



Company Presentation 1H23

Osai A.S. S.p.A. SB

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Company Overview

MIRELLA FERRERO



EXECUTIVE CHAIR

1992 - date: Osai A.S. S.p.A. SB 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. S.p.A. SB HR Director, General Manager
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



EXECUTIVE BOARD MEMBER

Apr2023 - date: Osai A.S. S.p.A. SB Executive Board Member
2020 - 2023: Osai A.S.'s temporary CFO
2018 – 2020: 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

MARCO GUOLO



CTO - EXECUTIVE BOARD MEMBER

Apr2023 - date: Osai A.S. S.p.A. SB Executive Board Member
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

SERGIO DUCA



IND. BOARD MEMBER

Chartered Accountant, Auditor and Audit & Risk Management Committee member

DONATELLA BUSSO



IND. BOARD MEMBER

Professor of Financial Accounting (University of Torino – ESCP Business School), Chartered Accountant and Statutory Auditor

PAOLA MARINI



IND. BOARD MEMBER

Affiliate Professor of Raw Material Engineering (Politecnico Torino)

MARCO GADALETA



CFO

2023 - date: Osai A.S. S.p.A. SB - CFO – Chief Financial Officer

2016 - 2023: Silvateam Group - Group CFO

2000 - 2016: Gavio Group – Administration, Finance, HR Director

1998 - 2000: TNT France – Financial Controller

1992 - 1998: Deloitte & Touche – Auditor

STEFANO GIORZA



COO

2020 - date: Osai A.S. S.p.A. SB - COO - Chief Operations Officer

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

MARCO CARNIATO



CCO

2023 - date: Osai A.S. S.p.A. SB - CCO - Chief Commercial Officer

2021 - 2023: Arol S.p.A. – Key Account Manager

2016 - 2021: Gefit S.p.A. – Global Sales Manager

2014 - 2015: Gefit S.p.A. – Asia Pacific Sales Director

2010 - 2013: Gefit S.p.A. – Business Development Manager

2008 - 2010: Gefit S.p.A. – Sales&Marketing Technical Engineering

2006 - 2008: Ansaldo Energia S.p.A. – Plant&Start Up Engineering

SIMONE FERRARO



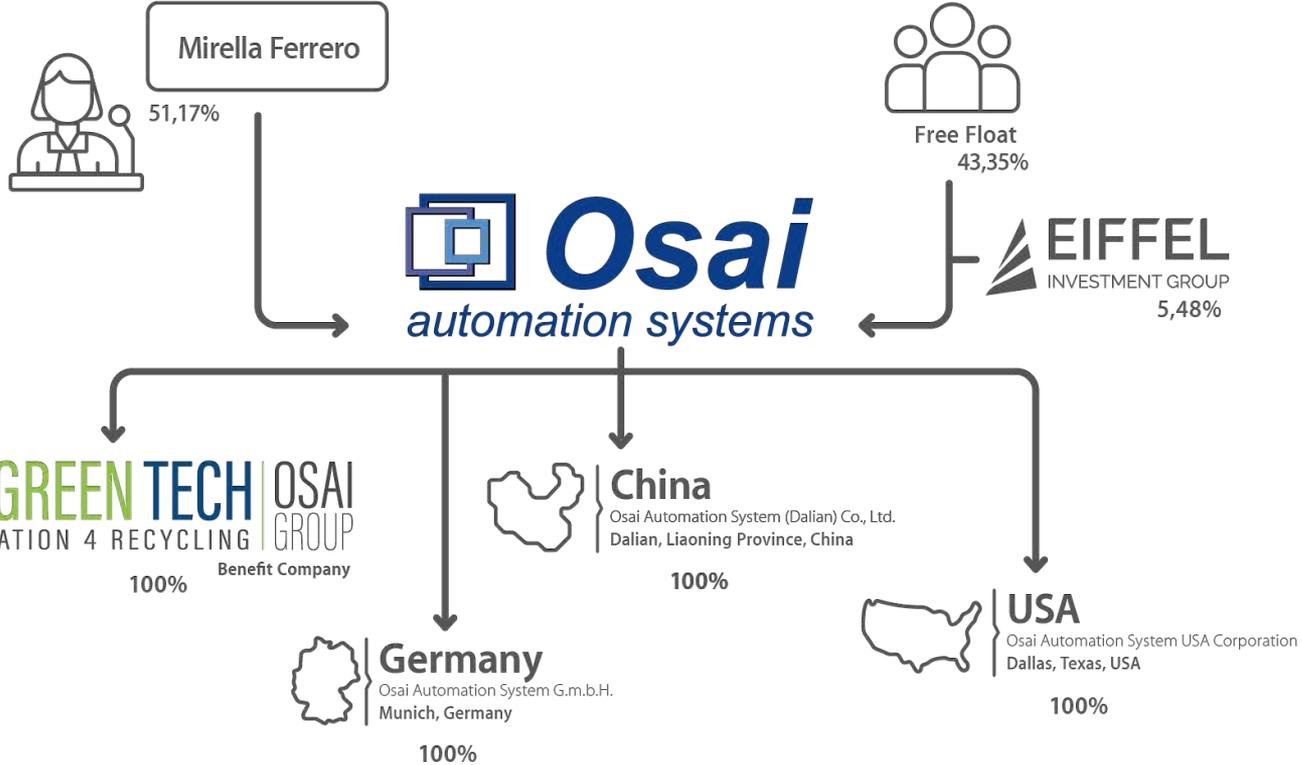
SALES MANAGER

2018 - date: Osai A.S. S.p.A. SB 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





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.





3 fully owned commercial branches
in strategic markets



A global presence, with the ability to respond quickly to clients.
More than 40 distributors all over the world in key markets,
with more than 50 local employees

Business Overview: Introduction



- HEADQUARTER
- OSAI SUBSIDIARIES
- DISTRIBUTORS
- SERVICE PROVIDER/
PARTNERS



The production plant is located in the municipality of Parella (close to Turin) and covers an area of more than **6.500 mq**, over three buildings.

The company has **more than 230 employees**, highly qualified in the following sectors:

- R&D
- Project management
- Sales engineering
- Supply chain



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.



