

# @cenarro

cold forming specialists





c o r p o r a t i v e

c a p a b i l i t i e s

p r o d u c t



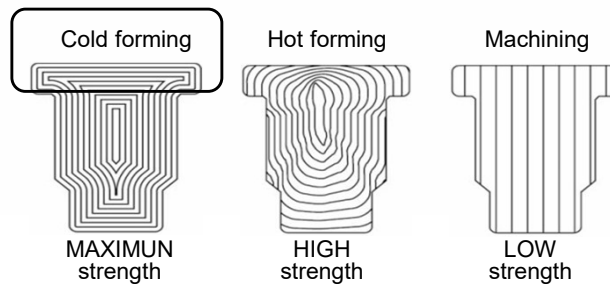
HUMANITY  
AT WORK

MONDRAGON



## Expertise

We are specialists in cold forming, a technology which we combine with machining processes, giving a competitive response to complex parts for the automotive sector.



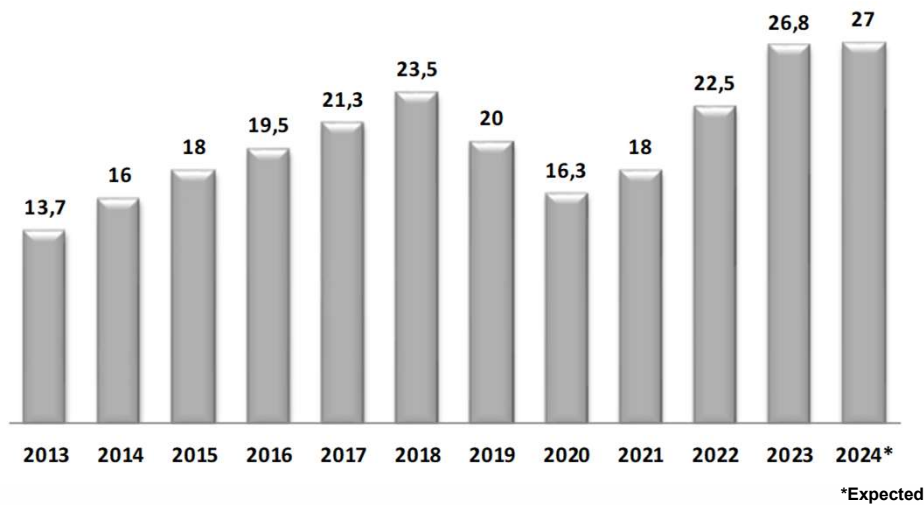
## Timeline

- 1940: Ecenarro launched: turning process
- 1982: Cooperative company
- 2002: Mondragón: member of the largest cooperative group in the world
- 2006: Edertek: co-founder of the technology centre
- 2009: Strategic plan: specialization
- 2012: 6 steps cold forming machines
- 2013: New strategic planning: Customer orientation.
- 2013: First CNC lathe machine: Kitako-Shimada.
- 2015: New facility in Mexico
- 2022: Joint Venture with a Tier1

