

# **NOTEBOOK**

**2025 EDITION** 









**INTERNATIONAL DEFENCE COMPANIES** 

Crafting France's defense technologies



# **NOTEBOOK**

2025 Edition

# **INTERNATIONAL DEFENCE COMPANIES**





Manuscript completed on December 17, 2024

# French defence procurement agency (DGA)

Defence Industry Directorate

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Paris, January 1, 2025

The creation of the Defence Industry Directorate (DID), as called for by the Délégué général de l'armement as part of his 'Impulsion' project, is now a reality.

Within the DGA, the DID guarantees the continuity, quality, performance and resilience of French defence companies. It plays an essential role in preserving France's strategic autonomy and encouraging the defence industry to become more competitive.

It supports French defence companies, whether large groups, mid-sized companies or SMEs, in their development and industrial strategies, and helps them to self-protect, innovate and invest to meet the needs of the armed forces. It also supports them in their export efforts, advising them and facilitating their dealings with the DGA's International Cooperation and Export Division (DICE).

The DID ensures that France has the industrial and technological capabilities needed to achieve the desired level of strategic autonomy, and encourages partnerships between the French State, local authorities, companies, research laboratories and the armed forces. It also ensures that these principles are applied at the European level, through partnerships, negotiations on EU industrial policies and dialogue with our European counterparts.

This new 2025 edition of the International Defence Companies notebook is published in light of these issues.

This publication provides key data from publicly available sources, for a selection of international companies chosen each year according to their main activities in the defence sector.

In this regard, Amphenol, Eaton, HyPrSpace, Latitude, Loft Orbital, MaiaSpace and SWISSto12 have been included for the first time in this 2025 edition while Avio and LIG Nex1 have been re-introduced.

The notebook should in no way be considered as reflecting the opinions or positions of the DGA, nor of Xerfi Specific, which contributed to its preparation.

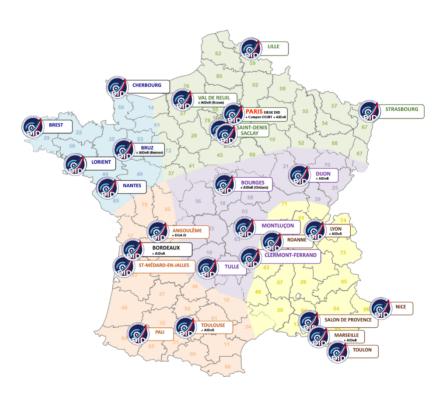
A digital version of the notebook, both in French and English, is available on the DGA's website at <a href="https://www.defense.gouv.fr/DGA">www.defense.gouv.fr/DGA</a>.

I wish you a pleasant reading.

Ingénieur hors classe de l'armement (IGHCA) Alexandre Lahousse Director, Defence Industry Directorate, DGA

# The Defence Industry Directorate (DID) IN FIGURES:

630 employees 9 regional defence industry attachés (attachés d'industrie de défense en région - AIDeR) 27 sites throughout France



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# METHODOLOGICAL NOTE

#### SCOPE

The 2025 edition of the Notebook on International Defence Companies covers a panel of 70 companies. A specific section, "Key Data", presents the following consolidated financial indicators for each company, provided such information is available ("N/A" meaning that data is not available):

- Revenue (in euros)
- Revenue variation (as a percentage change; calculated from data in local currency)
- Defence revenue (as a % of total revenue)
- Export revenue (as a % of total revenue)
- Operating profit/loss (in euros)
- · Operating margin (as a %)
- · Net income (in euros) or net income attributable to shareholders
- Order book at the end of the fiscal year (in euros)
- Headcount

To ensure consistency, consolidated financial statements were the preferred source of information. Emphasis was placed on the most recent, restated financial indicators. Furthermore, some data contained in the previous edition have been revised, corrected or modified for this edition in order to take into account more recent currency exchange rates (see below).

Currency conversions were calculated using the annual average exchange rate (source: European Central Bank) during each company's fiscal year. However, order book values were converted using the exchange rates at the closing date of each company's fiscal year. Average annual exchange rates used for conversions are presented in the table below. It should be noted that all financial indicators were converted using the average exchange rate for their corresponding year. To avoid a bias when calculating annual changes of monetary indicators, variations (as a percentage change) were calculated in the original currency used in each company's financial statement.

#### SOURCES

The defence industry ranking is based on data from the Defense News magazine 2023 top 100 list.

For publicly listed groups or those that publish annual statements of consolidated accounts, the following sources were used:

- Annual reports and reference documents.
- · Consolidated balance sheets and profit & loss statements
- Financial and investor presentations

For unlisted groups or those that do not publish annual statements of consolidated accounts, the following sources were used:

- · Press releases, company presentations
- · Data bases: Factiva, Diane
- · Business press and specialist publications

List of companies that do not publish, or only partially publish, financial statements:

- ArianeGroup
- Arauus
- Aviation Industry Corporation of China (AVIC)
- · Baykar Technology
- Furenco
- · General Atomics
- HvPrSpace
- ITP Aero
- Iveco Defence Vehicles
- John Cockerill
- KNDS

- Latitude
- Loft Orbital
  - MaiaSpace
  - MRDA
- NVL Group
- Polska Grupa Zbrojeniowa (PGZ)
- SWISSto12
- TechnicAtome
- Thales Alenia Space (TAS)
- thyssenkrupp Marine Systems (tkMS)
- · Turkish Aerospace

#### **OWNERSHIP**

The "Ownership structure" section draws data from the following sources:

- Company publications (websites, reference documents, investor presentations)
- Brokerage firms and major trading platforms (Bolsa de Madrid, Borsa Italiana, Deutsche Börse, Euronext, LSE, NASDAQ, NYSE, Tokyo Stock Exchange, etc).

