

Company Presentation  
FY2022

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**Osai A.S. S.p.A.**

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# Company Overview

MIRELLA FERRERO



## EXECUTIVE CHAIR

**1992 - date:** Co-Founder, Company Representative and Chair of the Board of Directors

**2005 - 2020:** Banca Generali

**1980 - 2005:** Previous experience in Unicredit Banca, Banca Fideuram

**40+ years of experience in the Banking sector**

FABIO BENETTI



## CEO

**2016 - date:** Osai A.S. HR Director, General Manager/Vice President Operations

**2008 - 2015:** RSGS, RSPP, General Services Manager with ICT mandate

**2007:** Osai A.S. – Business Organisation Manager

**Master's Degree in Engineering Management – Univ. of Torino**

CARLO FRIGATO



## CFO

**Oct2020:** Osai A.S.'s temporary CFO

**2018:** Giglio Group S.p.A. - CFO

**2014 - 2018:** Docomo Digital Ltd – CFO & Board Member

**2000 - 2014:** Buongiorno S.p.A. - CFO

**1999 - 2000:** E&Y

**1996 - 1999:** EDS S.p.A. – Account Manager

**1989 - 1996:** Accenture S.p.A. - Senior Manager

**Master's Degree in Electronic Engineering**

STEFANO GIORZA



## VP OPERATIONS

**2020 - date:** Vice President Operations, CPO- Technical Director

**2010 - 2020:** Osai A.S. CPO - Technical Director

**2005 - 2010:** Osai A.S. R&D Manager

**2005 - 2015:** Osai A.S. Mechanical Purchasing Manager, Head of General Planning

**1999 - 2010:** Osai A.S. Mechanical Design Manager

**1999 - 2005:** Osai A.S. Project Manager / Technical leader

**1992 - 2004:** Osai A.S. Mechanical Designer

GRAZIANO SETTIME



## VP BUSINESS DEVELOPMENT

**2016 - date:** Osai A.S. SpA - Vice President Business Development

**2016 - 2018:** Board Member of Italian Financial Institution

**1997 - 2015:** C level Manager, General Manager, Board Member of listed companies

**1986 - 1997:** Manager /Executive at Multinational Companies re. Auditing, M&A, Transaction Support, Corporate Restructuring

**1986: Master's Degree in Economics**

SIMONE FERRARO



## SALES MANAGER

**2018 - date:** Osai A.S. Technical & Sales Manager Electronic, Automation & Robotics Solutions

**2016 - 2017:** Osai A.S. Key Account Manager and Sales Support

**2008 - 2015:** Osai A.S. Key Account Manager

**2002 - 2008:** Osai A.S. Manager of laser applications

MARCO GUOLO



## CTO

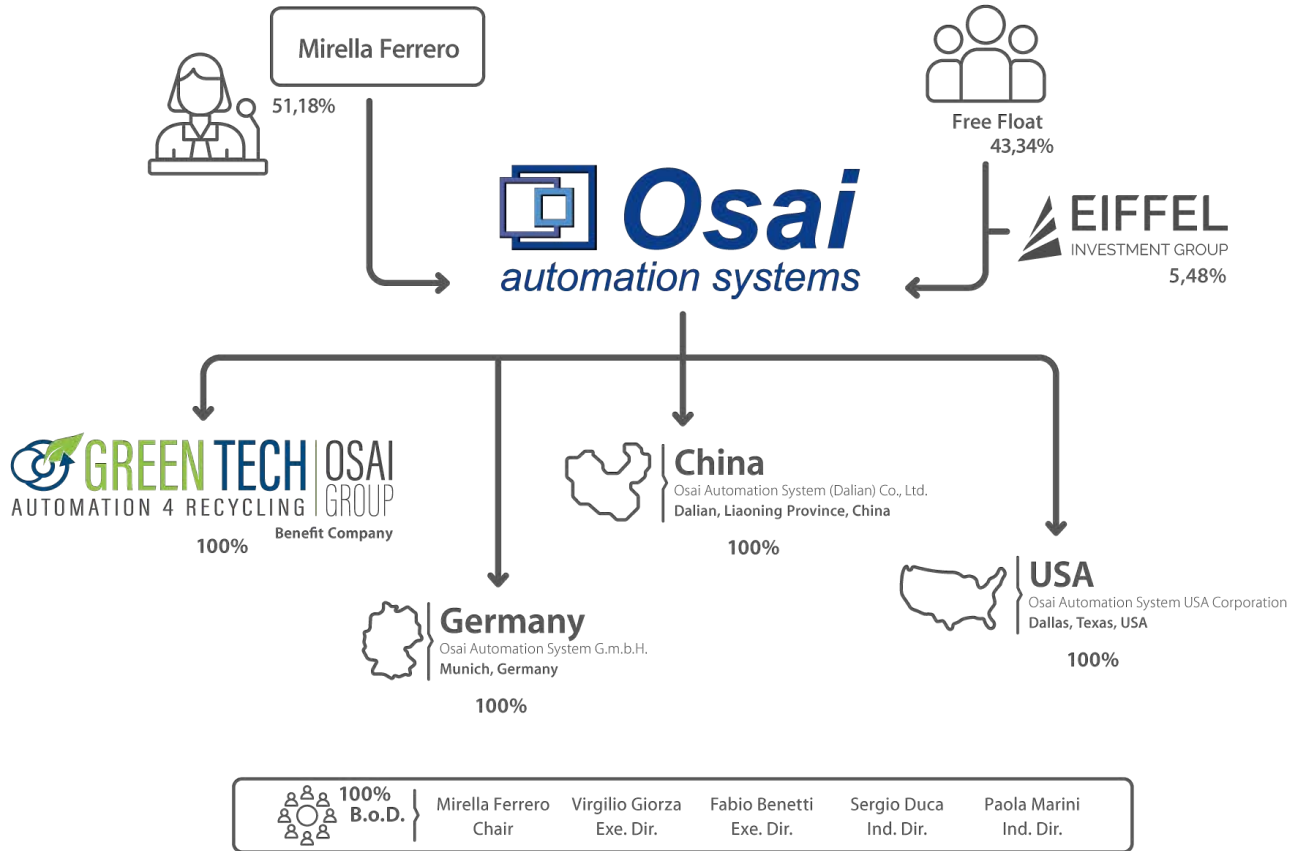
**2011 - date:** CTO (Chief Technology Officer) - Technical & Sales Manager Semiconductor & Laser Technologies Division

**2001 - 2011:** Osai A.S. Laser Division Manager

**1999 - 2000:** Osai A.S. – Software Analyst

**1992 - 1998:** RTM – design and production of laser machines

**28+ years of experience**





**1991**

Osai A.S., company operating in **sector Of industrial automation**, Was founded by **Carlo Ferrero**.



**2015**

Participation in the **ADIR project** for the recovery of precious metals in **collaboration with Fraunhofer Institute**.



**2019**

The **RE4M** project is born, an innovative system for the **extraction and sorting of electronic components** for the recovery of critical and precious metals.



**2022**

**Osai Green Tech SB S.r.l.** is established with the aim of actively contributing to the spread of **automation in the recycling world**, bringing efficiency, speed and sustainability.



**2023**

The expected date of **delivery of the first RE4M plant**. Osai GreenTech family's expanding its products in battery, HD and photovoltaic market sector.