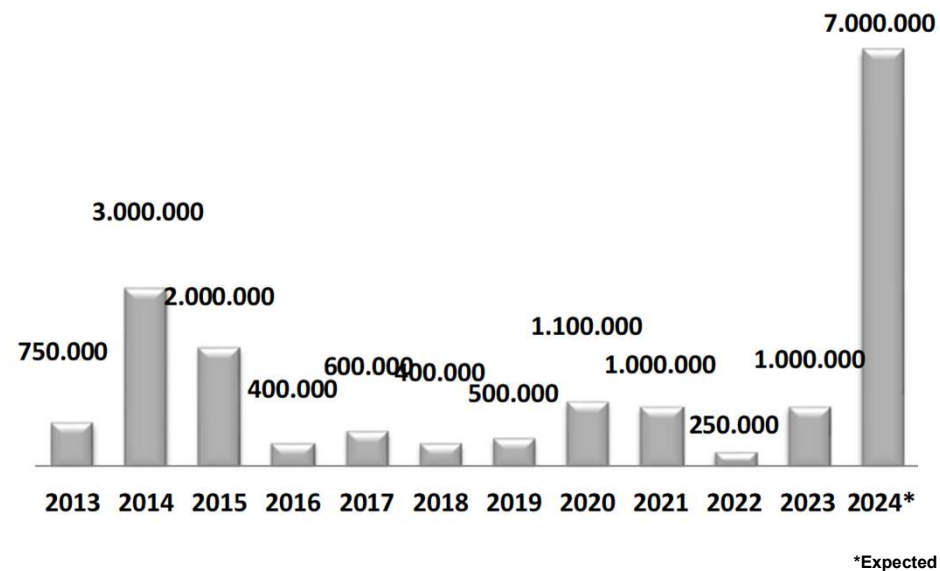


company

**figures**  
**Sales**  
(millions of euros)



**Investments**  
(euros)



Staff



102



company

**Main investments**  
(euros)

**Europe**

**New cold forming  
machine**



Expected to be installed  
beginning of 2025

**Plant expansion -  
Joint Venture**



Expected to be finished end of  
2024

**Mexico**

**New cold forming  
machine**



Expected to be installed  
end of 2025

**CNC  
lathe machine**



Expected to be installed  
beginning of 2025

**Automatic threading  
machine**



Expected to be  
installed Q1 2024



We are part of MONDRAGON, the biggest cooperative group in the world

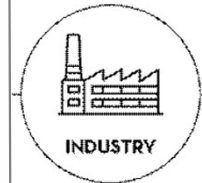
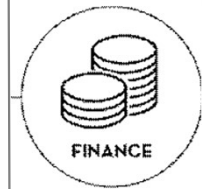
**MONDRAGON**  
HUMANITY AT WORK  
Finance  
Industry  
Retail  
Knowledge

**88 cooperatives**

**Sales** € 10.404 million €

**Staff** 70.545

**Investment** 390 million €





c o r p o r a t i v e

l o c a t i o n s & c a p a b i l i t i e s

p r o d u c t



Company: global footprint



**Locations:**

- Spain:
  - Amillaga
  - San Juan
  - Edertek

- Mexico:
  - Celaya



**Sales:**

- USA
- Mexico
- Brazil
- China
- South Africa
- Europe:

- Belgium
- Bulgaria
- Czech Republic
- France
- Germany
- Hungary
- Italy
- Poland
- Portugal
- Serbia
- Slovakia
- Turkey
- UK





## company

### locations



#### Headquarters & Plant 1: Amillaga



**Bergara**

#### Plant 2: San Juan



**Bergara**

#### R&D Technology Center: Edertek

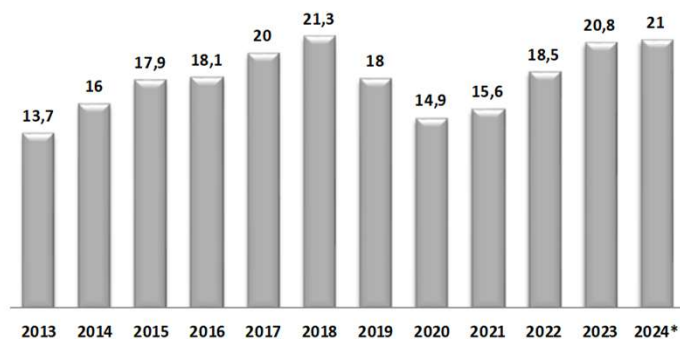


**Mondragón**

### figures

#### Sales

(millions of euros)



\*Expected

#### Staff



**79 persons**

### certificates

**ISO 9001:**

June 1998

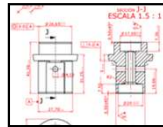
**IATF 16949:**

September 2018

**ISO 14001:**

April 2013





### prototyping & process design

Internal

Prototyping

Simulation (diagrams)

Partnerships with external engineering companies



### secondary operation

Internal

3 Kitako Shimada - 4 spindle turning

face turning  
drilling  
grooving  
turning  
tapping

1 Muratec - 4 spindle turning

face turning  
drilling  
grooving  
turning  
tapping

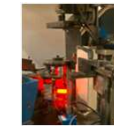
3 Pining

6 Threading

3 Incorporating the washer

6 Knurling

1 Washing machine



### 100% sorting

Internal

Machines

4 computer vision machines

Manual



### cold forming

Internal

Machinery	Nº stations	Cutting diameter	Cutting length
SP570	6	28	230
SP470 (2)	6	20	165
SP460	5	22	165
SP441	4	20	230
SP360 (2)	5	15	127

- process design
- materials
- cold forming
- second operations
- heat treatments
- coatings
- 100% sorting
- final check

