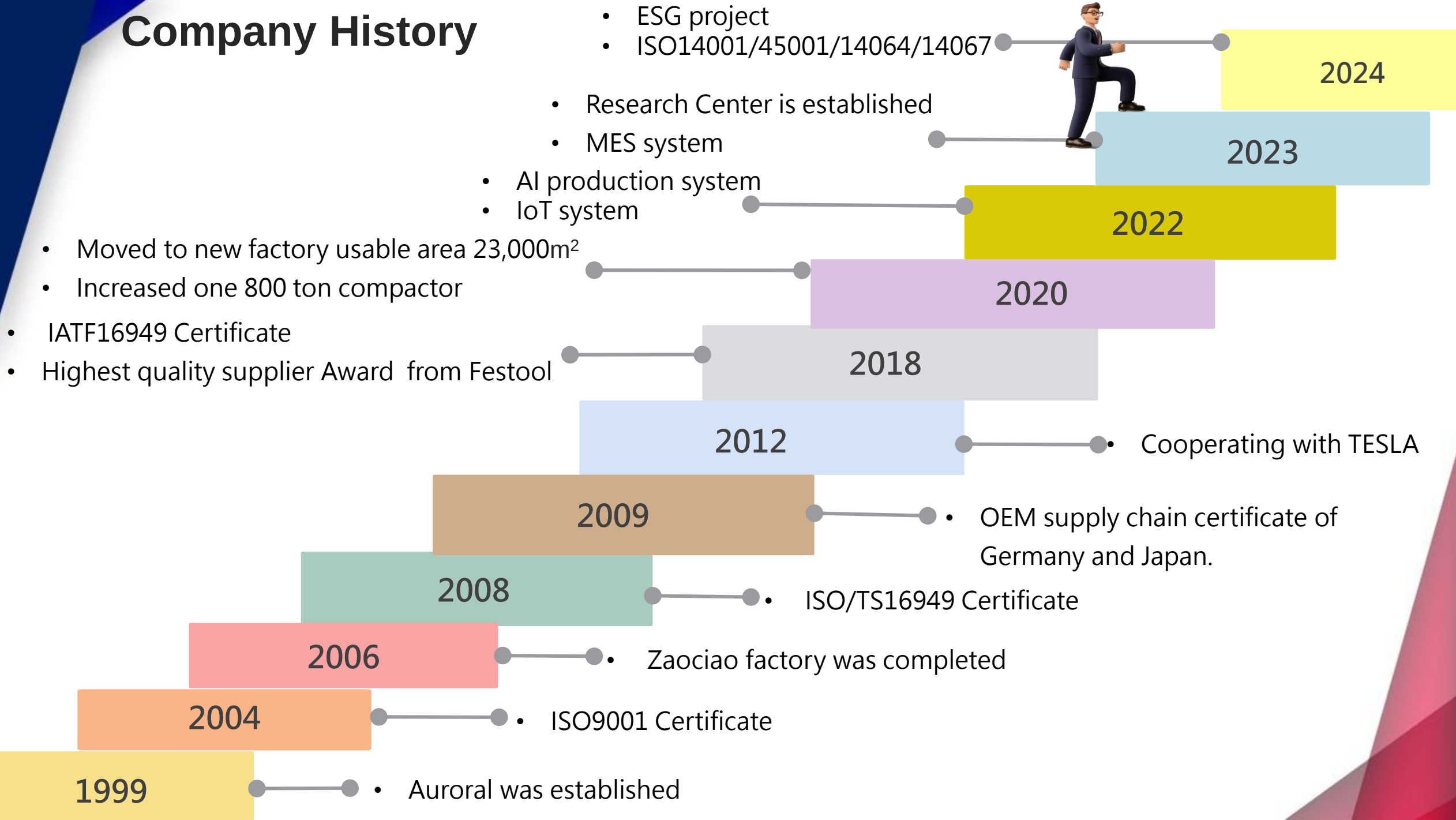


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05. Introduction to manufacturing process and inspection equipment
06. Advantages of powder metallurgy
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Company History