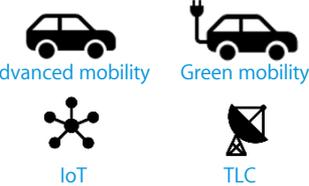
SEMICONDUCTOR

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.



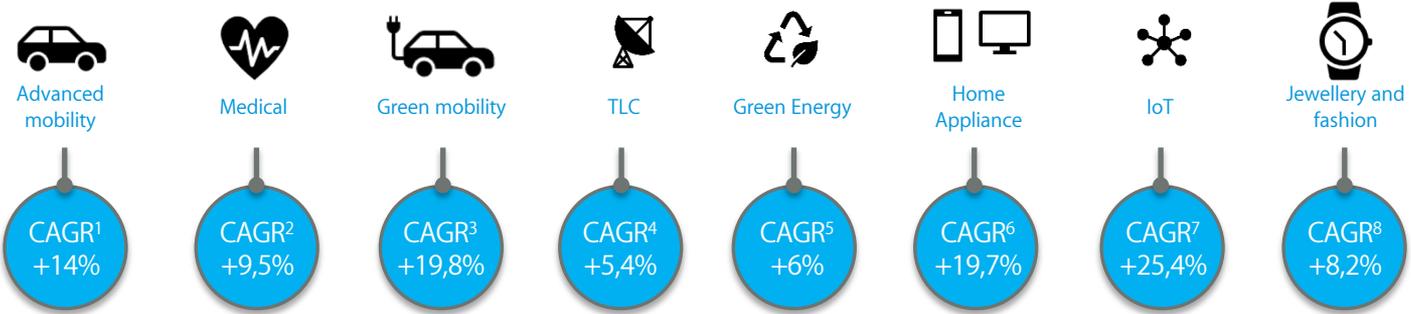
AFTER SALES

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>

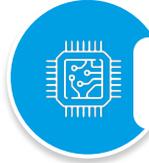
Divisions	AUTOMATION	ELECTRONICS	SEMICONDUCTOR	INDUSTRIAL LASER
Order range	500K - 4M	70K - 300K	500K - 1.2M	200K - 700K
Delivery time	6 - 18 months	3 - 12 months	8 - 12 months	8 - 12 months
Competitors	       	  	 	

**%CAGR
2021-2028
For main
market
sectors**

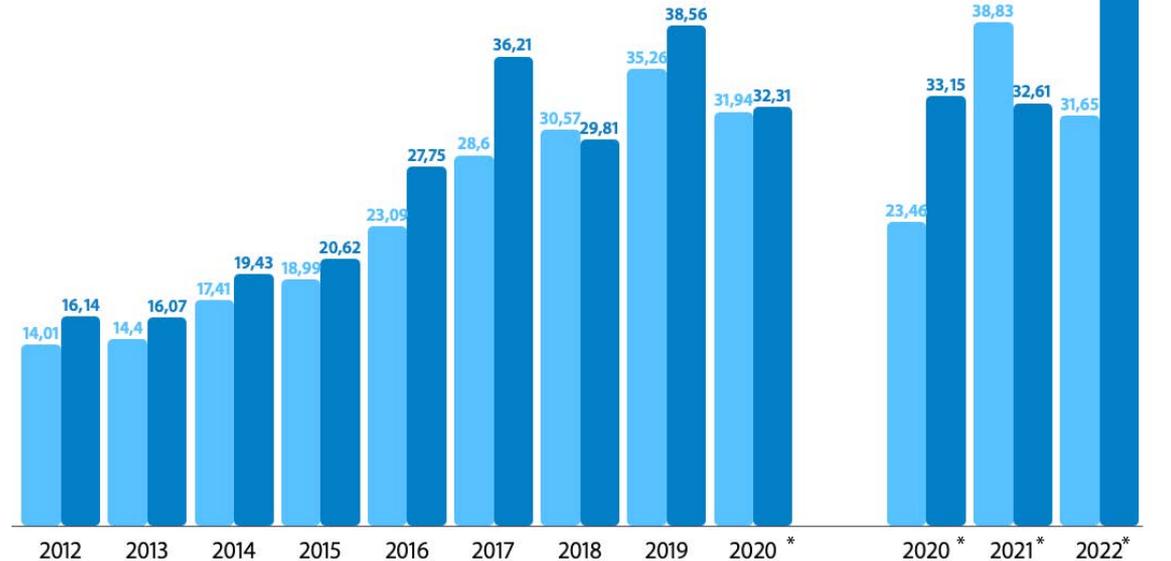
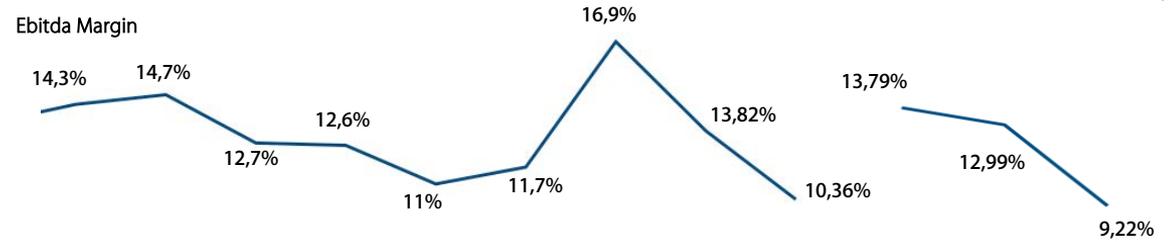
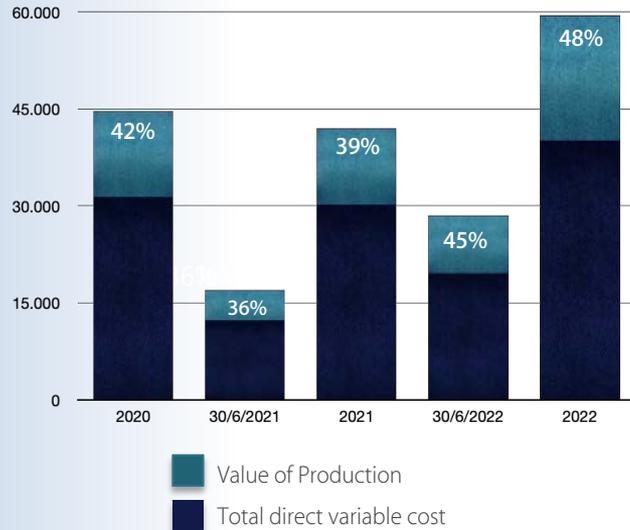