**rofin**



**1991**  
Osai founded by Carlo Ferrero, in the industrial automation sector

**1994**  
Introduction of **laser technology** and subsequent collaboration with a world leader in the field of laser sources



**Nov 2009**  
Establishment of the **German subsidiary** in Munich



**2015**  
Start of the **ADIR** project for the recovery of precious metals - **circular economy**, in collaboration with the Fraunhofer Institute

**Oct 2015**  
Upon the untimely death of the founder, his sister **Mirella** takes over the company, relying on the commitment and motivation of management



**2018**  
First burn-in system delivered  
  
Osai enters the Borsa Italiana Elite programme



**2019**  
Formation of several partnerships in the Far East and in the Americas



**2021**  
Osai takes part to the "Ecomondo" fair, a major event in Europe for Ecological transition and new model of circular and regenerative Economy



**1992**  
Acquisition of the first order for a **copier roller assembly machine**

**2001**  
Creation of the **Neo** platform and realisation of standard machine projects for the electronics sector



**2011**  
Delivery of the first machine for the **semiconductor** sector and establishment of the Chinese branch in **Dalian**



**2015**  
Establishment of the American branch in Dallas to provide technical assistance for the North American market



**Dec 2016**  
The company lists its first **Minibond** on the Borsa Italiana ExtraMot PRO



**2019**  
**OPEN INNOVATIVE PMI 2019** award, conferred by Grant Thornton in collaboration with CNEL

**2020**  
Continuity and development of activity maintained, despite the pandemic shock  
  
Listing on EGM Italia



**2022**  
In October, Osai established, Osai Green Tech SB S.r.l., its first Benefit Company and construction work started on the new Samone plant.







### AUTOMATION

Automatic assembly lines and systems for small and medium-sized components with high strategic value, made as per specific customer needs through the development of ad hoc solutions.



### ELECTRONICS

A wide catalogue of solutions that allow operations on electronic boards through laser marking processes, laser or mechanical depaneling and micro-assembly systems for electronic components.



### APPLIED LASER

With more than 500 solutions sold all over the world for industrial applications such as laser cutting, welding, and marking for plastic and metal components, these systems provide solutions in various markets, such as fashion, jewellery, and, with particular focus, medical.












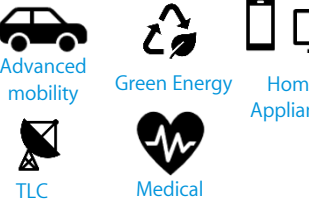
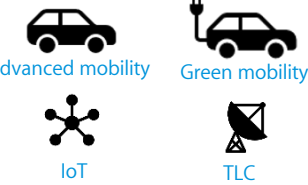

### SEMICONDUCTOR

















The semiconductor business is Osai's main business line, following its entry into the sector in 2011. The systems are used in semiconductor testing, assembly and automation processes, and are destined for global markets, notably the USA, China and South East Asia.



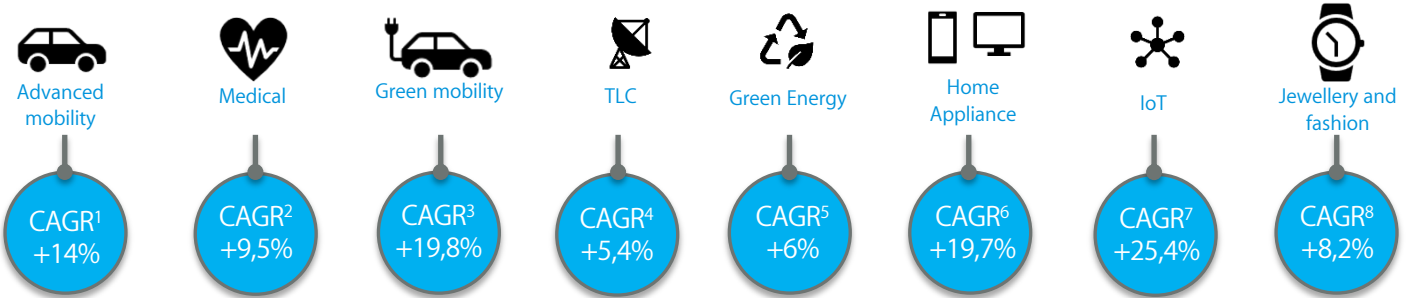
### AFTER SALES

Service has been a new line of business for Osai since 2019. Its main activities are technical assistance and consultancy for maintenance, upgrade and repowering, and the supply of spare parts.

Divisions	AUTOMATION	ELECTRONICS	SEMICONDUCTOR	INDUSTRIAL LASER
<p>Standard and customised products</p>	 <p>Workstations      Rotary tables</p>  <p>Complete assembly lines</p>	 <p>PCB Laser marking      Assembly Systems</p>  <p>Laser depaneling      Router depaneling</p>	 <p>Test handlers for MEMS sensors      Burn-in test Automation</p>  <p>Power device packaging      Tests handlers for power modules</p>	 <p>General Purpose Laser marking      Laser welding</p>  <p>Laser cutting</p>
<p>Target Clients</p>	<p>Manufacturers of high-tech components, principally for the mobility sector</p>	<p>Manufacturers of electronic boards and integrated circuits (standalone) or integrated (proprietary solutions)</p>	<p>Semiconductor companies</p>	<p>Manufacturers of mechanical micro-machining with a need for high levels of precision, also for small components</p>
<p>Principal market sectors</p>	 <p>Advanced mobility      Medical      Green mobility</p>	 <p>Advanced mobility      Green Energy      Home Appliance</p> <p>TLC      Medical</p>	 <p>Advanced mobility      Green mobility</p> <p>IoT      TLC</p>	 <p>Medical      Jewellery and fashion</p>

Divisions	AUTOMATION	ELECTRONICS	SEMICONDUCTOR	INDUSTRIAL LASER
Order range	500K – 4M	70K – 300K	500K – 1.2M	200K – 700K
Delivery time	6 – 18 months	3 – 9 months	3 – 12 months	3 – 9 months
Competitors	   	   	   	   

%CAGR  
2021-2028  
For main  
market sectors



1. **Data Bridge Market Research:** <https://www.databridgemarketresearch.com/reports/global-shared-mobility-market>  
 2. **Data Bridge Market Research:** <https://www.databridgemarketresearch.com/reports/global-medical-automation-market>  
 3. **PR Newswire:** <https://www.prnewswire.com/news-releases/global-electric-vehicle-market-anticipated-to-hit-812-888-1-million-growing-at-19-8-cagr-from-2021-to-2028-exclusive-report-243-pages-by-research-dive-301362602.html>  
 4. **Business Wire:** <https://www.businesswire.com/news/home/20210914005664/en/Global-Telecom-Services-Market-Analysis-Report-2021-2028-Focus-on-Mobile-Data-Services-Machine-To-Machine-Services-ResearchAndMarkets.com>  
 5. **Market Watch:** <https://www.marketwatch.com/press-release/renewable-energy-market-trends-and-forecast-2028-2021-07-29?siteid=bigcharts&dist=bigcharts&tesla=y>  
 6. **Report Linker:** <https://www.reportlinker.com/p06127590/Global-Smart-Appliances-Market-Analysis-Trends-Industry-Forecast-to.html>  
 7. **Market Watch:** <https://www.marketwatch.com/press-release/internet-of-things-market-size-industry-share-total-revenue-growth-rate-by-key-players-forecast-till-2028-2021-09-21>  
 8. **Grand View Research:** <https://www.grandviewresearch.com/press-release/global-jewelry-market>

-  HIGH-TECH ITALIAN PRODUCTION
-  STRONG PRESENCE INSIDE LOCAL AREA
-  FOCUS ON STAFF'S WELLBEING AND WELFARE
-  HIGH INTERNATIONAL EXPORT LEVEL