Company Organization

General Manager
Mr. J. M. Lien
Employees: 160

**Research
Center**
6 people

**Sales
Department**
8 people

International 5

Domestic 3

**Factory
Department**
135 people

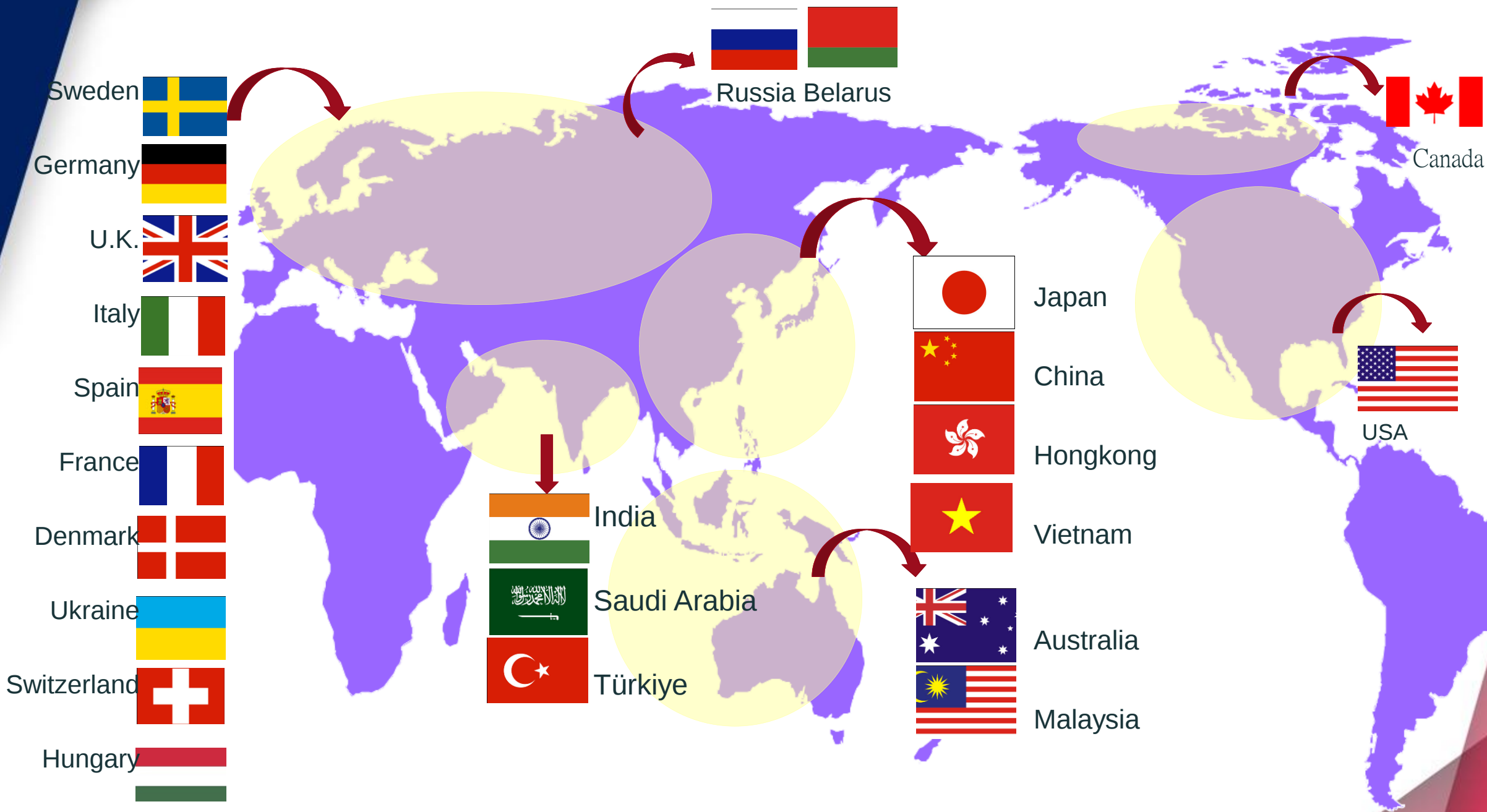
Develop 6

**Production
Technology 4**

**QC
Department**
9 people

Administration
5 people

Overseas Market

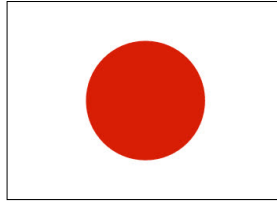


Major Customers



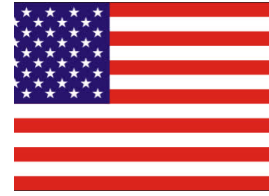
Germany

- INA(Schaeffler Group)
- USD
- Festool
- C.&E.FEIN
- Flex
- AUMA
- FTE



Japan

- Mikuni
- Mitsumi
- Brother
- Murata
- KYB
- Hitachi Astemo



USA

- INA(Schaeffler Group)
- Tesla
- GATES Corporation



India

- Lucas TVS
- Sanden
- Padmini
- Advik
- Shakti Pumps
- Torque Master
- Indian Railways



Russia

- PSM Hydraulics
- NPP (Promyshlennaya avtomatika)



Australia

- Ozroll
- DSIH



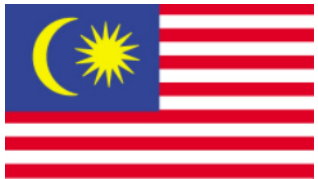
Turkey

- KACMAZLAR
- YILDIZ PUL OTOMOTIV(YPS)
- ATAKUL MAKINE(A-Tech)
- Yumak Automotive