1. **Data Bridge Market Research:** <https://www.databridgemarketresearch.com/reports/global-shared-mobility-market>
 2. **Data Bridge Market Research:** <https://www.databridgemarketresearch.com/reports/global-medical-automation-market>
 3. **PR Newswire:** <https://www.prnewswire.com/news-releases/global-electric-vehicle-market-anticipatd-to-hi-812-888-1-million-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-til-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 3rd SUSTAINABILITY REPORT REVIEWED BY BDO
-  LEGALITY RATING ★★★

Business Overview: Turnover and Value of Production



Value of Production
Revenues

OIC
* Consolidated

IFRS



BOARD

Risk Control Committee

Strategic Planning Committee



RISK ANALYSIS



SUSTAINABILITY PLAN

Sustainability Working Group



DECARBONIZATION PLAN

- GHG emission reduction plan in progress
- Carbon footprint already in place



INVESTMENT ON FACILITIES

- 100% Renewable energy
- EV charging infrastructure
- Substitution of gas boiler with heat pumps



INVESTMENT ON MOBILITY

- Transition EV car fleet
- Carpooling



INVESTMENT ON PEOPLE

- Welfare
- Integrative health care plan
- Corporate conventions
- Smartworking

AWARD

Leader della Sostenibilità 2023
Il Sole 24 Ore





Overview 1H23

Comments about the first semester

- Positive Growth for the Production Value (+ 15% vs 1H22) and Stable Revenues (+1% vs 1H22);
- Slight decrease (-9% vs 1H22) of a still Great Order Intake (22,8 mln Euro), especially in the Automation Sector (+107% vs 1H22), with the long-awaited entry of the Circular Economy (5% of the total Order Intake);
- Setback for the EBITDA(- 45% vs 1H22), caused by the introduction of new innovative and not yet profitable products, not balanced by others solutions with higher marginality and also by persisting delay on materials' delivery and logistic's timetable.
- On the Net Financial Position (26,3 mln Euro) weight properties investments for the new plant and the building site's purchase of the historic paper mill (3,7 mln Euro) realized to support and enlarge the production.
- Extension of the new technologic products portfolio designed for the E- Mobility sector, the Silicon Carbide Technology and Circular Economy though Osai Green Tech S.r.l. Società Benefit.



Main Consolidated Results 1H23

Production value

of group as of 30 june 2023

23.6 mln Euro

20.59 mln Euro at 1H22

Revenues

of group as of 30 june 2023

16.8 mln Euro

16.6 mln Euro at 1H22

EBITDA / EBITDA%

of group as of 30 june 2023

0.99 mln Euro / 4.22%

1.83 mln Euro / 8,88% at 1H22

EBIT

of group as of 30 june 2023

(0.78) mln Euro

0.79 mln Euro at 1H22

Net result

of group as of 30 june 2023

(1.26) mln Euro

0.48 mln Euro at 1H22

NFP

of group as of 30 june 2023

(26.3) mln Euro

(20.4) mln Euro as at 31.12.22

Consolidated Income Statement

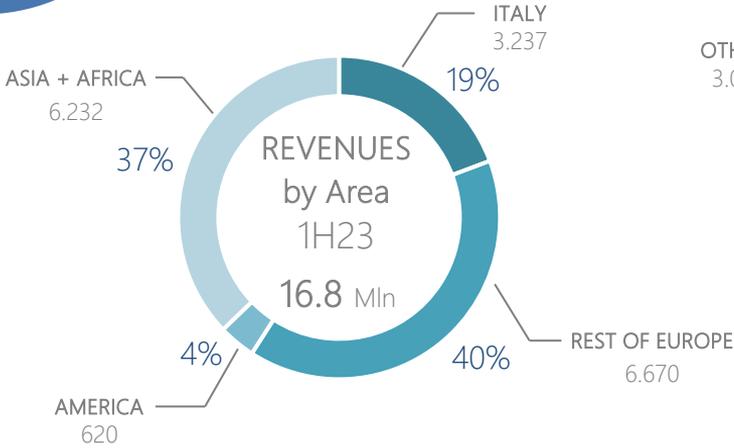
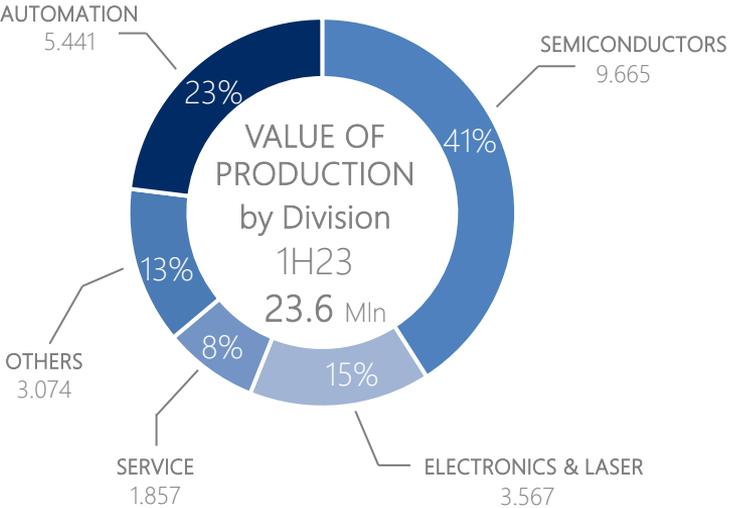
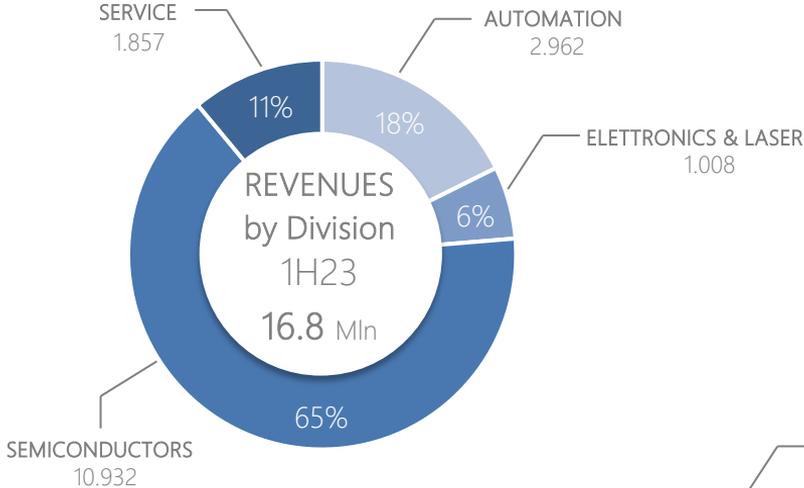
	(Euro/000)	June 30, 2023	June 30, 2022	▲
TOTAL SALES		16.759	16.601	158
Change in finished goods and W.I.P. stock		4.875	2.560	2.315
Other operating revenues		1.970	1.427	543
VALUE OF PRODUCTION		23.604	20.588	3.016
Product cost (raw materials and outsourcing)		(10.874)	(8.414)	(2.460)
GROSS MARGIN		12.730	12.174	556
Personnel expenses		(8.427)	(7.506)	(921)
Other operating costs		(3.306)	(2.839)	(467)
EBITDA		997	1.829	(832)
Writedowns, depreciation and amortisation		(1.332)	(1.041)	(291)
OPERATING INCOME OF ORDINARY OPERATIONS		(335)	788	(1.123)
Non-recurring expenses/(charges)		(445)	-	(445)
EBIT		(780)	788	(1.568)
Financial Income/(Expenses)		(851)	(257)	(594)
EBT		(1.631)	531	(2.162)
Income taxes		371	(47)	(418)
Net profit/(loss) for the period		(1.260)	484	(1.744)
EBITDA MARGIN		4,22%	8,88%	(4,66)