-  TAYLOR MADE SOLUTIONS WITH TURNKEY PROJECTS
-  LEADERSHIP IN MANUFACTURING MEMS TESTING MACHINES
-  AMONG THE FIRST INNOVATIVE SMEs TO DRAW UP THE 2<sup>nd</sup> SUSTAINABILITY REPORT REVIEWED BY BDO
-  LEGALITY RATING ★★★



## Overview FY22

## Comments about the year

- The Highest Value of Production for The Best Ever Performance archived over the years (+30% vs FY21);
- Extraordinary Order Intake collected in strategic markets related to innovative e-technologies and medical sectors (+20% vs FY21);
- EBITDA margin negatively influenced by the increase of components' costs in behalf of production and delivery time deadlines, to satisfy customers expectations (-7,4% vs FY21);
- Structural Increase of working capital to support growth and longer delivery times (6 mln Euro) and Investments on Production Areas (2,3 mln Euro) weigh on Net Financial Position (20,4 mln Euro);
- New products and alternative Tecnological Solutions to overcome components' shortage caused by the ongoing conflict;
- Containment of energy consumption being a self - electrical producer Company.





## Main Consolidated Results FY22

### Production value

of group as of 31 december 22

42.51 mln Euro

32.61 mln Euro at FY21

### Revenues

of group as of 31 december 22

31.65 mln Euro

38.83 mln Euro at FY21

### EBITDA / EBITDA%

of group as of 31 december 22

3.92 mln Euro / 9,22%

4.24 mln Euro / 12,99% at FY21

### EBIT

of group as of 31 december 22

1.82 mln Euro

1.32 mln Euro at FY21

### Net result

of group as of 31 december 22

0.95 mln Euro

0.91 mln Euro at FY21

### PFN

of group as of 31 december 22

(20.4) mln Euro

(11.06) mln Euro as at 31.12.21

# Consolidated Income Statement

	(Euro/000)	December 31, 2022	December 31, 2021	▲
<b>TOTAL SALES</b>		<b>31.646</b>	<b>38.827</b>	<b>(7.181)</b>
Change in finished goods and W.I.P. stock		7.793	(9.925)	17.718
Other operating revenues		3.070	3.711	(641)
<b>VALUE OF PRODUCTION</b>		<b>42.509</b>	<b>32.613</b>	<b>9.896</b>
Product cost (raw materials and outsourcing)		(18.057)	(11.587)	(6.470)
<b>GROSS MARGIN</b>		<b>24.452</b>	<b>21.026</b>	<b>3.426</b>
Personnel expenses		(14.482)	(12.671)	(1.811)
Other operating costs		(6.049)	(4.119)	(1.930)
<b>EBITDA</b>		<b>3.921</b>	<b>4.236</b>	<b>(315)</b>
Writedowns, depreciation and amortisation		(2.103)	(2.671)	568
<b>OPERATING INCOME OF ORDINARY OPERATIONS</b>		<b>1.818</b>	<b>1.565</b>	<b>253</b>
Non-recurring expenses/(charges)		-	(250)	(250)
<b>EBIT</b>		<b>1.818</b>	<b>1.315</b>	<b>503</b>
Financial Income/(Expenses)		(769)	(749)	(20)
<b>EBT</b>		<b>1.049</b>	<b>566</b>	<b>483</b>
Income taxes		(97)	340	(437)
<b>Net profit/(loss) for the period</b>		<b>952</b>	<b>906</b>	<b>46</b>
<b>EBITDA MARGIN</b>		<b>9,22%</b>	<b>12,99%</b>	<b>-3,18%</b>

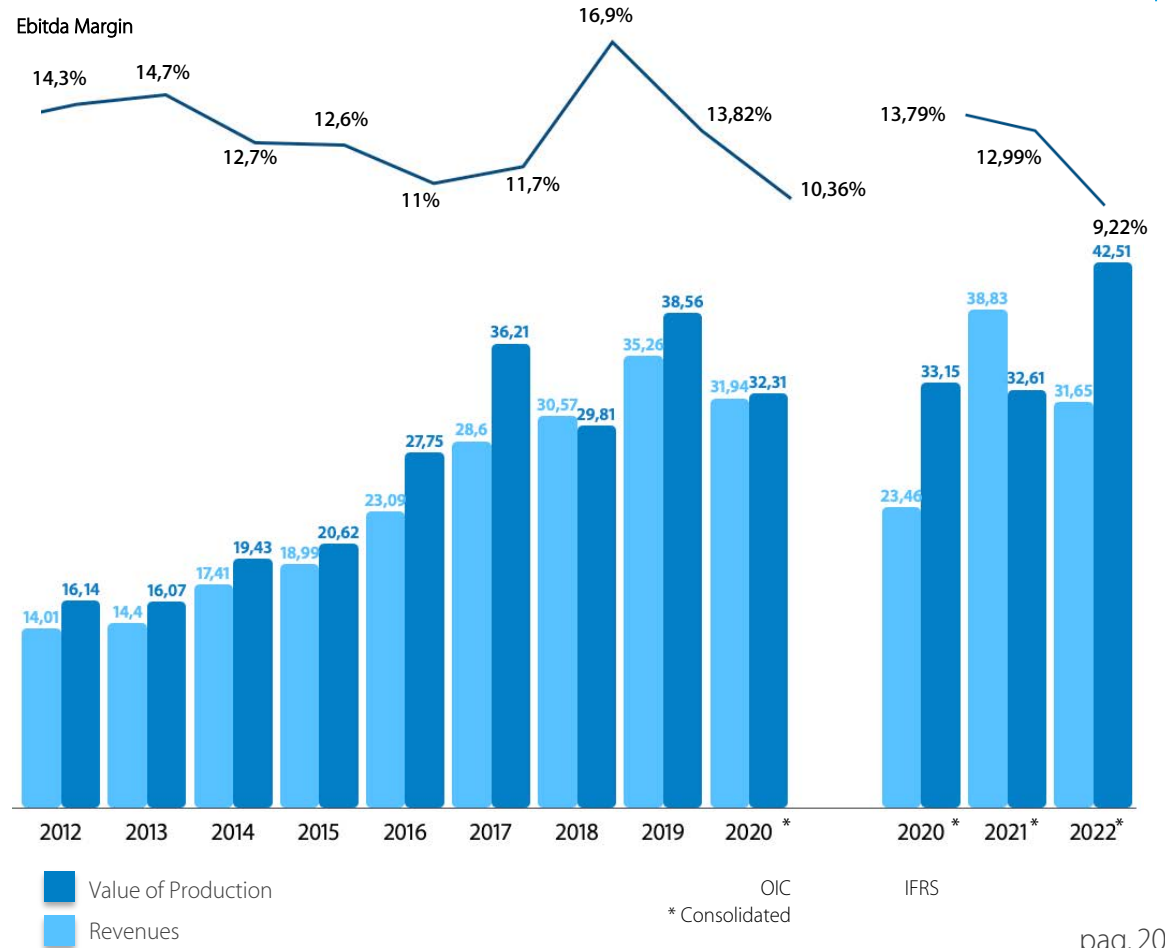
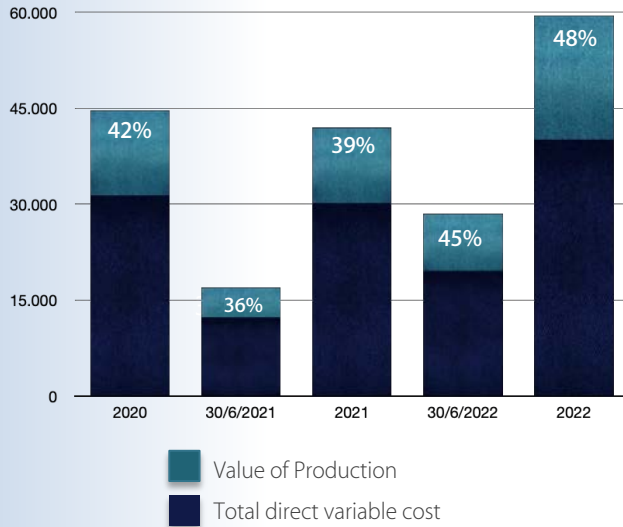
## ASSETS