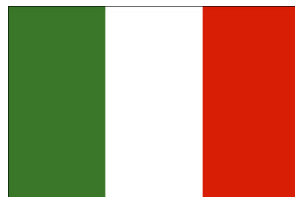
Thailand

- Thai Yamato
- Thai Shing



Malaysia

- ACM



Italy

- ZF



Switzerland

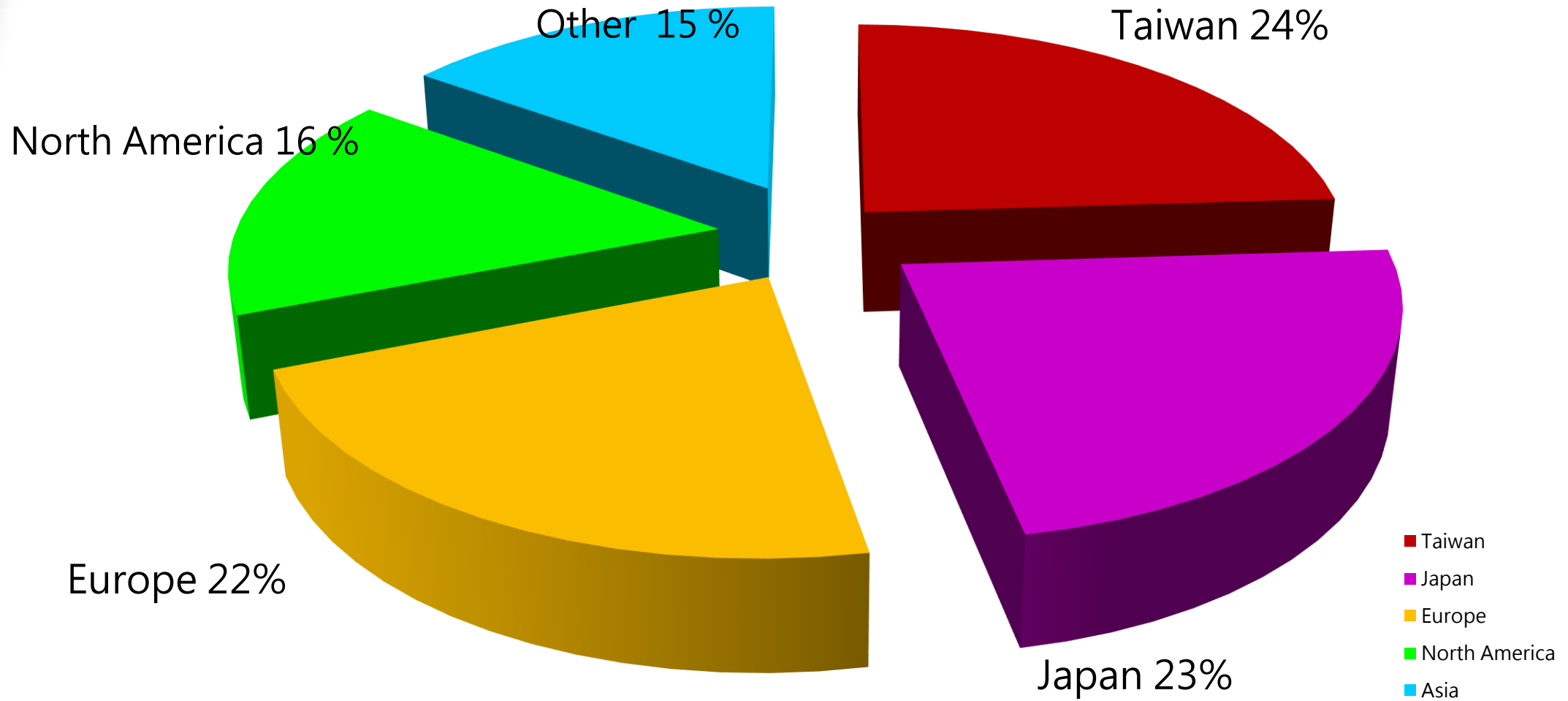
- Bernina



Canada

- SHW

Marketing Segment



Main Product - Automotive Parts



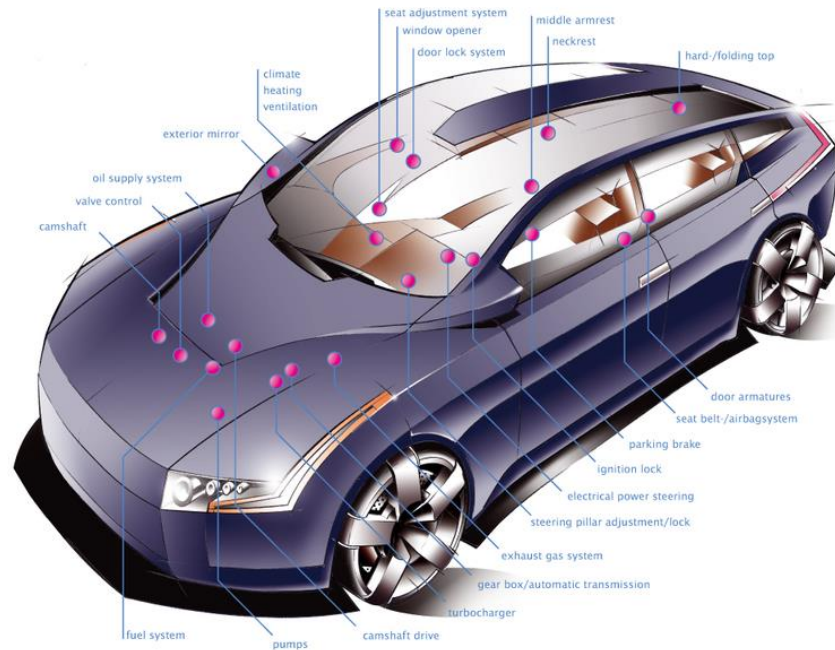
Pistons of Shock Absorber



Synchronizers and VVT systems



Sprocket (Chain) Gears and Rotors



Oil Pump Rotors