### final check

Internal - Laboratory Resources

Friction test: Erichsen

Traction test: Hoytom

Magnaflux: Tiede

Saline mist chamber: Dymetal

Roughness test: SJ-401 Mitutoyo

3D Crysta-Apex: Mitutoyo

Vision measurement: Vicivision



locations



Mexico plant: Celaya

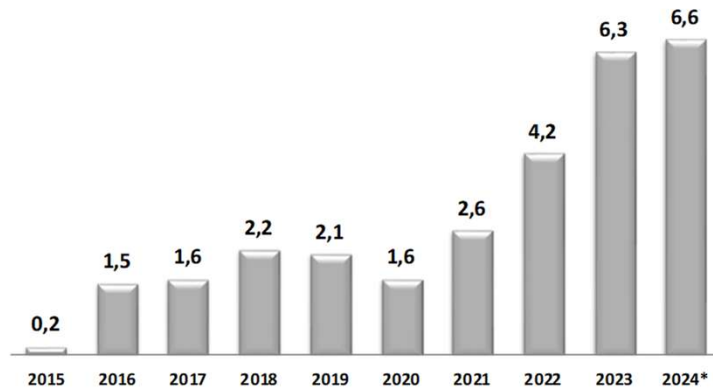


Celaya, Guanajuato

figures

Sales

(millions of US\$)



\*Expected

Staff



23 people

certificates

ISO 9001:  
February 2016

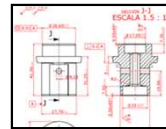
IATF 16949:  
September 2018

ISO 14001:  
October 2018





## capabilities in-house



### prototyping & process design

Internal

Prototyping

Simulation (diagrams)

Partnerships with external engineering companies



### secondary operations

Internal

2 Kitako Shimada - HS 4200

face turning  
drilling  
grooving

1 Drilling

3 Threading

1 Pinning

1 Washing machine



### 100% sorting

Internal

Machines

100% crack detection

100% dimensional

Manual



### final check

Internal - Laboratory Resources

Hardness Rockwell and Vickers

Roughness test

Comparator projector

3D Crysta-Apex: Mitutoyo

Vision measurement Vicivision



### cold forming

Internal

Machinery	Nº stations	Cutting diameter	Cutting length
SP470	6	20	165

- process design
- materials
- cold forming
- second operations
- heat treatments
- coatings
- 100% sorting
- final check