ASSETS

(Euro/1000)	June 30, 2023	December 31, 2022	Δ
ASSETS			
NON-CURRENT ASSETS			
Property, plant and equipment	15.607	14.411	1.196
Intangible Assets	6.258	5.304	954
Shareholdings	226	226	0
Non current financial assets	649	629	20
Other non-current receivables	465	679	(214)
Deffered tax assets	971	571	400
TOTAL NON-CURRENT ASSETS	24.176	21.820	2.356
CURRENT ASSETS			
Inventory	36.222	31.172	5.050
Trade receivables	10.597	9.402	1.195
Current tax receivables	746	1.312	(566)
Other short-term receivables	1.398	1.382	16
Current financial assets	1.648	1.579	69
Cash and cash equivalents	2.157	9.865	(7.708)
TOTAL CURRENT ASSETS	52.768	54.712	(1.944)
TOTAL ASSETS	76.944	76.532	412

LIABILITIES

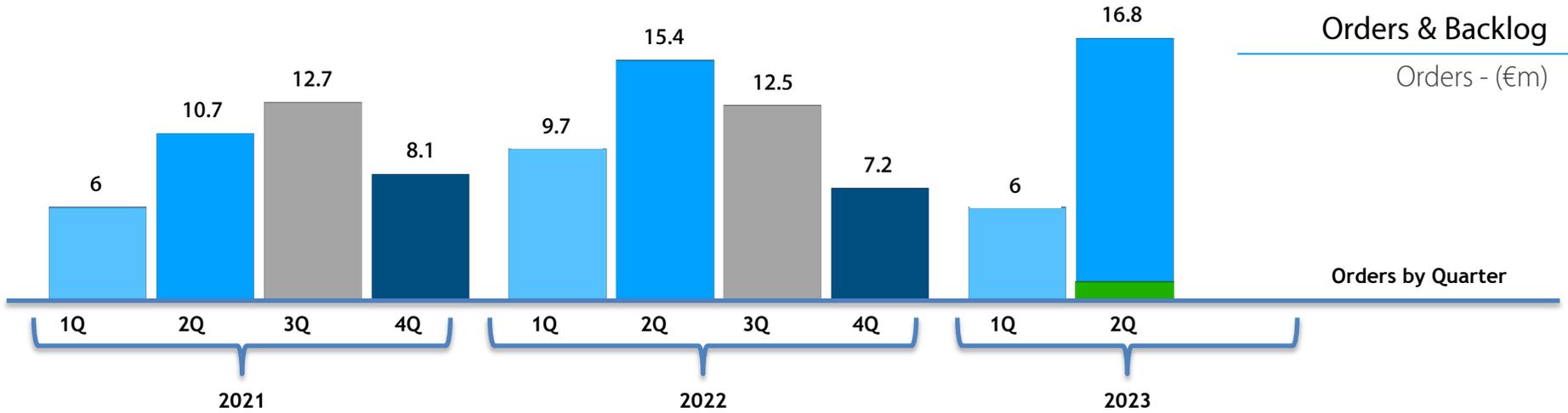
(Euro/1000)	June 30, 2023	December 31, 2022	Δ
SHAREHOLDERS EQUITY			
Share capital	1.613	1.613	14
Share premium reserve	8.681	8.677	249
Legal reserve	299	257	44
FTA reserve	(1.683)	(1.683)	-
Other components of shareholder's equity	196	223	(27)
Conversion reserve	(28)	1	(29)
Retained earnings/(loss) carried forward	8.401	7.488	913
Profit/(loss) for the period	(1.260)	952	(2.212)
TOTAL SHAREHOLDERS EQUITY	16.219	17.528	(1.309)
<i>Shareholders' Equity of parent company shareholders</i>	16.219	17.528	(1.309)
<i>Shareholders' Equity of non-controlling interests</i>	-	-	-
NON CURRENT LIABILITIES			
Long-term borrowings	13.065	15.015	3.776
Employee benefits	3.535	3.212	(267)
Other non-current payables	210	221	221
Deffered tax liabilities	6	2	(15)
Other non-current financial liabilities	4.447	4.932	4.932
Payables non current under IFRS16	1.474	3.645	798
TOTAL NON-CURRENT LIABILITIES	22.737	27.027	(4.290)
CURRENT LIABILITIES			
Short-term borrowings	10.624	8.155	2.469
Other current financial liabilities	474	(24)	498
Trade payables	7.114	8.697	(1.583)
Current taxes payable	257	387	(130)
Other current payables	18.336	13.536	4.800
Provision for risks and charges	472	472	0
Payables current under IFRS16	711	754	(43)
TOTAL CURRENT LIABILITIES	37.988	31.977	6.011
TOTAL LIABILITIES	76.944	76.532	412