#### **CHARTS**

Charts represent the sales breakdown by business segment (i.e. branches or divisions as presented by the company) and geographical region.

#### MAIN PROGRAMMES. COOPERATIONS AND EXPORT PARTNERSHIPS

The "Main programmes, cooperations and export partnerships" section presents the main programmes highlighted by companies in their public media releases (excluding upstream study programmes). Partnerships for each programme are also listed, without furtner details. These partnerships can take several forms: co-contractorship, co-development or co-production agreements, subcontracting agreements (for tier-1 equipment suppliers considered as "strategic partners"), marketing agreements, joint ventures (JV), or partnerships with foreign companies as part of offset agreements.

Due to the very concise format of the notebook, this section cannot claim to be exhaustive.

#### **EURO EXCHANGE RATES\***

COUNTRY	CURRENCY	1 EURO =			
		2020	2021	2022	2023
Australia	Australian dollar	1,655	1,575	1,517	1,629
Japan	Japanse yen	121,850	129,880	138,030	151,990
Norway	Norwegian krone	10,723	10,163	10,103	11,425
Poland	Polish zloty	4,443	4,565	4,686	4,542
Singapore	Singapore dollar	1,574	1,589	1,451	1,452
South Korea	South Korean Won	1 345,580	1 354,060	1 358,070	1 412,880
Sweden	Swedish krona	10,848	10,147	10,630	11,479
Turkey	Turkish lira	8,055	10,512	17,409	25,760
United Kingdom	Pound sterling	0,890	0,860	0,853	0,870
United States	U.S. dollar	1,142	1,183	1,053	1,081

\*Exchange rates used for conversions were calculated as the annual average rate from January 1 to December 31 (source: European Central Bank).



# **AIRBUS**

Leading European aerospace and defence group, ranked 3<sup>rd</sup> worldwide in the military helicopter segment and 13th worldwide in the defence sector

#### **BUSINESS AREAS**

Platform manufacturer and systems integrator

- Commercial and military aircraft
- Commercial and military helicopters
- Unmanned aircraft systems (UAS)
- Commercial and military space (satellites, services)
- Defence electronics
- Cybersecurity

#### **GOVERNANCE**

Chairman
Chief Executive Officer
CEO Airbus Defence
and Space

R. Obermann G. Faury

M. Schoellhorn

KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	49,912	52,149	58,763	65,446
Δ (%)	-29.18%	4.48%	12.68%	11.37%
Defence (%)	21%	18%	20%	18%
Export (%)*	59%	63%	59%	61%
Operating profit/loss	-510	5,342	5,325	4,603
Operating margin	-1.02%	10.24%	9.06%	7.03%
Net income**	-1,133	4,213	4,247	3,789
Order book	373,127	398,439	449,241	553,893
Employees	131,349	126,495	134,267	147,893

<sup>\*</sup>Revenue excluding Europe

#### OWNERSHIP STRUCTURE (as of 10.10.2024)

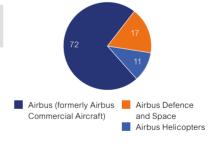
Symbol	AIR
Listed on	Euronext Paris
Market Cap (€m)	101,333

#### Major shareholders (as of 10.10.2024)

SOGEPA (French State)*	10.83%
GZBV (German State)*	10.82%
SEPI (Spanish State)*	4.08%
TCI Fund Management Ltd.	3.01%

<sup>\*</sup>Shareholder agreement

# REVENUE BY BUSINESS SEGMENT (%)



#### MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
NHIndustries	62.5%	France
ArianeGroup	50%	France
ATR	50%	France
AirTanker Holdings	46.5%	United Kingdom
Eurofighter Jagdflugzeug	46%	Germany
MBDA	37.5%	France

#### REVENUE BY REGION (%)



<sup>\*\*</sup>Net income attributable to shareholders

MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	Trafes the Signal State for the State of the
Military aircraft and unmanned aircraft systems	
NGWS (Next Generation Weapon System), including the future NGF fighter aircraft and its Remote Carrier	•
Eurofighter Typhoon fighter aircraft	• • •
A400M Atlas strategic and tactical military transport aircraft	• • •
CN235 and C295 tactical transport aircraft	•
A330 Multi Role Tanker Transport (MRTT) aircraft	• • •
European MALE RPAS future UAS (Eurodrone programme)	• • •
VSR700 future shipborne UAS	•
Military helicopters	
H125M single-engine transport helicopter (2 t)	•
H135M and H145M twin-engine transport helicopters (3 t)	•
H160M (6 t), H175M (8 t), H215M (9 t) and H225M (11 t) twin-engine multirole helicopters	•
NH90 twin-engine multirole helicopter (11 t)	• • •
Tigre / Tiger twin-engine attack helicopter (6 t)	•
Space	
Syracuse IV military communications satellites	• • •
CERES space-borne military intelligence system	•
CSO Earth observation satellite programme	•
Cybersecurity	
Stormshield Data Security	•

\*Formerly GE Aviation \*\*Formerly Raytheon Technologies

#### Business trends

- Airbus revenues went up by 11.4% in 2023 to reach €65.4bn, mainly due to the increase in commercial aircraft deliveries (735 in 2023, compared to 661 in 2022). The sales of the group's two defence segments also grew (+3.4% for Airbus Defence and Space and +4.1% for Airbus Helicopters).
- In January 2024, Airbus acquired Eutelsat OneWeb's 50% stake in the Airbus OneWeb Satellites (AOS) joint venture. Airbus is now the sole owner of AOS and its satellite production facility based in Merritt Island (Florida).
- In May 2024, the group completed the acquisition of U.S. company Aerovel, which develops the Flexrotor VTOL tactical UAS. The drone is designed for intelligence, surveillance, target acquisition and reconnaissance (ISTAR) missions at sea and over land, and can operate for more than 12 hours. Aerovel is based in Bingen (Washinoton) and employs around thirty people.