Awards Ecenarro Mexico 2021- 2023

**New PNs**

**Value \$US**

**Volume units.**

**26**

**8.933.403**

**18.961.370**





c o r p o r a t i v e

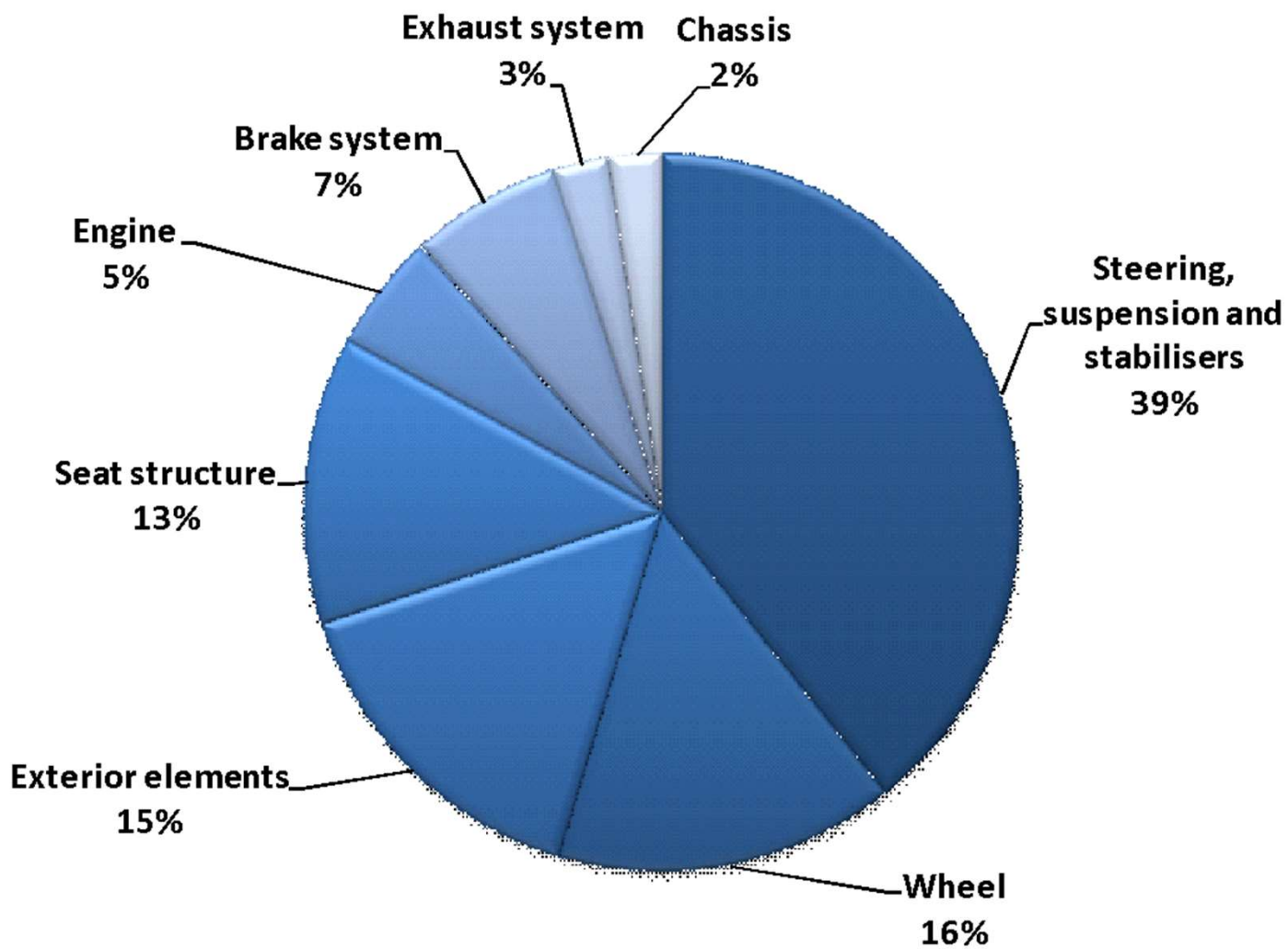
c a p a b i l t i e s

s t r a t e g y

p r o d u c t



## Share per function





functions

1- Seat structure



2- Brake system



3- Steering



4- Suspension



5- Stabilisers



6- Chassis



7- Seat belt



8- Wheel



9- C2C Client projects



function: seat structure



- Application:** • Recliner  
• Lacht
- Market:** • Tier 1
- Dimensions:** • Maximum exterior  $\varnothing$  34 mm.  
• Maximum length 200 mm.
- Materials:** • Non alloy, Alloys chrome, alloys borom
- Quality:** • 8.8  
• 10.9
- Characteristics:** • Machining process can be applied



function: seat structure





function: seat structure





function: seat belt



**Application:** • seat belt retainer

**Market:** • Tier 1

**Materials:** • Alloy borom

**Quality:** • 10.9

**Characteristics:** • 100% cold formed security part



function: brake system



**Application:** • Heavy vehicle brake structure

**Market:** • Tier 1

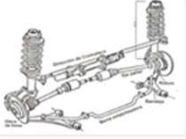
**Dimensions:** • Maximum exterior  $\varnothing$  32mm.  
• Maximum length 160 mm.

**Materials:** • Alloys chrome

**Quality:** • 10.9

**Characteristics:**

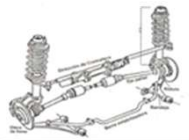
• Shaft gear in 1 piece, assembly of shaft + gear avoided



function: Steering, suspension and stabilisers

## Steering & Suspension





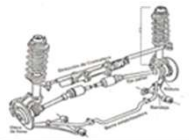
function: Steering, suspension and stabilisers

## Sockets



## Stabilisers





function: Steering, suspension and stabilisers



**Market:** • Tier 1

**Dimensions:**

- Ball between Ø 21mm and Ø 35 mm.
- Rod maximum Ø 99 mm.
- Sockets maximum Ø 40 mm.

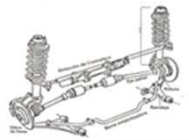
**Materials:** • 41CrS4 • 42CrMo4 • Iron - for sockets

**Characteristics:**

- Single or double open die
- Rods without open die ball

**R&D:**

- 36CrBS4
- Micro alloy
- Bainitic
- Cold finished cone



function: Steering, suspension and stabilisers



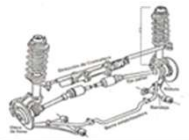
**Application:** • Shock absorber

**Market:** • Tier 1

**Dimensions:** • Maximum exterior  $\varnothing$  32mm.  
• Maximum length 95 mm.

**Materials:** • Alloys chrome.

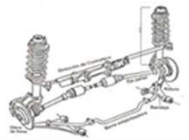
**Quality:** • 10.9



function: Steering, suspension and stabilisers



- Application:** • Silent block
- Market:** • Tier 1
- Dimensions:** • Maximum exterior  $\varnothing$  34mm.  
• Maximum length 110 mm.
- Materials:** • Non alloy, Alloys chrome, alloys borom
- Quality:** • 8.8  
• 10.9



function: Steering, suspension and stabilisers



**Application:** • Silent block

**Materials:** • Non alloy, Alloys chrome, alloys borom

**Market:** • Tier 1

**Dimensions:** • Maximum exterior  $\varnothing$  34mm.

• Maximum length 110 mm.