(Euro/1000)	December 31, 2022	December 31, 2021	Δ
<b>ASSETS</b>			
<b>NON-CURRENT ASSETS</b>			
Property, plant and equipment	14.411	11.622	2.789
Intangible Assets	5.304	3.384	1.920
Shareholdings	226	126	100
Non current financial assets	629	48	581
Other non-current receivables	679	516	163
Deffered tax assets	571	829	(258)
<b>TOTAL NON-CURRENT ASSETS</b>	<b>21.820</b>	<b>16.525</b>	<b>5.295</b>
<b>CURRENT ASSETS</b>			
Inventory	31.172	22.459	8.713
Trade receivables	9.402	11.566	(2.164)
Current tax receivables	1.312	801	511
Other short-term receivables	1.382	723	659
Current financial assets	1.579	1.424	155
Cash and cash equivalents	9.865	9.179	686
<b>TOTAL CURRENT ASSETS</b>	<b>54.712</b>	<b>46.512</b>	<b>8.560</b>
<b>TOTAL ASSETS</b>	<b>76.532</b>	<b>62.677</b>	<b>13.855</b>

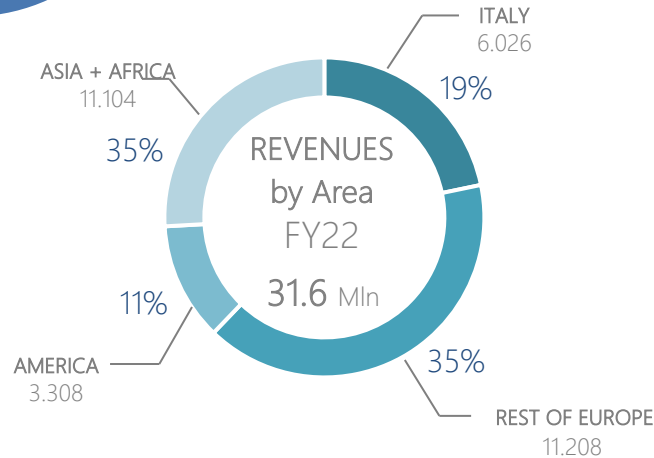
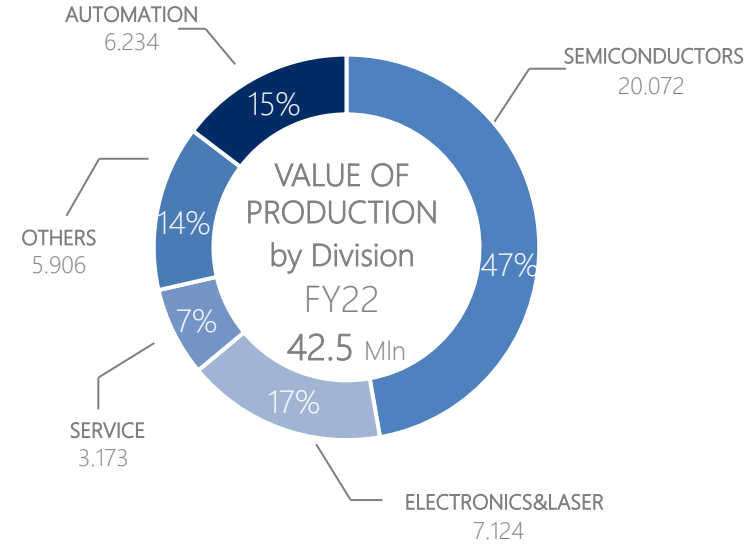
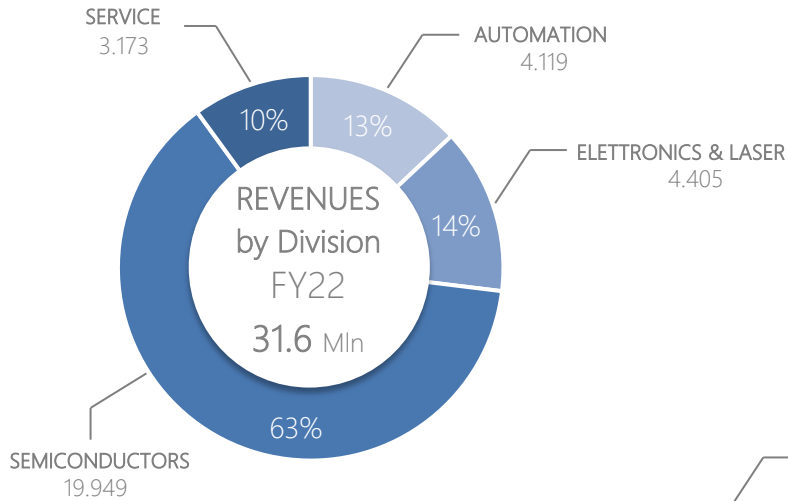
## LIABILITIES

(Euro/1000)	December 31, 2022	December 31, 2021	Δ
<b>SHAREHOLDERS EQUITY</b>			
Share capital	1.613	1.599	14
Share premium reserve	8.677	8.428	249
Legal reserve	257	213	44
Reserve for unrealised foreign currency exchange gains	-	-	-
Cash Flow Hedge reserve	-	-	-
FTA reserve	(1.683)	(1.683)	-
Other components of shareholder's equity	223	(159)	382
Conversion reserve	1	(4)	5
Retained earnings/(loss) carried forward	7.488	6.626	862
Profit/(loss) for the period	952	906	46
<b>TOTAL SHAREHOLDERS EQUITY</b>	<b>17.528</b>	<b>15.926</b>	<b>1.602</b>
<i>Shareholders' Equity of parent company shareholders</i>	17.528	15.926	1.602
<i>Shareholders' Equity of non-controlling interests</i>	-	-	-
<b>NON CURRENT LIABILITIES</b>			
Long-term borrowings	15.015	11.239	3.776
Employee benefits	3.212	3.479	(267)
Other non-current payables	221	-	221
Deffered tax liabilities	2	17	(15)
Other non-current financial liabilities	4.932	-	4.932
Payables non current under IFRS16	3.645	2.847	798
<b>TOTAL NON-CURRENT LIABILITIES</b>	<b>27.027</b>	<b>17.582</b>	<b>9.445</b>
<b>CURRENT LIABILITIES</b>			
Short-term borrowings	8.155	6.572	1.583
Other current financial liabilities	(24)	358	(382)
Trade payables	8.697	6.158	2.539
Current taxes payable	387	377	10
Other current payables	13.536	14.585	(1.049)
Provision for risks and charges	472	422	50
Payables current under IFRS16	754	697	57
<b>TOTAL CURRENT LIABILITIES</b>	<b>31.977</b>	<b>29.169</b>	<b>2.808</b>
<b>TOTAL LIABILITIES</b>	<b>76.532</b>	<b>62.677</b>	<b>13.855</b>