#### Home markets (France, Germany, Spain, United Kingdom)

- The Bundeswehr awarded Airbus a contract in December 2023 to supply up to 82 H145M transport helicopters (including 20 as options), to be delivered from 2024 onwards. The contract is worth over €2bn and includes support and services for 7 years.
- In December 2023, the Spanish Ministry of Defense ordered 16 C295 aircraft, including 6 in maritime patrol configuration (MPA) and 10 in maritime surveillance configuration (MSA), for €1.69bn.
- In January 2024, the French Defence Procurement Agency (DGA) ordered 42 H145 helicopters on behalf of the French Ministry of the Interior (36 for the Sécurité Civile and 6 for the Police Nationale and Gendarmerie), to be delivered by 2026.
- Airbus signed a contract worth around €1.9bn in June 2024 with the German Federal Police for the supply of 44 H225 multirole helicopters (including 6 as options), to be delivered from late 2029 to 2035.
- In June 2024, the NH90 Standard 2 helicopter began its flight tests at the group's Marignane facility in southern France. 18 helicopters are on order for the French Special Forces.
- Airbus signed a €2.1bn, 15-year contract in July 2024 with the Bundeswehr to develop, deploy and support two future secure military communications satellites in geostationary orbit (SATCOMBw 3).

#### Export markets

- The group signed three contracts for its H145M transport helicopter in the first half of 2024: with Brunei in April for 6 units configured for close air support and surveillance missions; with the UK in April for 6 units to be deployed in Cyprus and Brunei; and with Belgium in June for 17 units (15 for the Army and 2, plus 3 as an option, for the Federal Police).
- Airbus handed over a second C295 tactical transport aircraft to the Indian Air Force in May 2024. The next 14 aircraft will be delivered at a rate of one per month until August 2025.
- In July 2024, Airbus won a third contract with Saudi Arabia for the supply of 4 A330 MRTT refueling and transport aircraft, to be delivered from 2027.

#### Technology and Innovation

- ► The group's self-financed R&D expenditure amounted to €3.3bn in 2023, representing 5.0% of revenues.
- The European MALE RPAS UAS, a program led by Airbus with Dassault Aviation and Leonardo, successfully passed the preliminary design review phase (wind tunnel testing, operational capability demonstration, etc.) in May 2024. The maiden flight is scheduled for 2027, with deliveries expected in 2028.
- Airbus is coordinating four projects funded by the European Defense Fund, including FASETT (Future Air System for European Tactical Transportation) to develop a new transport aircraft, and SPIDER (Space based Persistent ISR for Defence and Europe Reinforcement) to develop multimission satellite constellations for defense and security.



# AMPHENOL

Manufacturer of interconnect systems (connectors, sensors, antennas, cable, etc.), in particular for defence applications, and 66th-largest defence contractor worldwide

#### **BUSINESS AREAS**

Systems integrator and components supplier

- Connectors
- ▶ Components for communication systems
- Power distribution
- Cable and cable assemblies
- Sensors
- Connector accessories

#### **GOVERNANCE**

Solutions division

Chairman	Martin H. Loeffler
President and CEO	R. Adam Norwitt
President, Communications	William J. Doherty

KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	7,530	9,194	11,988	11,614
Δ (%) [\$]*	4.55%	26.48%	16.06%	-0.54%
Defence (%)	12%	11%	9%	11%
Export (%)	71%	71%	67%	65%
Operating profit/loss	1,434	1,779	2,456	2,368
Operating margin	19.05%	19.35%	20.49%	20.39%
Net income**	1,053	1,326	1,806	1,784
Order book	1,940	3,362	3,823	3,657
Employees	80,000	90,000	91,000	95,000

<sup>\*</sup>Variation based on revenue in local currency

#### OWNERSHIP STRUCTURE (as of 10.10,2024)

Symbol	APH
Listed on	NYSE
Market Cap (\$m)	77,865
Major shareholders (as of 10.10.2024)	ı

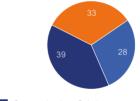
Vanguard Fiduciary Trust Co. 12.36% 8.47% Fidelity Management & Research Co. BlackRock Advisors LLC 6.20% T. Rowe Price International Ltd. 4.85%

# MAIN JOINT VENTURES AND ASSOCIATES\*

Name	%	Country
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<sup>\*</sup>No information available

# REVENUE BY BUSINESS SEGMENT (%)

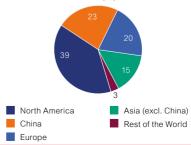


Communications Solutions

Interconnect and Sensor Systems

Harsh Environment Solutions

#### **REVENUE BY REGION (%)**



See €/\$, p.9

<sup>\*\*</sup>Net income from continuing operations attributable to shareholders

MAIN PRODUCTS AND MARKETS	Connunications buck the life stack
Connectors	
Tri-Start MIL-DTL-38999 Series III connectors	• • • • •
Ethernet, USB and display connectors	• • • • •
HDAS and VITA PCB connectors	• • • •
Fiber optic connectors	• • • • •
D38999, M83723 and M5015 quick disconnect connectors	• • •
Communications	
HF antenna systems and portable telescopic masts	•
Media converters	•
Ethernet switches	• • •
Power distribution	
Power converters	• • • •
Power distribution units (PDU)	• • • •
Cable and cable assemblies	
Fiber optic cables	•
Coaxial cables and connectors	•
Cable assemblies and harnesses	• • • •
Sensors	
Pressure and shock sensors	• • •
Sensors for defence vehicle testing	•
Accessories	
Accessories for connectors (rear covers, protective caps, etc.)	• • •