**Quality:** • 8.8  
• 10.9



function: Chassis



- Application:** • Chassis spacers and fasteners
- Market:** • Tier 1
- Dimensions:** • Maximum exterior  $\varnothing$  34mm.  
• Maximum length 215 mm.
- Materials:** • Non alloy, Alloys chrome, alloys borom
- Quality:** • 8.8  
• 10.9



function: wheel

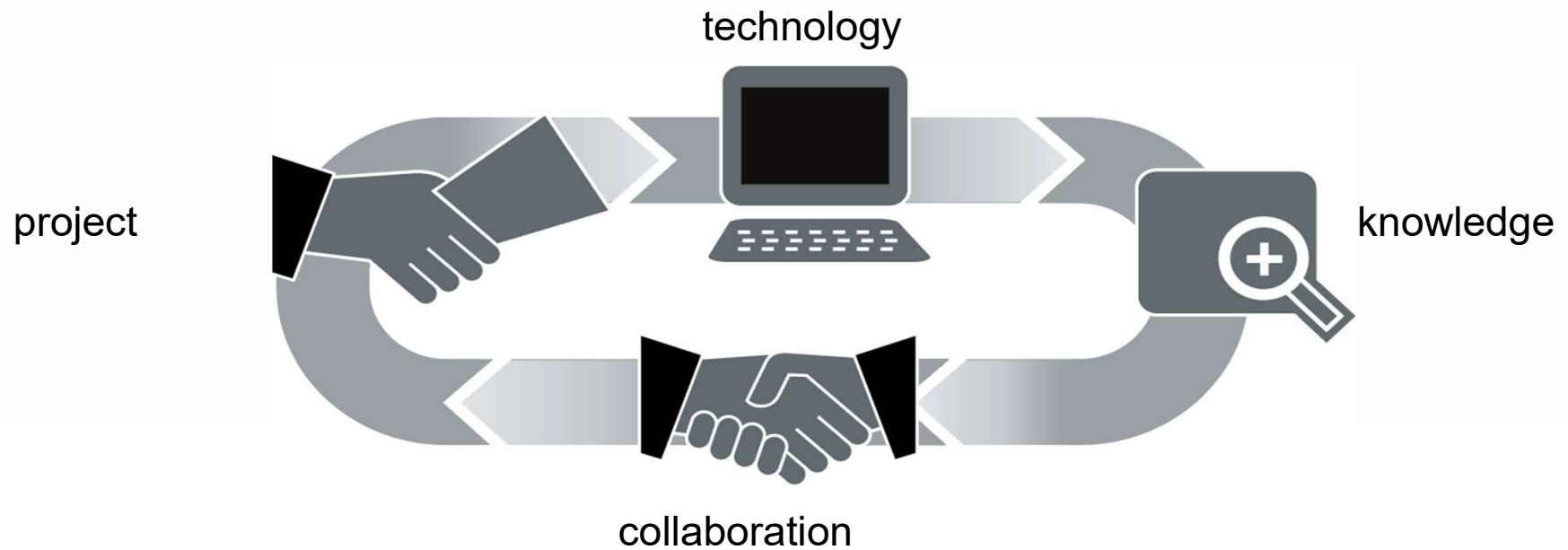


- Function:** • Wheel
- Application:** • Wheel
- Market:** • OEM, Tier 1 and spare parts
- Dimensions:** • Wheel bolt: M 10 to M14. Length: up to 120 mm. under the head  
• Wheel key: Hexagonal 17 mm, 19 mm or 21 mm. Maximum exterior  $\varnothing$  32 mm. Length: maximum 60 mm.
- Materials:** • 36MnB4  
• 34CrMo4  
• 38B2
- Quality:** • 8.8  
• 10.9
- Characteristics:** • Wheel key: possibility of combining 2 hexagonals



## C2C

- Specific projects with the client
- The aim is to develop the most efficient solution for a family of parts





# C2C

Project 1



Project 2



Project 3



Project 4



Project 5





**@cenarro**  
cold forming specialists

**[www.ecenarro.com](http://www.ecenarro.com)**