export
81%

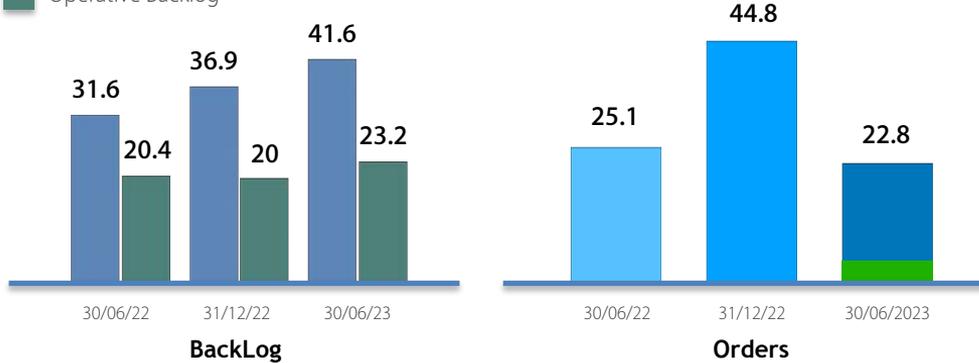
Orders & Backlog

Orders - (€m)



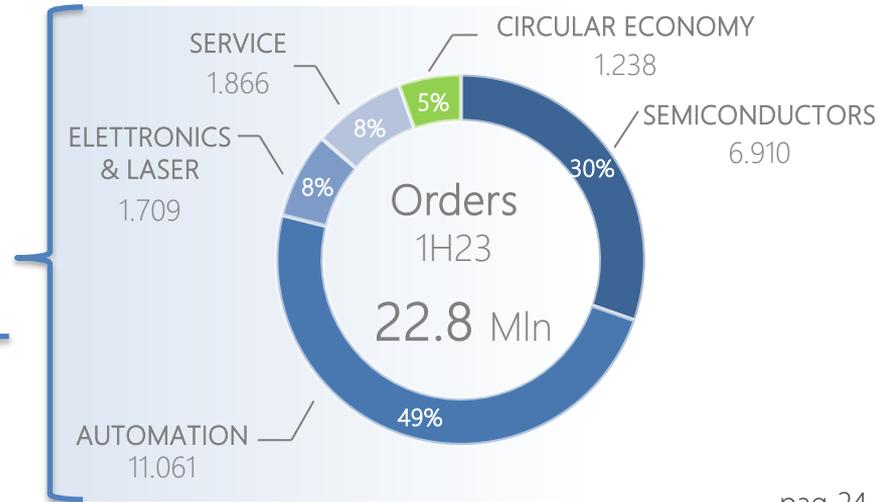
Orders by Quarter

Commercial Backlog
Operative Backlog



BackLog

Orders



Operative Profit & Loss by Division 30/06/2023

		Total Sales (Euro/000)	Operative Value of Production ⁽¹⁾ (Euro/000)	MOL 3 rd Level (Euro/000)	MOL 3 rd Margin %
 AUTOMATION	18%	2.962	5.441	1.017	19
 ELECTRONICS & LASER	6%	1.008	3.567	620	17
 SEMICONDUCTORS	65%	10.932	9.665	2.136	22
 SERVICE	11%	1.857	1.857	314	17
OTHERS		-	1.719	(4.445)	-
TOTAL		16.759	22.249	(358)	(2)



R&D 1H23

1.84 Mln

Capitalized costs

1.355 KEuro

R&D Bonus amount

135 KEuro

European Grants

350 KEuro

R&D 1H23

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

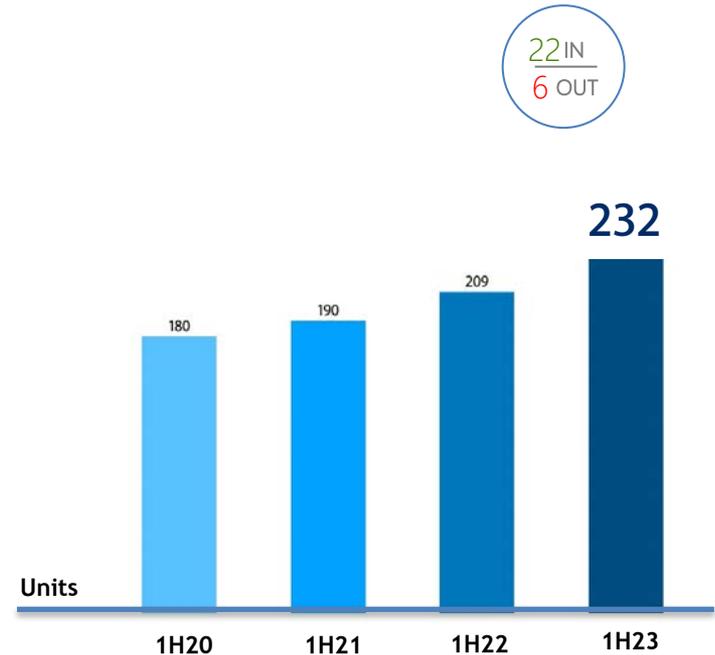
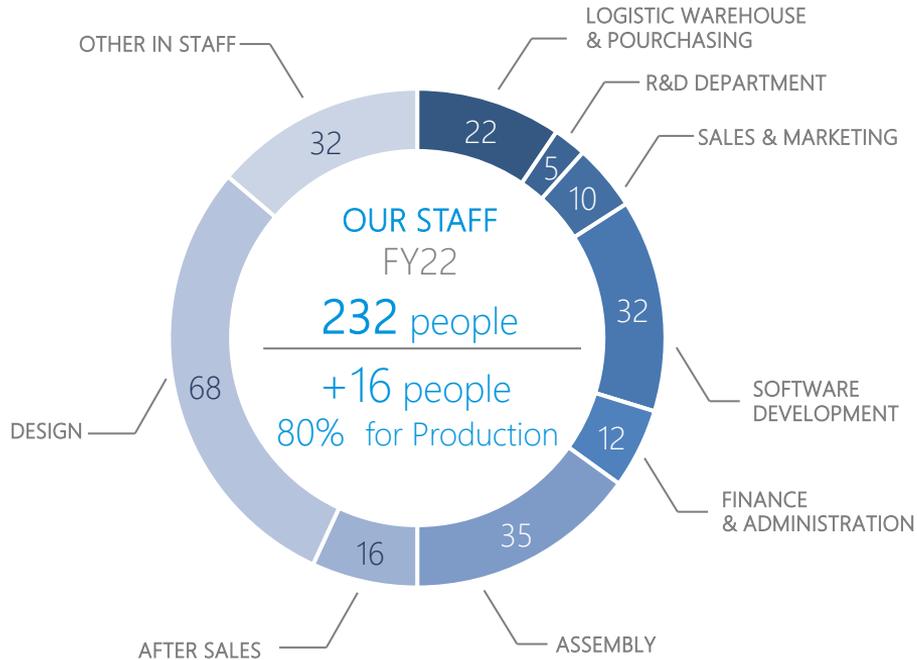
Biomedical Automation [AUTOMATION, APPLIED LASER](#) - Conception, design and implementation of automation system solutions for medical applications