#### Business trends

- After several years of strong growth, Amphenol's revenue remained virtually stable in 2023 (-0.5% year-on-year in local currency) at \$12.6bn (€11.6bn). The decline in the Communications Solutions division (-13%) was offset by growth in the Interconnect and Sensor Systems (+6%) and Harsh Environment Solutions (+14%) divisions.
- ▶ The group's defence business is spread across all three divisions and accounted for 11% of total revenues in 2023. Defence revenue was up by more than 20% year-on-year in local currency, thanks to rising demand in most markets (naval, aeronautics, communications, space, etc.).
- In line with its growth strategy, Amphenol completed 10 acquisitions in 2023, for a combined total of \$970m (€900m). In particular, the group acquired Q Microwave and XMA, two U.S. manufacturers of radio frequency components for military applications.
- In May 2024, Amphenol completed the acquisition of Carlisle Interconnect Technologies (CIT) from U.S. group Carlisle Companies Inc. for \$2bn (€1.9bn). Amphenol thus strengthened its range of interconnect systems (cables, connectors, sensors, etc.), particularly for defence, civil aeronautics and industry markets. With almost 6,000 employees, the company was renamed Amphenol CIT and is expected to generate revenue of around \$900m (€830m) in 2024.
- In July 2024, Amphenol announced a definitive agreement to acquire U.S. group CommScope's mobile networks and antennas businesses for \$2.1bn (€1.9bn). These activities employ around 4,000 people and are expected to generate revenue of around \$1.2bn (€1.1bn) in 2024. The transaction is expected to close in the first half of 2025.

#### Home market

- Amphenol generated 35% of its turnover in the United States in 2023.
- The group produces interconnect systems (connectors, antennas, power distribution systems, cables and assemblies, etc.) for various markets (automotive, communications networks, industry, etc.). In defence, these products are designed for applications in harsh environments, mainly in communication and surveillance systems, aeronautics (airframes, avionics systems, helicopters, UAVs), land vehicles, naval, missiles and space.

#### Export markets

- ► In 2023, 65% of the group's revenue came from exports, including 23% from China. Amphenol has a global presence with nearly 300 manufacturing facilities in some 40 countries.
- In France, Amphenol acquired several companies including Socapex, Air LB, FILEC, SEFEE and AUXEL. Based in Thyez (in Savoie, near the Swiss border), Amphenol Socapex produces interconnect systems for the civil aeronautics, industry, defence and space sectors, notably for the Rafale fighter aircraft (Dassault Aviation) and the Ariane 6 launcher (ArianeGroup). Amphenol Air LB also supplies composite connectors and accessories for military applications (aircraft, helicopters, UAVs, armoured vehicles, missiles, radars, etc.). Another French subsidiary, CMR Group, produces military electrical equipment for land (including vehicles from Arquus, KNDS France and Texelis) and naval platforms.

#### Technology and Innovation

- ► The group's self-financed R&D expenditure amounted to \$342m (€316m) in 2023, or 2.7% of revenues.
- The French subsidiary Amphenol Socapex has an engineering laboratory of over 300 m², certified by the Defense Logistics Agency (DLA) of the U.S. Department of Defense, for product testing and qualification. The site's research focuses on materials (metals, polymers, ceramics, etc.), electrical systems and optical fibres.



# ARIANEGROUP

Leading European company in the space industry and among the world leaders, specialised in space and ballistic launchers and in space launch services (via Arianespace)

#### **BUSINESS AREAS**

Platform manufacturer and systems integrator

- Commercial launch services (launchers and services)
- Defence systems
- ▶ Propulsion systems
- Pyrotechnics (for launchers and satellites)
- ▶ Equipment and services

#### **GOVERNANCE**

**Executive Officer** 

Chief Executive Officer	Martin Sior
Executive Vice-President Defence Programmes	Vincent Pery
Arianespace Chief	01111111111111

Stéphane Israël

# KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	2,718	3,129	2,357	2,298
Δ (%)	-11.44%	15.12%	-24.67%	-2.50%
Defence (%)	N/A	N/A	N/A	≈ 60%
Export (%)	N/A	N/A	N/A	N/A
Operating profit/loss	N/A	N/A	N/A	N/A
Operating margin	N/A	N/A	N/A	N/A
Net income*	-20	-24	89	-26
Order book	N/A	N/A	N/A	N/A
Employees	9,000	7,600	8,000	8,000

<sup>\*</sup>Total comprehensive income

#### OWNERSHIP STRUCTURE

Symbol	
Listed on	Unlisted group
Market Cap	
Major shareholders (as of 10	.10.2024)
Airbus	50%

Safran 50%

# REVENUE BY BUSINESS SEGMENT (%)

N/A

# MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
Nuclétudes	99.9%	France
Pyroalliance	90%	France
Sodern	90%	France
Arianespace	74%	France
Europropulsion	50%	France
Euro Cryospace	45%	France
Regulus	40%	France

#### **REVENUE BY REGION (%)**

N/A

MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	kitche ester Liste Pord Parc Holder Parce Parce Print
Commercial launch services	
Ariane 6 launcher	• • • • • • •
Maia future reusable mini-launcher*	
Launch services (Ariane 6)**	
Defence systems	
M51 submarine-launched strategic ballistic missile	• • • •
V-MAX / V-MAX2 (experimental manoeuvring vehicle) demonstrators	
Helix multi-orbital space surveillance service	
Propulsion systems	
Vulcain 2.1 and Vinci rocket engines (Ariane 6)	•
P120C rocket engine (Ariane 6, Vega-C)	•
Prometheus rocket engine project	• •
Storable Propellant Engine (SPE)/BERTA future rocket engine	
Orbital propulsion systems for satellites and spacecraft	
M10 hold down and release mechanisms (ME0032, ME0038)	
Pyrotechnics (for launchers and satellites)	
Vulcain Turbine Pump Starter	•
Vinci engine ignition system	•
Vega C's Zefiro-9 third-stage engine ignition system	•
Equipment and services	
RESUS submarine rescue system	
Dismantling and decontamination services  "Developped by ArianeGroup's wholly-owned subsidiary MaiaSpace (see th  "The launch of Soyuz rockets has been suspended since the end of Februs "Formerly RUAG Space ""OHB group ""	