## Business Overview: Turnover and Value of Production



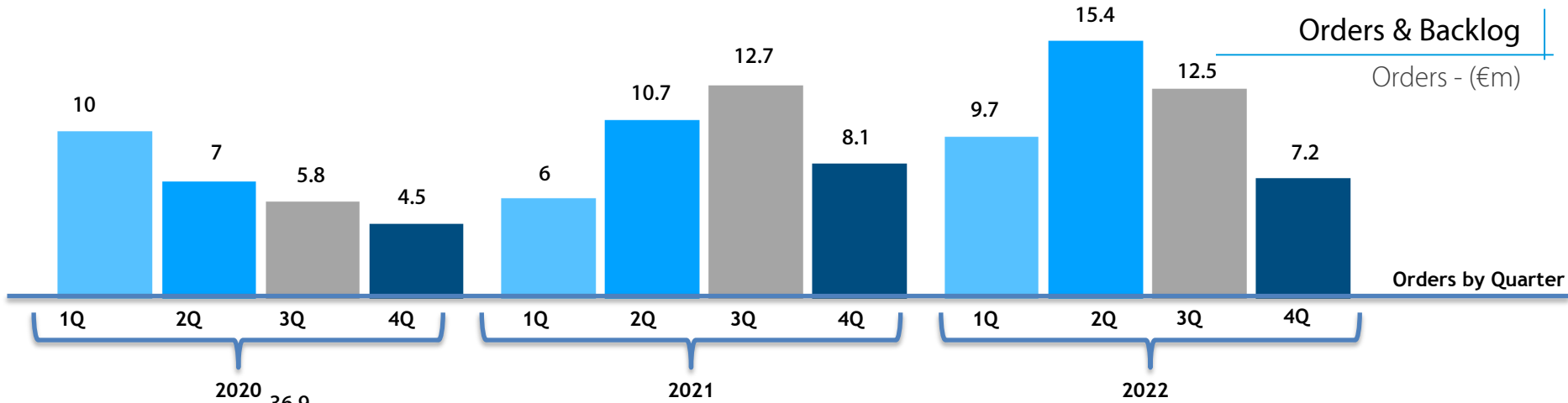
## Key Figures by Division 31/12/22



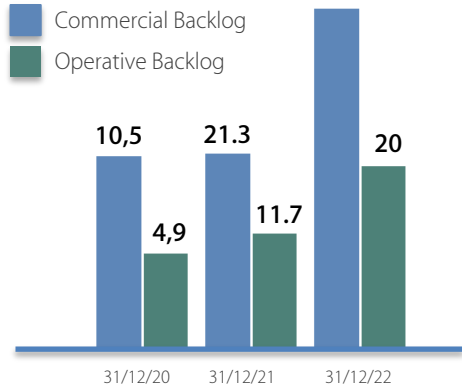
export  
**81%**

# Orders & Backlog

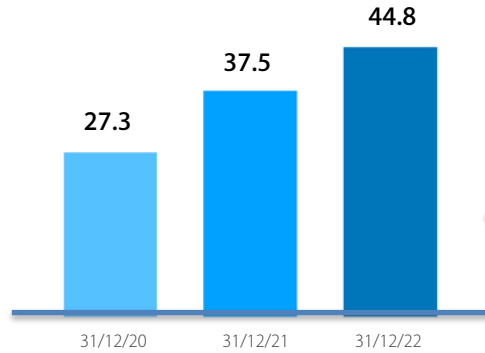
Orders - (€m)