Circular Economy Automation [AUTOMATION](#) - Conception, design and realisation of solutions for automation systems for applications in the recycling and circular economy sector

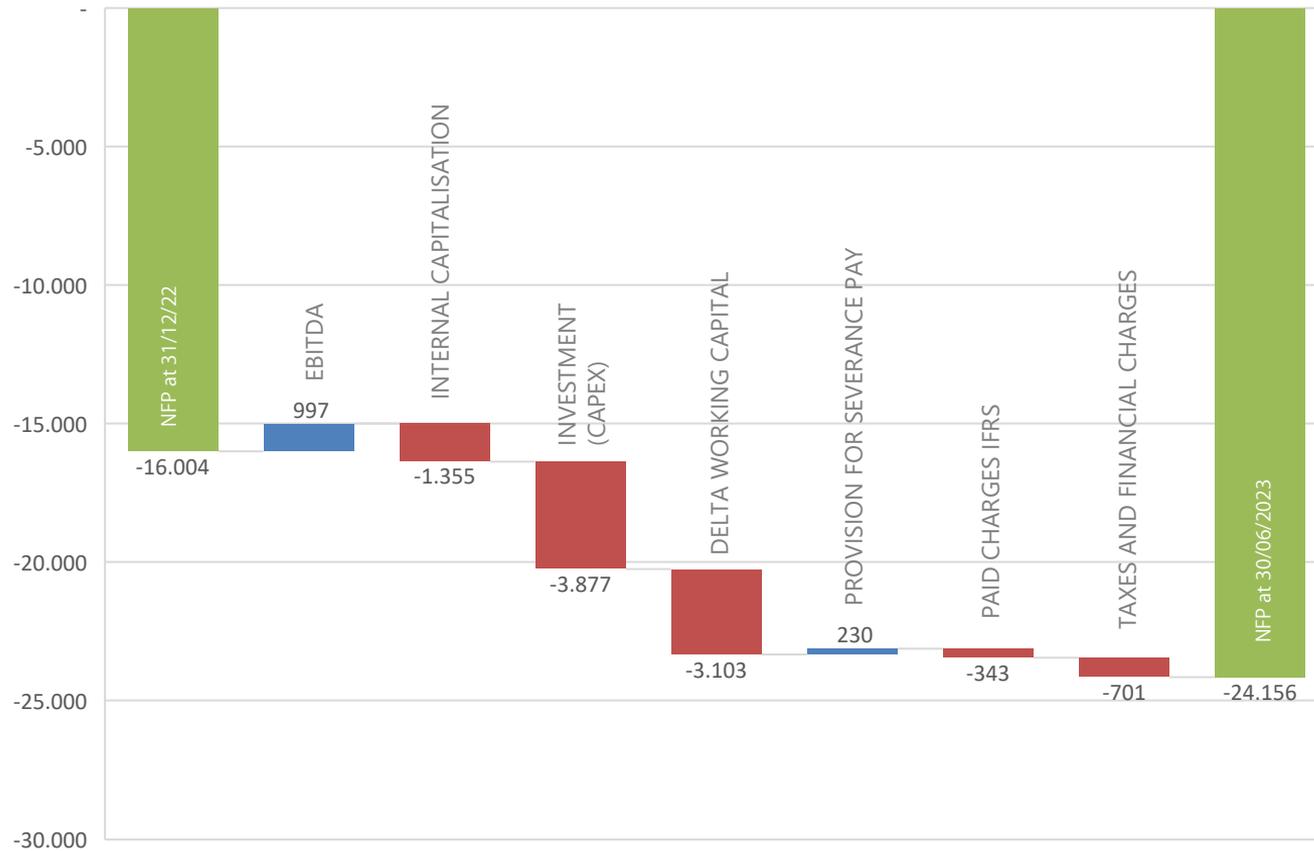
High Tech Automation [AUTOMATION, LASER, ELECTRONICS](#) - Design and prototyping of demonstration systems suited to the needs of 'gigafactories' for e-Mobility applications