<sup>17</sup> 

#### Business trends

- ▶ Down for the second consecutive year, ArianeGroup's revenues fell by 2.5% in 2023, to €2.3bn. Arianespace, the group's launch services subsidiary, was hit in particular by delays to the Ariane 6 programme. As a result, Arianespace only carried out 3 launches during the year (compared with 5 in 2022 and 15 in 2021), including the last two flights of Ariane 5 and the penultimate launch of the Vega light launcher. Defence activities (around 60% of ArianeGroup revenues), relating to ocean deterrence (M51 missile), held up better.
- Arianespace had a backlog of around 30 launches for Ariane 6 at the end of 2023, including commercial flights (18 of which to launch over 600 satellites in Amazon's Kuiper constellation by 2026, as well as contracts for Intelsat and Eutelsat) and institutional flights. Following an agreement signed in July 2024 with Avio, Arianespace has responsibility for the last flight of Vega, which took place in September 2024, and the next 5 flights of Vega C, scheduled by the end of 2025.
- Ariane 6 successfully completed its maiden flight in July 2024, which included a test of the Vinci engine (a re-ignitable upper-stage engine that allows satellites to be placed in different orbits during the same flight), and put several small satellites into orbit, representing around one tonne of payload. The next two flights are scheduled for the first half of 2025, notably to launch the French military satellite CSO-3. To ensure the launcher's economic viability, the aim is to reach a rate of at least 9 launches a year from 2027 (i.e. around twice as many as Ariane 5).

#### Home market

- Arianespace is one of five operators selected in January 2024 by the European Commission and the European Space Agency (ESA) to launch small satellites, alongside Rocket Factory Augsburg (RFA) and Isar Aerospace (Germany), Orbex (UK) and PLD Space (Spain). The aim of the Flight Ticket Initiative programme is to encourage competition in launch services in Europe.
- In April 2024, Arianespace was selected by the European Commission to launch the first four new-generation Galileo satellites (supplied by Airbus Defence and Space and Thales Alenia Space). An Ariane 6 launcher will carry out two flights in 2026 and 2027. It will also put the last six first-generation Galileo satellites into orbit during three flights scheduled for 2025. However, due to the unavailability of Ariane 6 in 2024, the ESA signed a €180m contract with SpaceX at the end of 2023 for the launch of four Galileo satellites in two flights. The satellites were put into orbit by a Falcon 9 launcher in April and September 2024.
- In June 2024, EUMETSAT (European Organisation for the Exploitation of Meteorological Satellites) decided to re-award SpaceX the contract for the launch of its MTG-S1 satellite (supplied by OHB), which was due to be launched by Ariane 6 in June 2025. Arianespace is still responsible for launching EUMETSAT's three other satellites (MTG-I2, Metop-SGA and Metop-SGB).
- ArianeGroup and Thales teamed up in June 2024 to offer a long-range strike system (150 km in an initial version), as part of the French Army's FLPT (Frappe Longue Portée Terrestre) programme, which aims in particular to replace the LRU (Lance-roquettes unitaire) artillery system. Safran and MBDA are working on a competing offer.

#### Technology and Innovation

- ▶ A qualification firing of the M51.3 missile, without a nuclear warhead, was successfully carried out in November 2023 by ArianeGroup and the DGA from the Ballistic Launch Base (BLB, Base de Lancement Balistique) at Biscarrosse in South West France.
- Based on its expertise in the design and production of long-range ballistic systems and associated technologies, ArianeGroup is developing a Tactical Ballistic Missile (Missile Balistique Tactique, MBT), a conventional ballistic solution meant to rapidly provide a national hyper-velocity operational strike capability.
- ArianeGroup also developed ELIXIR, an innovative and sustainable solution for the destruction of energetic materials and toxic substances for the defence, space and industrial sectors.



# **ARQUUS**

French subsidiary of John Cockerill, acquired from Volvo in July 2024, among the European leaders in land armament

#### **BUSINESS AREAS**

Platform manufacturer and systems integrator

- Wheeled armoured vehicles
- ► Tactical and logistics vehicles
- Propulsion systems for armoured vehicles
- Weapon systems (Remote Control Weapon Systems, RCWS)
- MRO and modernisation services

#### **GOVERNANCE**

Chairman and CEO	Emmanuel Levacher
Chief Financial, Strategy & IT Officer	Christian Cusset
Chief Operating Officer	Frédéric Gratien

### KEY FIGURES (Fiscal year ended: December 31st)

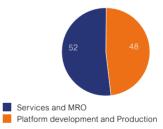
€ millions	2020	2021	2022	2023
Revenue	≈ 558	≈ 591	≈ 550	≈ 577
△ (%)	-10.00%	5.91%	-6.94%	4.91%
Defence (%)	100%	100%	100%	100%
Export (%)	27%	10%	N/A	N/A
Operating profit/loss	N/A	N/A	N/A	N/A
Operating margin	N/A	N/A	N/A	N/A
Net income	N/A	N/A	N/A	N/A
Order book	5,500	5,000	N/A	N/A
Employees	1,570	> 1,500	> 1,500	> 1,500

#### OWNERSHIP STRUCTURE

Symbol Listed on Market Cap	Unlisted subsidiary
Major shareholders (as of	10.10.2024)