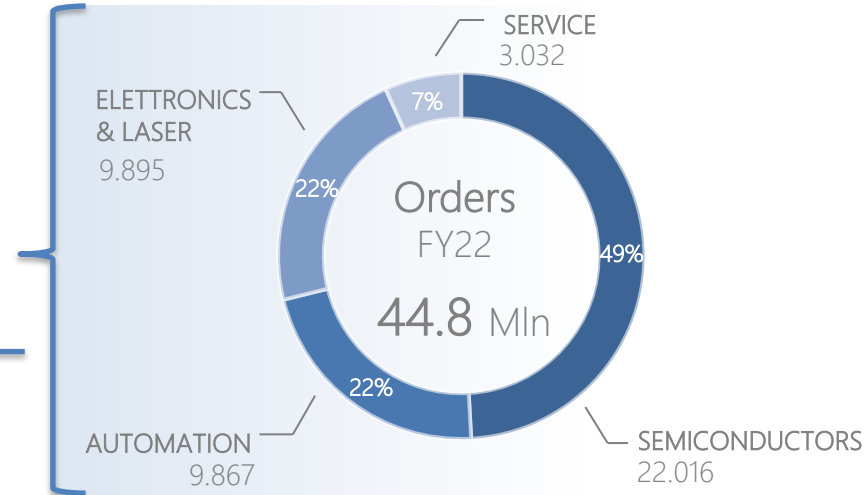
Orders by Quarter







BackLog

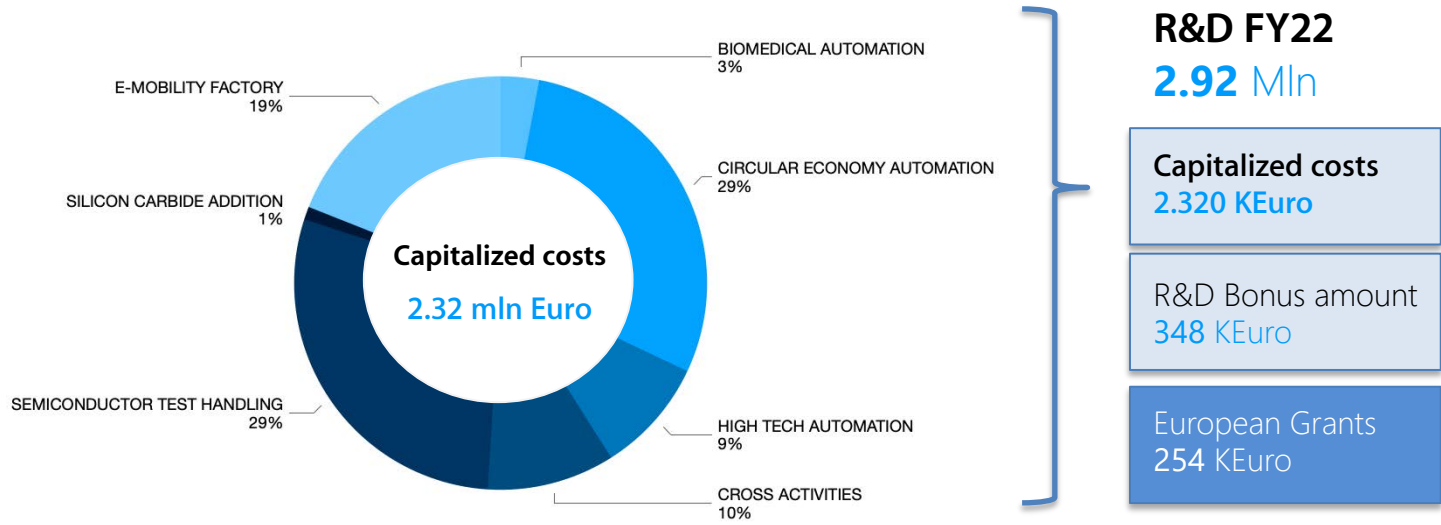


Orders



## Operative Profit & Loss by Division 31/12/2022

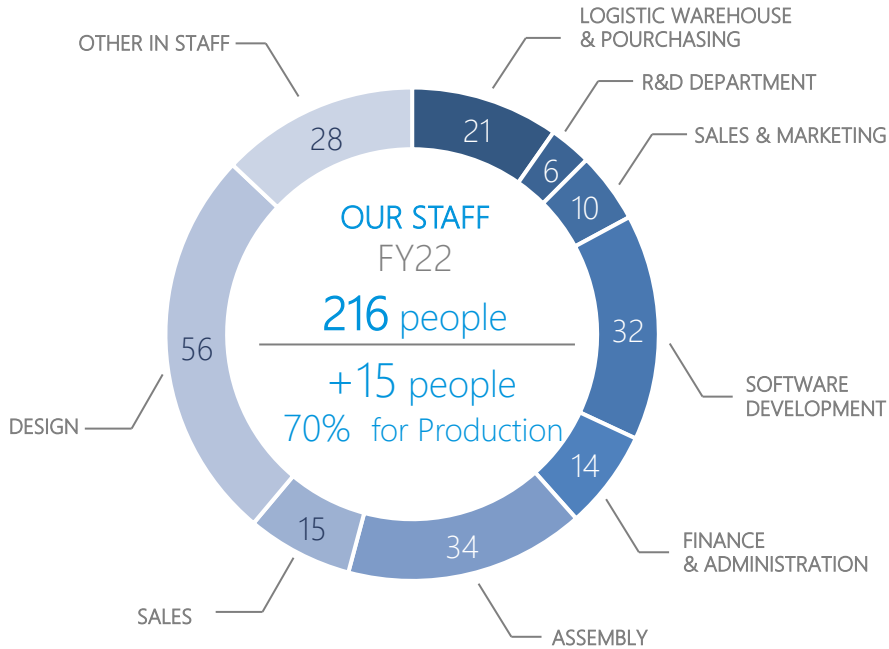
		Total Sales (Euro/000)	Operative Value of Production <sup>(1)</sup> (Euro/000)	MOL 3 <sup>rd</sup> Level (Euro/000)	MOL 3 <sup>rd</sup> Margin %
	AUTOMATION	4.119	6.234	1.260	20
	ELECTRONICS e LASER	4.405	7.124	2.243	31
	SEMICONDUCTORS	19.949	20.072	5.773	29
	SERVICE	3.173	3.173	589	19
	OTHERS	-	3.585	(8.265)	-
<b>TOTAL</b>		<b>31.646</b>	<b>40.189</b>	<b>1.601</b>	<b>4</b>



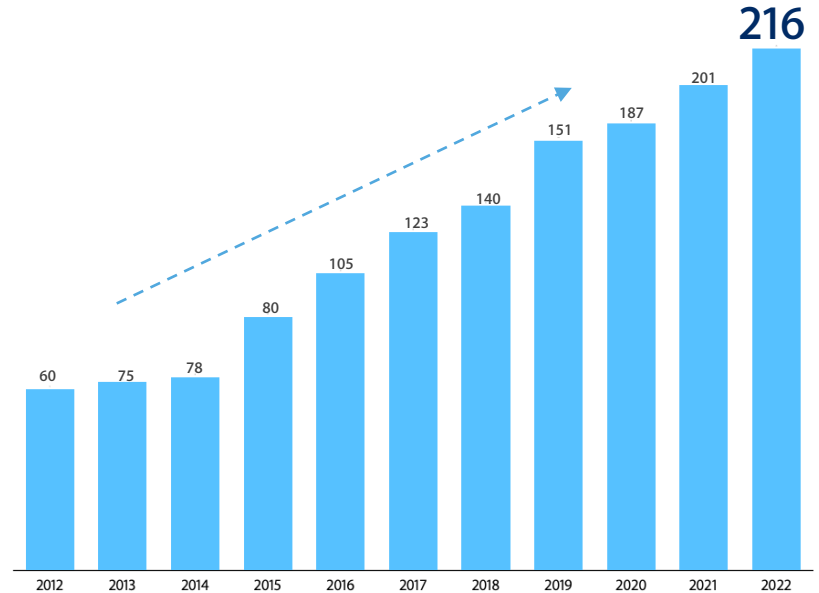
- Semiconductor Test Handling** [SEMICONDUCTORS](#) - New processes or applications for MEMS stimulation and test systems for the semiconductor market
- Silicon Carbide Addition** [SEMICONDUCTORS](#) - Automating and making reliable the surface enrichment process on large wafers
- E-Mobility Factory** [AUTOMATION, LASER, SEMICONDUCTORS](#) - Design and prototyping of demonstration systems suited to the needs of 'gigafactories' for e-Mobility applications
- Biomedical Automation** [AUTOMATION, APPLIED LASER](#) - Conception, design and implementation of automation system solutions for medical applications
- Circular Economy Automation** [AUTOMATION](#) - Conception, design and realisation of solutions for automation systems for applications in the recycling and circular economy sector
- High Tech Automation** [AUTOMATION, LASER, ELECTRONICS](#) - Design and prototyping of demonstration systems suited to the needs of 'gigafactories' for e-Mobility applications
- Cross Activities** [ALL DIVISIONS](#) - Conception, design and implementation of automation system solutions with cross-divisional application; Transversal activities across different project clusters with spin-offs in different divisions



# FY22 People in STAFF



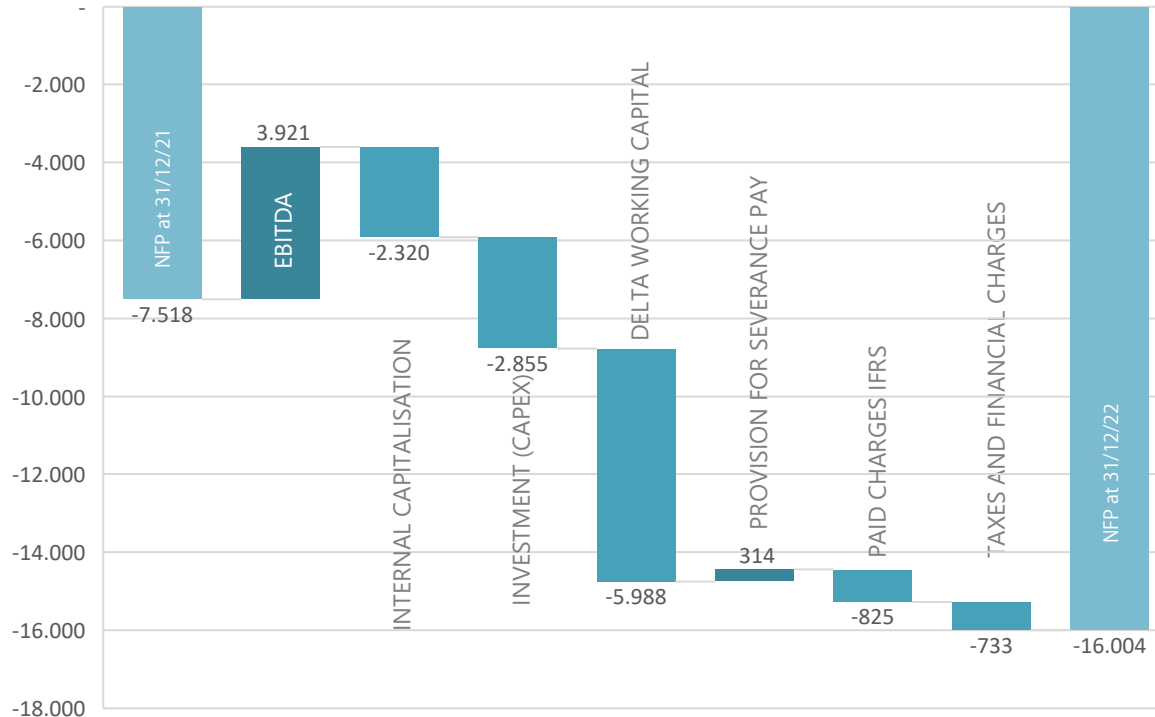
The Group has heavily invested in human resources in the last decade