Main Product - Power Tool and Hand Tool Parts



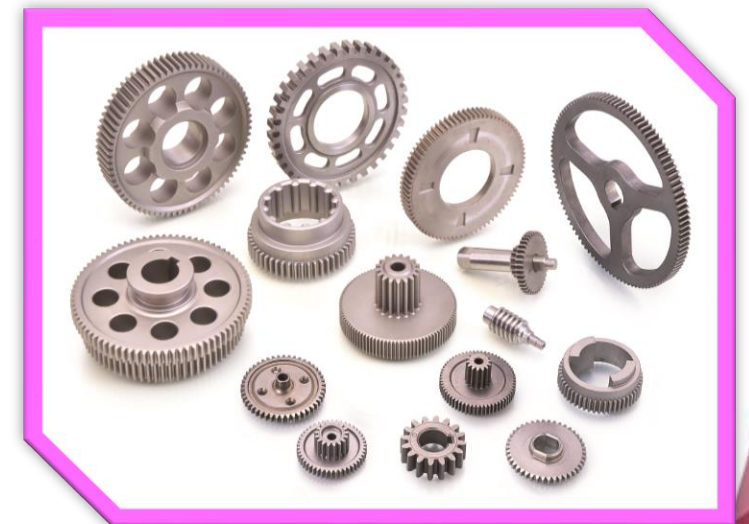
Bevel Gears



Helical Gears



Power Tool Parts

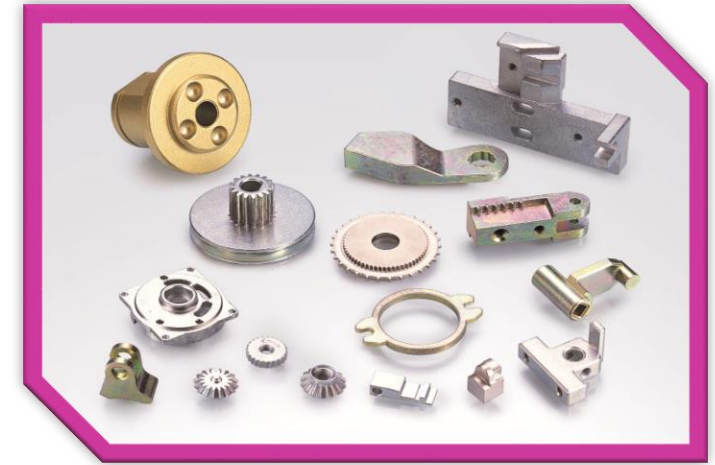


Transmission Parts

Main Product - Machinery and Hardware Parts



Machining and Hardware Parts



Coated (Plated) Parts

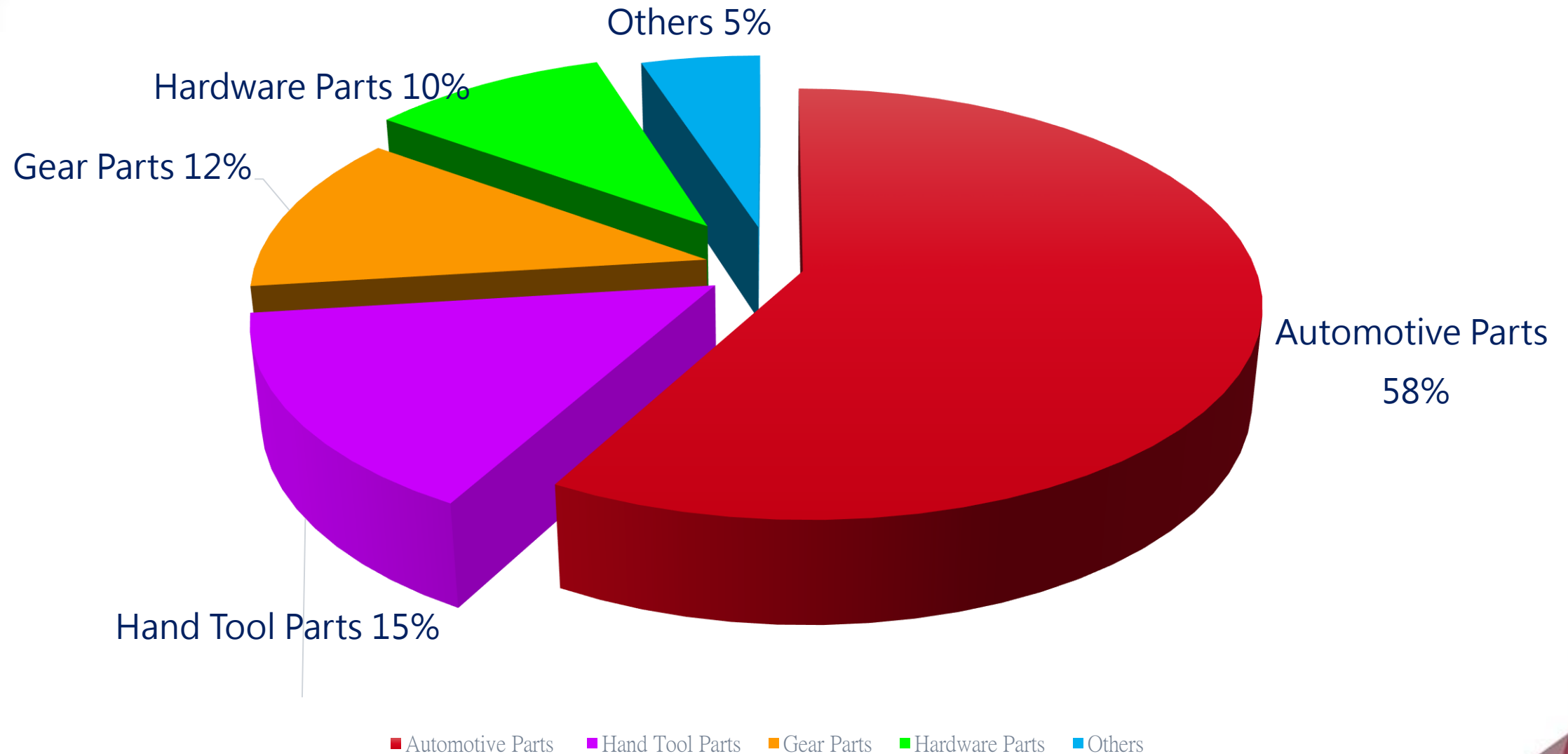


Stainless Steel Parts



Bronze Bushings