John Cockerill 100%

# REVENUE BY BUSINESS SEGMENT (%)



Name	%	Country
ODAS	2%	France

# MAIN JOINT VENTURES AND ASSOCIATES REVENUE BY REGION (%)



MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	4ZZ	Stran	e es m	N P	y Page	id H	onne st	South Ma	gyat Sati	ar MBDA
Armoured combat and transport vehicles										
Griffon and Jaguar multirole armoured vehicles (Scorpion and CaMo programmes) (chassis, engine, suspension and remote controlled weapon station)	•	•	•							
VBCI armoured infantry fighting vehicle (engine, suspension, etc.)	•									
6x6 VAB Mk3 medium weight armoured vehicle		•								
Bastion and Fortress Mk2 4x4 armoured personnel carrier/combat vehicles				•						
Maintenance for VAB armoured personnel carrier and transport vehicle					•					
Reconnaissance vehicles										
4x4 VBL Mk2 and Grizzly light armoured vehicles						•				
4x4 PVP / Dagger light protected vehicle										
4x4 Scarabée light armoured vehicle										
Light tactical vehicles										
Areg, Patsas, Sabre, Torpedo and VLFS Special Forces vehicles										
VLRA, VLRA 2, Sherpa Light and ALTV light tactical vehicles										
4x4 VT4 tactical vehicle										
Tactical and logistics trucks										
4x4 / 6x6 / 8x4 / 8x8 Armis tractor units										
4x4 / 6x6 VLRA 2 tactical trucks										
8x8 next generation tanker truck (FTLT programme)							•	•		
Weapon systems										
Hornet family of remote controlled weapon stations									•	
CAESAR 155 mm self-propelled howitzer (chassis)	•									
Ground-based air defence vehicle (Sherpa Mistral)										•

#### Business trends

- Arquus generated revenues of approximately €577m in 2023, up 4.9% year-on-year. The group delivered 485 new vehicles over the year, mainly to the French market but also for export (around 20 Bastion 4×4 armoured personnel carriers to Armenia, for example). It also provided modernisation and MRO services, and delivered in particular 90 refurbished 4×4 VBL light armoured vehicles to the French Army.
- The group closed its plant in Marolles-en-Hurepoix, in the Paris Region, in July 2024 and transferred its activities to a neighbouring site in Lisses.
- ▶ John Cockerill, a Belgian group with dual activities that produces turrets for armoured vehicles, completed the acquisition of Arquus from Volvo in July 2024. The deal, worth an estimated €300m, enables John Cockerill to broaden its portfolio to include high-mobility military vehicles.

#### Home market

- Arquus, KNDS France and Thales are jointly in charge of the Scorpion programme for the supply of wheeled armoured vehicles to the French Army. An order for 1,872 Griffon VBMR/MEPAC and 300 Jaguar EBRC vehicles is expected, and around half of the vehicles should be delivered by 2025. The three groups delivered 123 Griffon and 22 Jaguar vehicles in 2023, bringing the total number of vehicles delivered since 2019 to 575 and 60 respectively.
- At the end of 2023, the French Ministry of Armed Forces ordered 96 Grizzly armoured reconnaissance vehicles and 136 VLFSs (light vehicles for Special Forces) from Arquus, bringing the total number of vehicles in the procurement pipeline to 151 and 206 respectively.
- In May 2024, Arquus won the contract to supply 376 new-generation 8x8 tankers for the French Armed Forces (FTLT programme, Flotte tactique et logistique terrestre), to be delivered by 2029. The group received an initial order for 70 vehicles, worth €120m. Arquus will partner with Magyar (tank manufacture) and Desautel (fire protection) on this programme.

#### Export markets

- The group has customers in more than 60 countries and intends to strengthen its export business. Together with KNDS France, Thales and Mol, Arquus is participating in the CalMo (Capacité Motorisée) programme to supply the Belgian Army with 382 Griffon VBMRs, 60 Jaguar EBRCs and 28 CAESARs from 2025 onwards. The contrat includes training and maintenance services.
- ► The Carabiniers of Chile (Carabineros de Chile, Chilean national law enforcement gendarmerie) ordered 5 Bastion 4x4 armoured personnel carriers from Arquus in December 2023, for delivery in 2024.
- Arguus signed a letter of intent with Cyprus in June 2024 for the supply of 12 Sherpa armoured vehicles, which will be armed with MBDA's Akeron anti-tank missile.
- In June 2024, the group also signed an agreement with Qatar's Barzan Holdings to modernise 54 VAB Mk1 armoured vehicles (Véhicules de l'avant blindé) for the Qatar Armed Forces.

#### Technology and Innovation

- Arquus invests around 3.5% of its revenues (around €20m) in R&D every year. The group is in particular working on the development of fully autonomous vehicles (new version of the Dagger, Drailer ground robotic platform, etc.) and hybrid propulsion vehicles.
- In February 2024, the French defence procurement agency (DGA), with the support of the French Defence Innovation Agency (AID), selected the KNDS-Arquus consortium to test the first digital twin demonstrator applied to a land combat vehicle.

# ATOS

French digital services company, producing supercomputers for nuclear deterrence and participating in the French Army's Scorpion programme

#### **BUSINESS AREAS**

IT solutions supplier and systems integrator

- ► IT services and digital transformation consulting
- Big Data and High Performance Computing (HPC) solutions
- Information and tactical communication systems
- ▶ Command, Control and Surveillance systems
- ► Electronic systems (navigation instruments, defence electronics)
- Cybersecurity

#### **GOVERNANCE**

Non executive Chairman	Philippe Salle

Chief Executive Officer Jean-Pierre Mustier

#### KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	11,181	10,839	11,341	10,693
Δ (%)	-3.51%	-3.06%	4.63%	-5.71%
Defence (%)	>10%	>10%	>10%	N/A
Export (%)	85%	85%	84%	83%
Operating profit/loss	650	-2,768*	-795	-3,106
Operating margin	5.81%	-25.54%*	-7.01%	-29.05%
Net income**	725	-215	-28	-3,441
Order book	23,700	23,600	21,200	18,500
Employees***	104,430	109,135	110,797	95,140