# Operative NFP – without IFRS 16

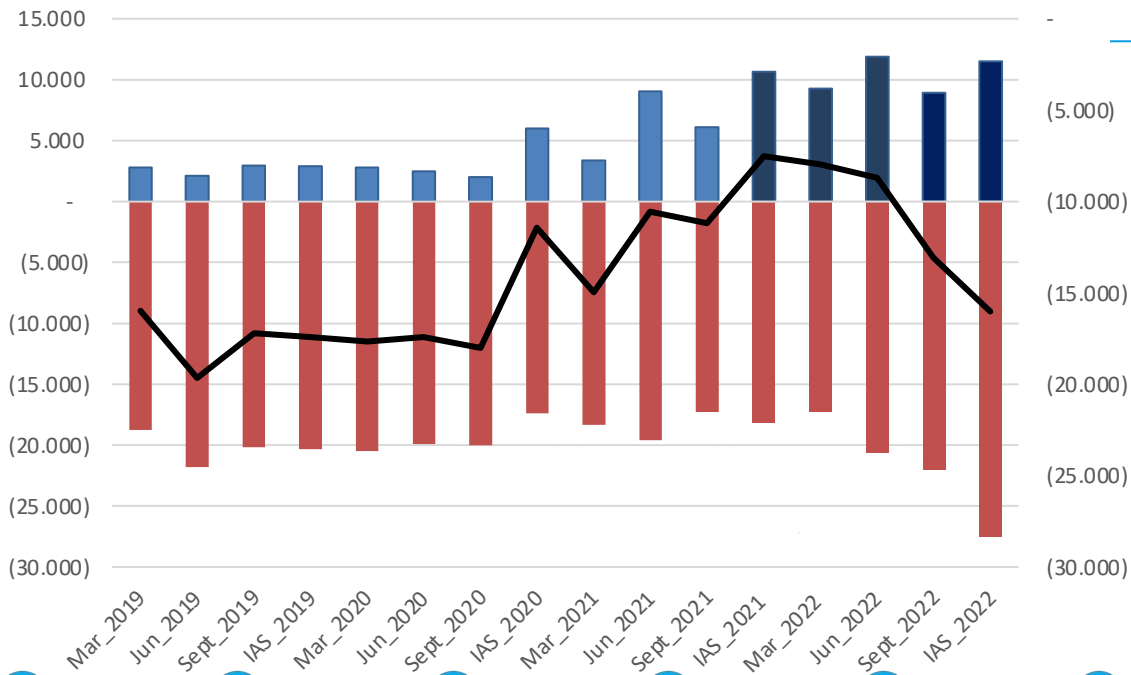
## Net Financial Position

(€m)

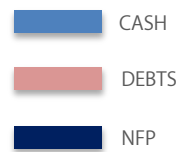


NFP	euro
NFP at 31/12/2021	- 7.518
EBITDA	3.921
Internal capitalisations	- 2.320
Investment (CAPEX)	- 2.855
Delta Working Capital	- 5.988
Provision for severance pay	314
Paid charges IFRS	- 825
Taxes and financial charges	- 733
NFP at 31/12/22	- 16.004

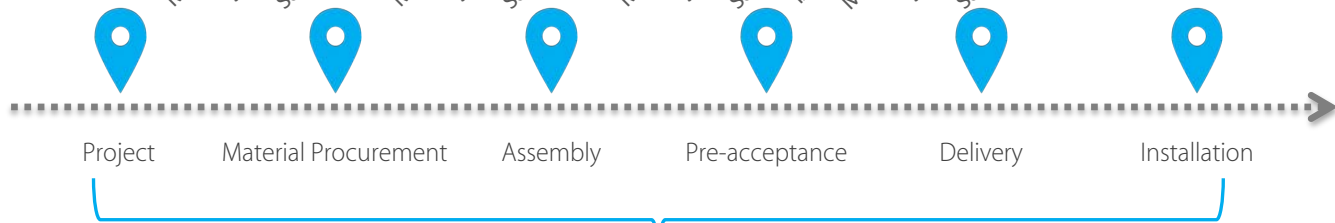
# NFP (€m)



## Activities Description

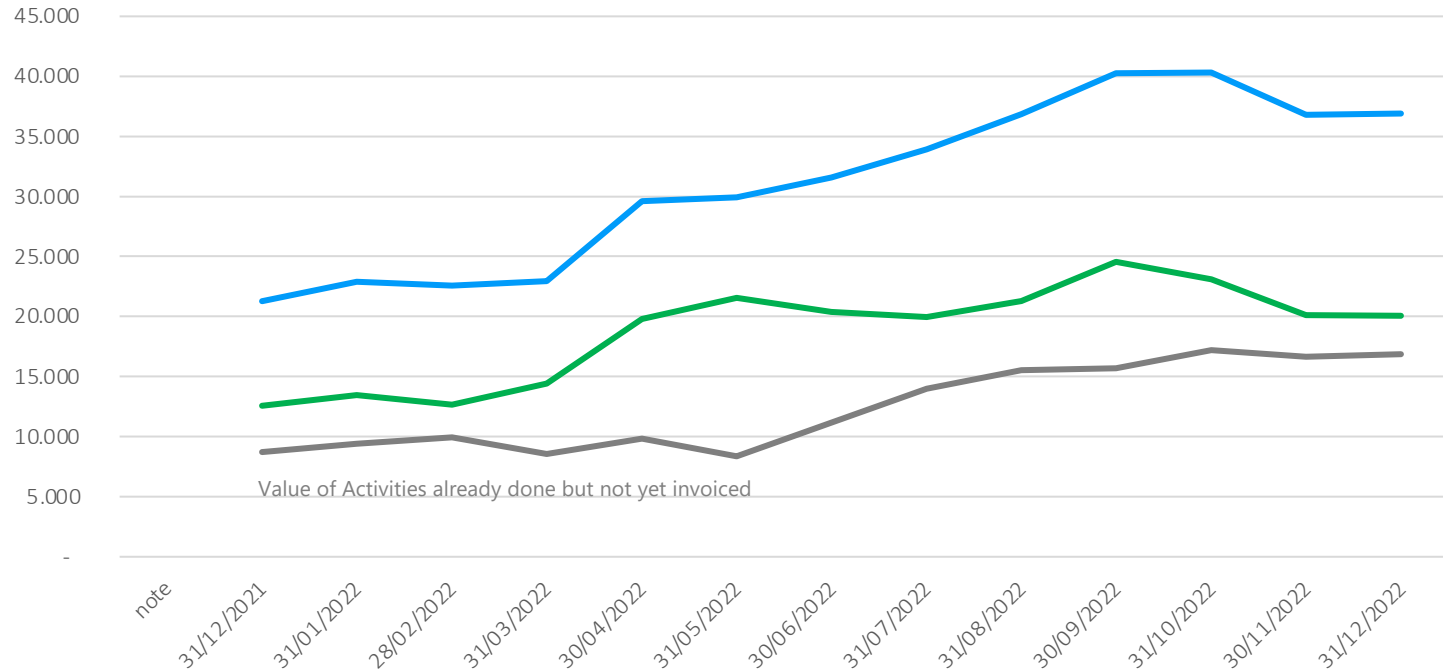


Order



Payment

# Operative and Commercial Backlog (€m)



Commercial Backlog Invoices to issue on Orders


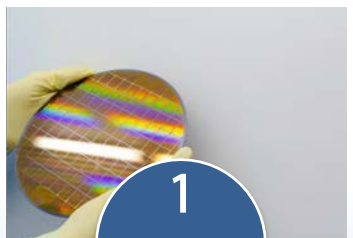

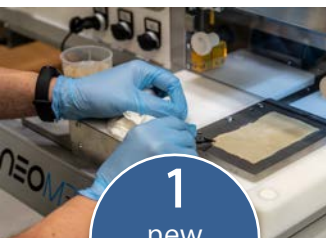
Operative Backlog Value of production to be realized on Orders