Product Classification



Powder Metallurgy Material

Iron series

General iron , alloy, iron with
copper infiltration

Stainless steel

SUS303, 304
316 ,409 ,430

Copper series

Bronze / Brass



Production Equipment

Compactor machine: 3 tons to 800 tons (35 units)

Sizing machine: 15 tons to 630 tons (25 units)

Sintering Furnace: 9 units

Steam Treatment Furnace: 3 units

Automatic Deburring Machine

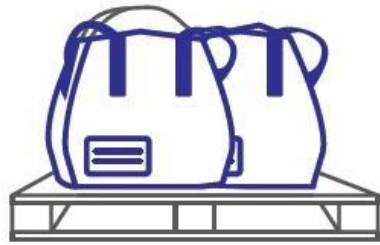
Automatic Weighing Equipment

Vacuum Oil Impregnation Machine

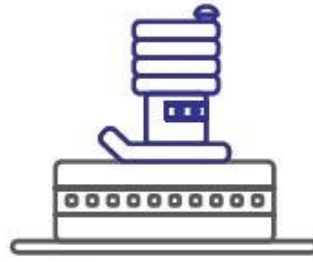
Automatic Ultrasonic Washing Machine (3 units)



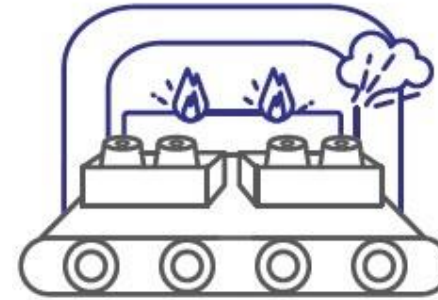
Production Process



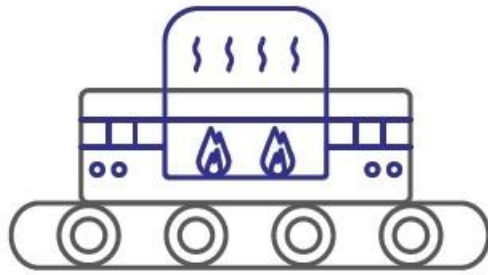
Raw Material



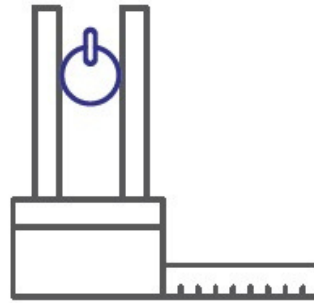
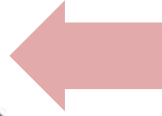
Compaction