\*Exceptional/unusual expenses are included in this figure \*\*Normalised net income attributable to shareholders before unusual, abnormal and non-recurring items, net of tax \*\*\*Including «indirect employees»

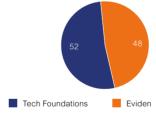
# OWNERSHIP STRUCTURE (as of 21.11.2024)

Symbol	ATO
Listed on	Euronext Paris
Market Cap (€m)	18

#### Major shareholders (as of 21.11.2024)

OnePoint Technology	4.82%
Legal & General IM Ltd.	1.85%
Mandarine Gestion SA	0.77%
Goldman Sachs Asset Management International	0.23%

# REVENUE BY BUSINESS SEGMENT (%)



#### MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
Athea	50%	France
Atos Saudi	49%	Saudi Arabia

#### REVENUE BY REGION (%)



# MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS Big Data and High Performance Computing (HPC) solutions Artemis.IA programme BullSequana supercomputers Copernicus Data and Information Access Services (DIAS) (Copernicus programme) Tactical communication systems Hoox for Mission and Auxylium tactical communication solutions Plug and Play Positioning and Timing System (P3TS) SCommand, Control and Surveillance systems Bull Battle Management System (Scorpion Combat Information System) CENTINELA checkpoint solution VIGIA border monitoring Electronic navigation equipment LMN electromagnetic speed log\* BEN Marine family of navigation instruments Multi-fonction repeater for surface ships (MFR6, MFR12) and submarines (MFR6 WP) Defence electronics ELINT/R-ESM systems family (ELIT, OSCAR, CARACAL) COMINT/C-ESM systems family (FlashHawk) Shadow jammers family (Raid Shadow, Black Shadow) Cybersecurity Data encryption solutions (Trustway, Trustway Chronos)

<sup>\*</sup>The LMN6, a new generation of electromagnetic speed log, has been chosen by the French Navy to equip its ships, such as La Fayette-class frigates, Horizon-class frigates, surveillance frigates and mine-hunting vessels.

#### Business trends

- ► Atos generated revenues of €10.7bn in 2023, down 5.7% year-on-year. Nevertheless, on a like-for-like basis and at constant exchange rates, revenue remained virtually stable (+0.4%). Growth in the Eviden division (+2.9%) was driven by the Big Data & Security segment (Mission Critical Systems and High-Performance Computing, particularly in Spain and India), while growth in digital activities was limited by the slowdown in the United States. The Tech Foundations division (-1.7%) suffered from difficulties in certain segments (infrastructures, hardware and software resale, etc.) and the disposal of non-core activities, notably in Italy.
- Weighed down by nearly €5bn of debt, Atos initiated a safeguard plan, which was validated by a specialised Commercial Court in October 2024. This plan provides for the conversion of €2.9bn of financial debt into capital and the provision of new financing and equity of between €1.5bn and €1.675bn. Philippe Salle was appointed Chairman of the Board of Directors in October 2024 and will become Chairman and Chief Executive Officer of Atos on February 1, 2025.
- ▶ In November 2024, the French State obtained a preferred share issued by Bull, the group's subsidiary that produces the supercomputers, and can now block certain operations to protect national interests.
- In November 2024, Atos received a non-binding offer from the French State to acquire the Advanced Computing activities, valued at €500m (up to €625m including earn-outs). These activities, which include the supercomputers used for nuclear deterrence, generated revenues of €570m in 2023 and employ 2,500 people, mainly in France. Exclusivity is granted until May 31 2025, with an initial payment of €150m due to Atos upon signing of a binding Share Purchase Agreement. The French State's previous offer included the Mission Critical Systems and Cybersecurity Products activities (€340m revenue in 2023), for which Atos would commit to launch a formal sale process.

#### Home market

- In January 2024, Atos signed a contract to supply BEN Marine electromagnetic lochs to equip the French Navy's EDA-S (Engins de Débarquement Amphibie Standard) barges (14 units planned, including 4 in service).
- In March 2024, Atos was selected to deploy a new geolocation solution, called P3TS (Plug and Play Positioning and Timing System), which will equip the French Armed Forces' tactical vehicles.
- In June 2024, the French defence procurement agency (DGA) awarded Atos the contract for the deployment of the combat information system of the Scorpion programme onboard the French Army Light Aviation (SICS ALAT) by 2026. The group will also supply a secure multifunction computer for the French Navy's E-2D Hawkeye aircraft.
- In October 2024, Atos lost a contract for the supply of a supercomputer to the French Ministerial Agency for Defence AI (AMIAD). The contract, estimated at more than €100m (ASGARD project), was awarded by the French Ministry of Armed Forces to Orange and Hewlett-Packard instead.

#### Export markets

- In 2024, Atos strengthened its presence in Mexico (security operations centre for the supply of cybersecurity services). Austria (site specialising in satellite technologies) and Romania (cloud security services centre).
- In November 2024, Atos signed a framework contract worth up to €60m with a research centre in Finland to develop a supercomputer based on its BullSequana XH3000 platform. The group also signed contracts to supply AI supercomputers to Denmark and Sweden.

#### Technology and Innovation

In May 2024, Atos cybersecurity experts based in Poland and Romania participated in the cyber defence exercise Locked Shields 2024, organised by the NATO Cooperative Cyber Defence Centre of Excellence (CCDCOE).