## Osai Next Products

# Osai doesn't stop!

growth focused on 5 trading areas and 6 new products in 2022-2023

<p><b>Semiconductor Test Handling</b></p> <p>Development of new systems for «<b>burn-in automation</b>» applications, solutions capable of automating processes aimed at automotive chip testing. Developed the <b>smallest conditioning chambers in the world</b> for MEMS R&amp;D fine tuning</p>	<p><b>Silicon Carbide Addition</b></p> <p>Precision, accuracy and management of high volumes in a single revolutionary machine (additional new models in next months), in order to develop the technology for assembling 'silicon carbide' crystals in an innovative and fully automatic way</p>	<p><b>E-mobility Factory</b></p> <p>Conception, design and prototyping of high-tech solutions for assembly, laser welding and testing of <b>battery packs</b>.</p>	<p><b>Biomedical &amp; Life Science Automation</b></p> <p>Conception, design and implementation of automation system solutions for <b>medical &amp; Life Science applications</b>.</p>
			
<p>2 new Products 2022</p>	<p>1 new Product 2023</p>	<p>1 new Product 2023</p>	<p>1 new Product 2023</p>

**Circular Economy Automation**

**RE4M project**, an innovative system for the **automated extraction and selection** of electronic components for the **recovery of critical and precious metals**.




1 New Product 2023



### PCB

OSAI's experience within the European ADIR project enabled the birth of the **RE4M - Recycling for Manufacturing** project, an innovative system for the automated extraction and sorting of electronic components for the recovery of critical and precious metals.



### HARD DISK

Innovative project designed to automate the process of **extracting, separating and sorting** valuable components from disused hard disks.



### BATTERY

We are witnessing the E-mobility explosion, with exponential growth of electric vehicles strongly linked to the production capacity of the **battery industry**. By 2030, demand is estimated to be 3,500 Gwh.



### PHOTOVOLTAIC

By 2050, it is estimated that there will be more than 78 million tonnes of old **photovoltaic panels** to deal with in terms of **recycling and recovery** of secondary raw materials.

# WEEE



**12**

Millions of tonnes  
in Europe

**800**

kg/day of **detached** and  
**ground** components



**2.000**

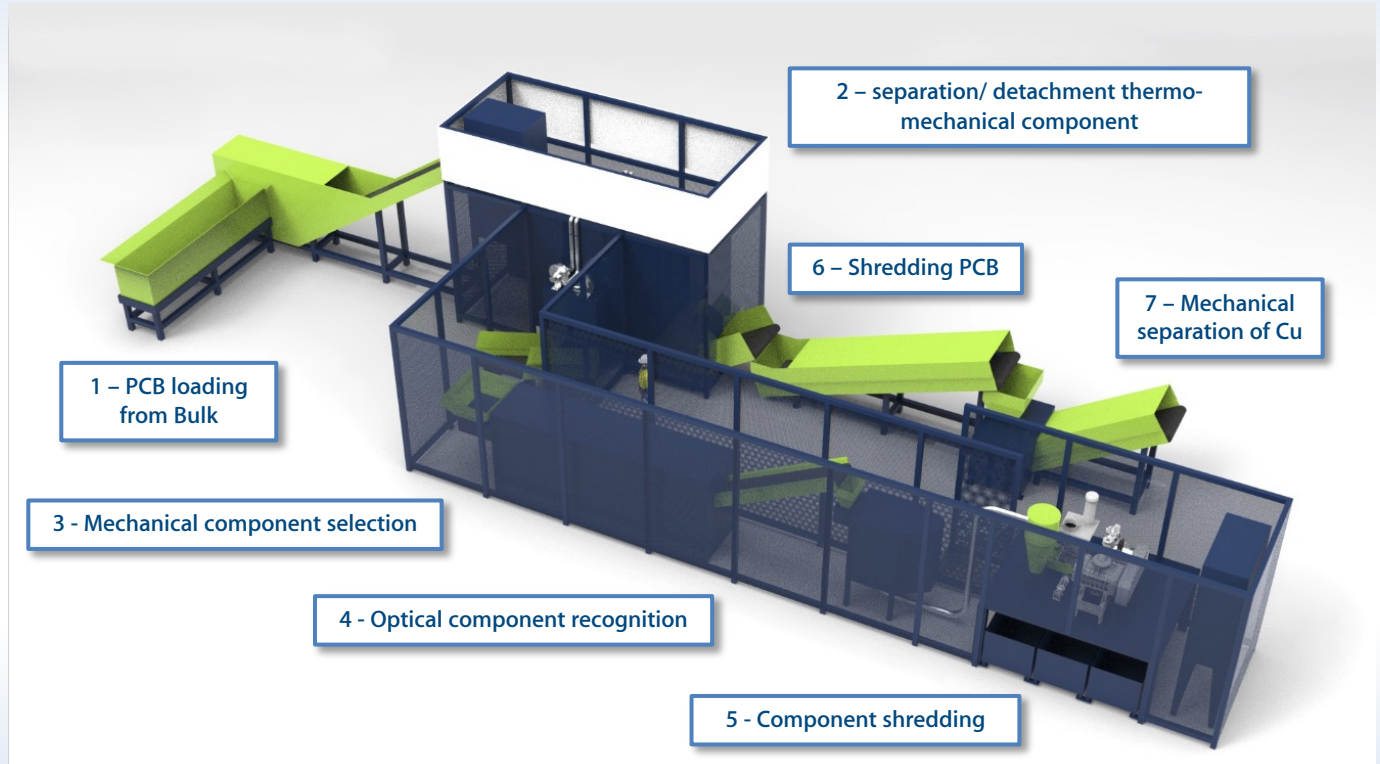
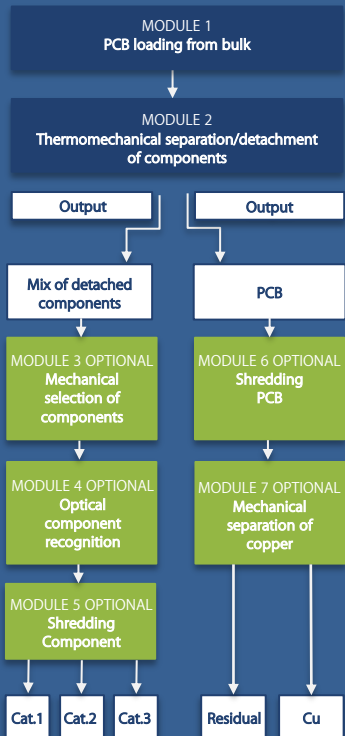
kg/day of **PCB**

**1.200**

kg/day of **boards without**  
**chopped components**

**High concentration**  
**of precious metals**  
(gold, silver, copper  
and palladium)





# Automation is a vehicle for...



# the new recycling era!

# Worldwide Exhibitions 2022





## HEADQUARTER

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