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

1H23 People in STAFF



Operative NFP – without IFRS 16



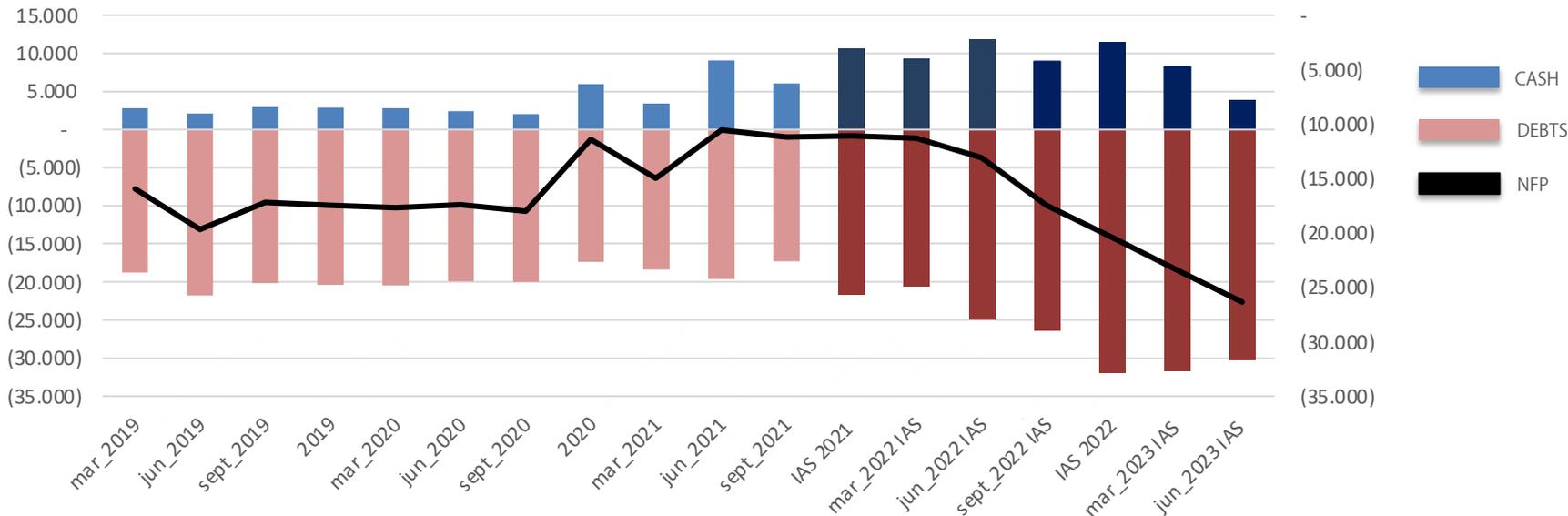
Net Financial Position

(€m)

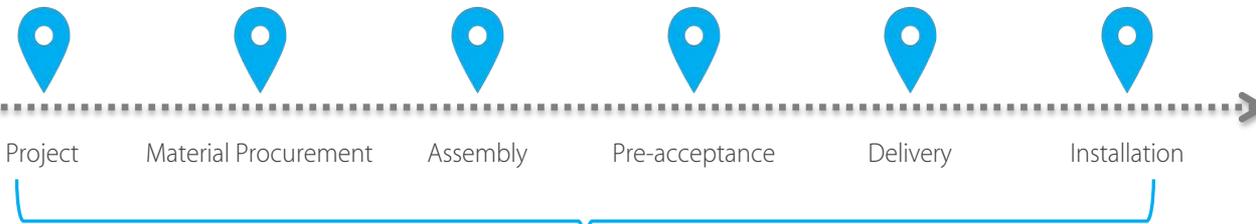
NFP	euro
NFP at 31/12/2022	(16.004)
EBITDA	997
Internal capitalisations	(1.355)
Investment (CAPEX)	(3.877)
Delta Working Capital	(3.103)
Provision for severance pay	230
Paid charges IFRS	(343)
Taxes and financial charges	(701)
NFP at 30/06/2023	(24.156)

NFP (€m)

Activities Description



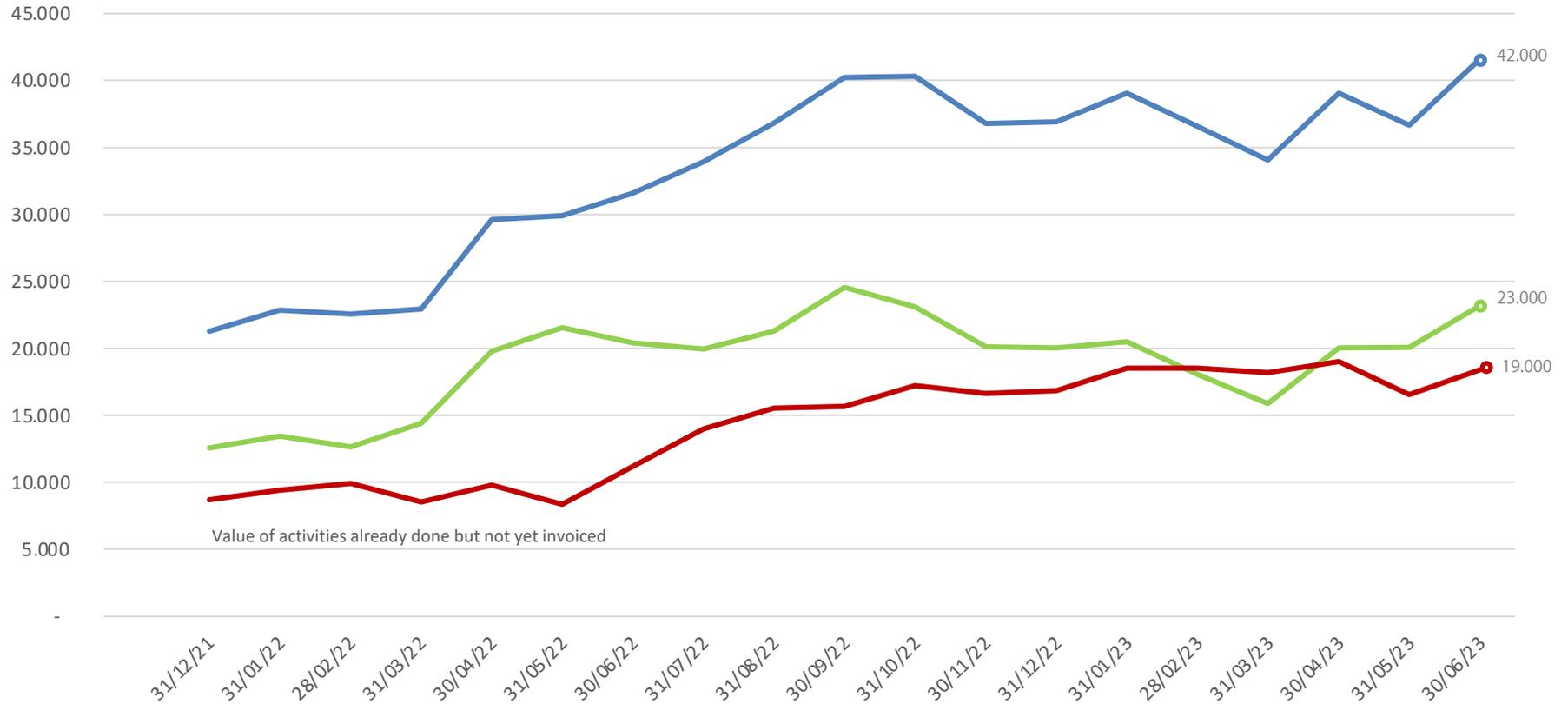
Order



Payment

Operative and Commercial Backlog (€m)

Activities Description

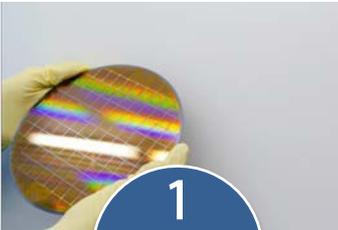




Osai Next Products

Osai doesn't stop!