Sintering



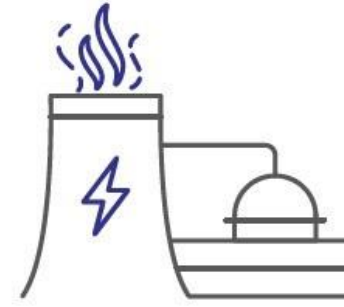
Heat Treatment



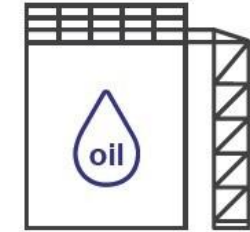
Sizing



Tumbling

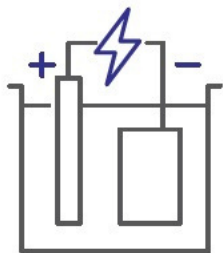


Steam Treatment



Vacuum Oil
Impregnation

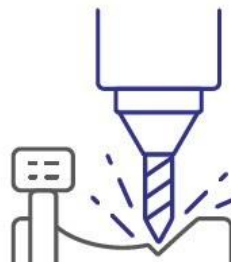
Arrange according to product needs



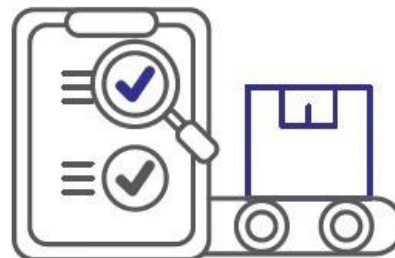
Plating



Outsourcing



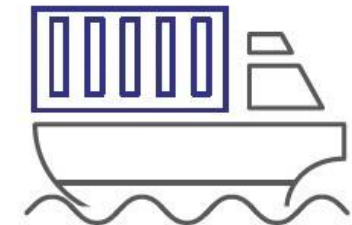
Machining



Quality Inspection



Package



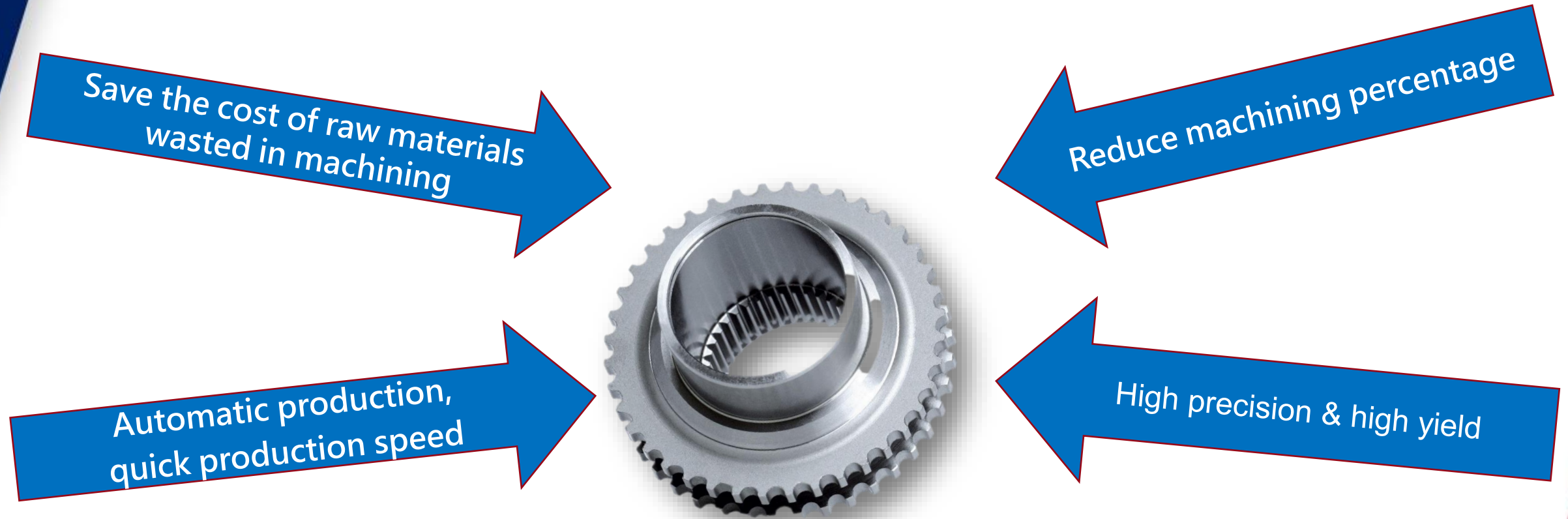
Shipping

Inspection Equipment

- 2 CMM (Zeiss, TESA)
- Magnaflux Flaw Detector
- Sonic Flaw Detector
- Gear Meshing Measure
- Gear Accuracy Machine
- Profilometer
- Torque Testing Machine
- Material Testing machine
- Image Dimension Measuring System
- Hardness Testing Machine



Advantages of Powder Metallurgy



Sustainable Development

- Continuously purchase high-precision production equipment and inspection instruments.
 - Optimize powder metallurgy processes , challenge high-precision and difficult production outputs.
 - Establish a research center to develop new business entities, such as aluminum alloyed powder metallurgy.
-
- Cooperate with 2-3 domestic universities to establish industry-academic partnerships and introduce intelligent production systems (MES, IoT).
 - Plan to implement and obtain ISO 14001, ISO 45001, and ESG system certifications.