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

<p>Semiconductor Test Handling</p> <p>Development of new systems for «burn-in automation» applications, solutions capable of automating processes aimed at automotive chip testing. Developed the smallest conditioning chambers in the world for MEMS R&D fine tuning</p>	<p>Silicon Carbide Addition</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>E-mobility Factory</p> <p>Conception, design and prototyping of high-tech solutions for assembly, laser welding and testing of battery packs.</p>	<p>Biomedical & Life Science Automation</p> <p>Conception, design and implementation of automation system solutions for medical & Life Science applications.</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>

CircularEconomy 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



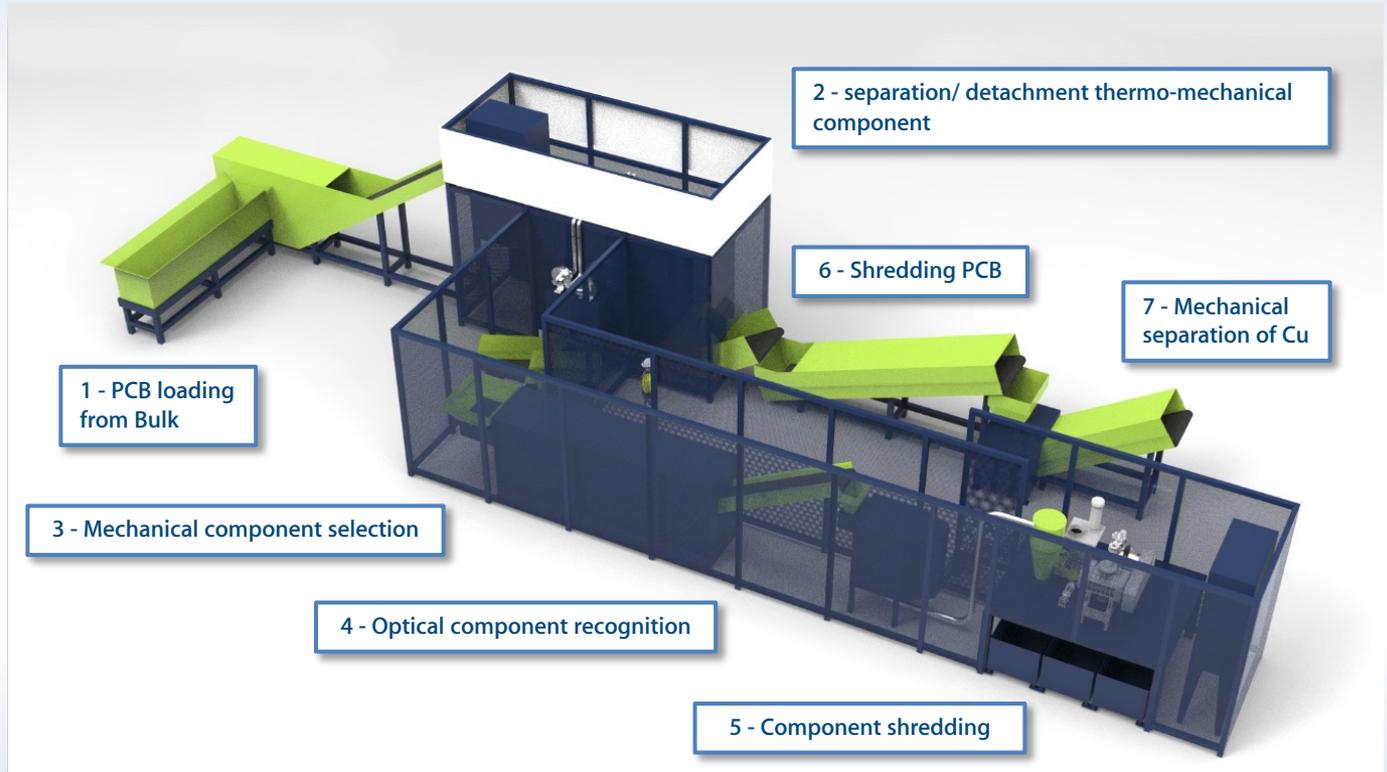
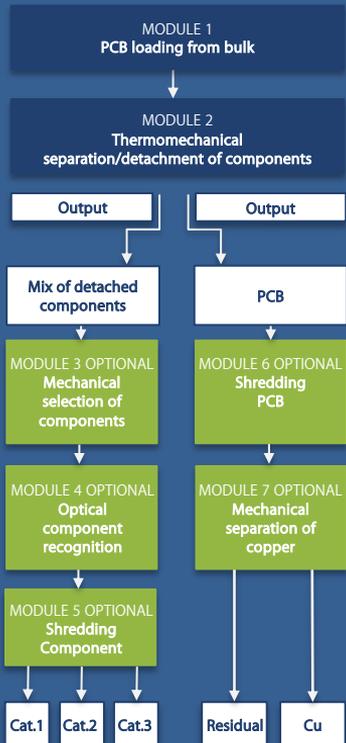
2.000

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 2023

San Francisco
San Diego

Odense
Frankfurt
Belgium
Stuttgart
Paris
Grenoble
Madrid
Berlin
Nuremberg
Munich
Salzburg
Ivrea
Bologna
Rimini
Istanbul

Seoul
Shanghai





HEADQUARTER

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<https://goo.gl/maps/SvkTBjtbeeb8vpfi9>



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where ideas become technology



Head Quarter

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