2023
ICMEM

研究發表：
雷射督普勒應用於生胚密度檢測



左上圖1 為報告照片
左下圖2、3是與來自北科、中原及長庚大學的教授合影
右上圖4 與會議主持人合影
右中圖5 報告人合影

- **Research Publication**
- **Location: Chiba University, Japan**
- **Time: 2023 4/7~4/9**
- **Participants: from Japan, Taiwan, Spain, Croatia, the United States, and Indonesia**

Sustainable Development – Friendly Environment

E – Environment

Implement greenhouse gas investigation

Product Carbon Footprint calculation

Waste management

Implement ESG projects

S – Society

Supply Chain Standards

Labor Management

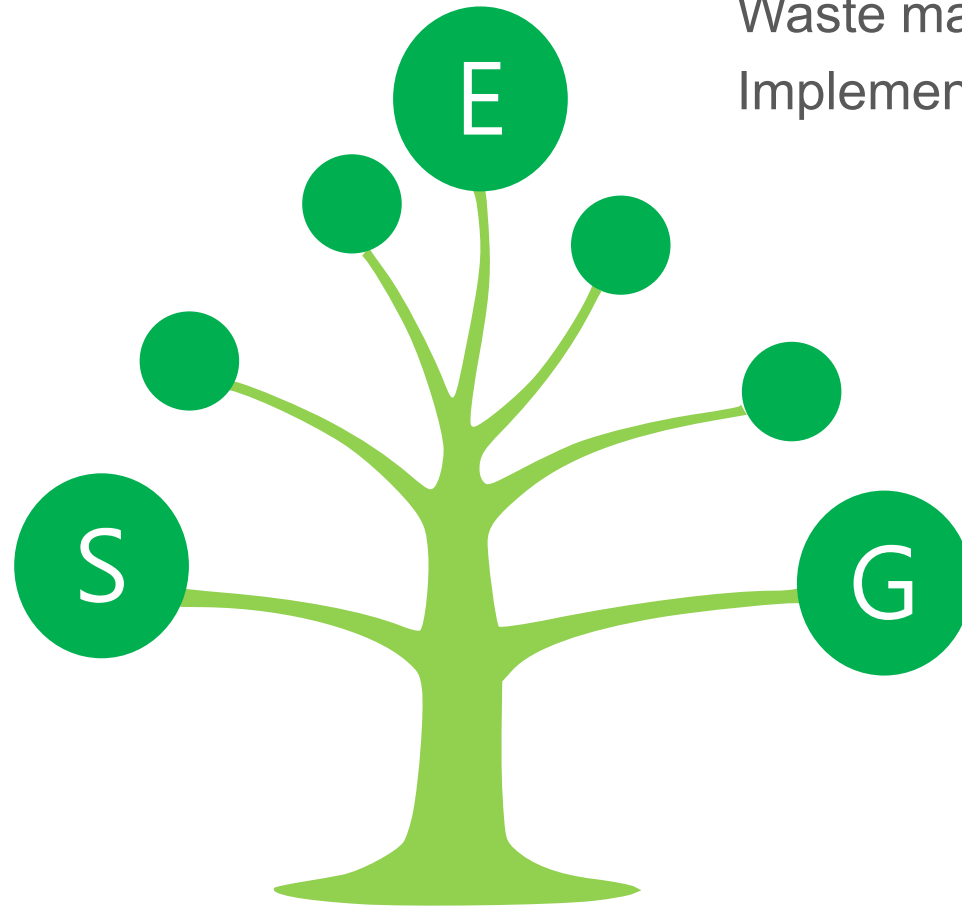
Health and Safety

G – Governance

Corporate governance

Business ethics

Protection of labor rights





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**Thank you very much for your listening.
Your suggestion is our greatest motivation for
growth and improvement !**