# ALISTAL

Australian military and civilian shipbuilding company, ranked 80th-largest defence contractor worldwide

#### **BUSINESS AREAS**

Platform manufacturer and systems integrator

- Surface ships (frigates, patrol boats) and auxiliary ships)
- Subsystems for naval platforms
- Vessel control and information management
- Maintenance, modernisation and related ship services

#### **GOVERNANCE**

Chairman	Richard V. Spencer
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Non executive Director John Rothwell

Chief Executive Officer Patrick (Paddy) Gregg

#### OWNERSHIP STRUCTURE (as 10.10.2024)

Symbol	ASB
Listed on	Australian Stock
Eloted off	Exchange
Market Cap (A\$m)	993

#### Major shareholders (as of 10.10.2024)

Tattarang Ventures Pty Ltd.	19.61%
John Rothwell	8.76%
Copia Investment Partners Ltd.	6.52%
Chester Asset Management Pty Ltd.	6.05%

#### MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
Austal Muscat	70%	Oman

#### KEY FIGURES (Fiscal year ended: June 30th)

€ millions	2020-21	2021-22	2022-23	2023-24
Revenue	983	920	1,019	890
∆ (%) [AUD]*	-24.64%	-9.10%	10.92%	-7.32%
Defence (%)	89%	92%	94%	97%
Export (%)	84%	80%	79%	81%
Operating profit/loss	72	78	-3	35
Operating margin	7.29%	8.45%	-0.32%	3.88%
Net income	51	51	-9	9
Order book**	1,577	1,987	1,415	2,363
Employees	≈ 5,500	≈ 5,000	≈ 4,300	4,258

<sup>\*</sup>Variation based on revenue in local currency See €/AUD, p.9

### REVENUE BY BUSINESS SEGMENT (%)



<sup>\*</sup>Group's operations in Australia, the Philippines, Vietnam and Oman

#### **REVENUE BY REGION (%)**



<sup>\*\*</sup>Excluding options

# Catalad Dynamics constitution of the Catalada Ca MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS Frigates and patrol boats Independence-class LCS frigate Heritage-class future Offshore Patrol Cutter (OPC) Cape / Evolved Cape-class patrol boats Guardian-class patrol boat Auxiliary ships T-AGOS future Ocean Surveillance ship Navajo-class future Towing, Salvage and Rescue (T-ATS) ship Spearhead-class Expeditionary Fast Transport (EPF) / EMS (Expeditionary Medical Ship) Landing Craft Utility (LCU) 1700-class craft Auxiliary Floating Dock Medium (AFD-M) Uncrewed surface vehicle Saildrone Surveyor future USV Subsystems for naval platforms Command modules for the Virginia and Columbia-class submarines Aircraft elevators for Gerald R. Ford-class aircraft carriers Vessel control and information management systems MARINELINK product suite Motion Control vessel stability system Services Naval MRO and modernisation services

\*Formerly GE Aviation \*\*Formerly Huntington Ingalls Industries

#### Business trends

- Austal posted revenues of A\$1,469m (€890m) during fiscal year 2024 (ended June 30th), down 7.3% year-on-year in local currency. Shipbuilding revenues fell, with a market decline in both divisions, while revenues from maintenance and support services increased. Austal delivered seven ships during the year, all of them naval vessels: four Guardian-class and one Evolved Cape-class patrol boats by Austal Australia, as well as the penultimate Independence-class LCS frigate and one EPF vessel by Austal USA.
- In September 2024, the South Korean group Hanwha Ocean withdrew its bid for Austal, made in April 2024 for A\$1.02bn (€620m).

#### Home market

- In Australia, the group is a long-standing supplier of patrol boats (Cape and Guardian programmes) to the Australian Border Force and the Royal Australian Navy. In 2024, the Australian government ordered 4 additional patrol boats: 2 Evolved Cape-class ones in February for A\$157m (€95m) and 2 Guardian-class ones in June for A\$39m (€24m). In October 2024, Austal delivered the 8th Evolved Cape-class patrol boat and the 21st Guardian-class patrol boat, out of 10 and 24 units planned respectively.
- In November 2023, Austal signed an agreement with the Australian government, known as the SSA (Strategic Shipbuilding Agreement), meaning that it will build all future naval vessels from federal programmes. Austal (shipbuilding) and Australian group Birdon (design) were selected for the LC-M (Landing Craft-Medium) programme and will supply 18 landing craft. Subsequent programmes involve 8 larger landing craft, known as LC-H (Landing Craft-Heavy), and 6 naval autonomous vehicles (Large Optionally Crewed Vessels) for the Australian Navy.
- The Australian government also plans to acquire up to 11 general purpose frigates (3 built in the country of the chosen shipbuilder and 8 in Australia by Austal) as part of the SEA 3000 programme. tkMS (MEKO A-200-class) and Mitsubishi Heavy Industries (Mogami-class) were shortlisted for this programme in November 2024. Delivery of the first frigate is scheduled for 2029.

#### Export markets

- In December 2023, Austal USA signed a \$868m (€796m) contract with the U.S. Navy to design and build 3 Expeditionary Medical Ships (EMS), based on the Spearhead-class Expeditionary Fast Transport (EPF) vessels and equipped with enhanced medical capabilities.
- In May 2024, the U.S. Navy awarded Austal USA a \$516m (€465m) contract to start building the first T-AGOS Ocean Surveillance ship. Up to 7 vessels could be ordered under the programme.
- ▶ In the summer of 2024, Austal USA began construction of the third of 5 Navajo-class Towing, Salvage and Rescue (T-ATS) ships and the first Heritage-class Offshore Patrol Cutter (up to 11 units planned).
- ▶ In August 2024, the U.S. Navy exercised an option for the production of 2 additional Landing Craft Utility (LCU) 1700-class craft and awarded a \$55m (€50m) contract to Austal USA, which now has 5 units under construction or on order. Options for a further 7 vessels can still be exercised.
- In September 2024, General Dynamics Electric Boat awarded Austal USA a \$450m (€405m) contract to expand submarine module production capacity. Austal USA also signed a \$152m (€137m) contract with the U.S. Navy to invest in its shipyard in Mobile, Alabama to support the U.S. submarine production capacity. The U.S. Navy has set a goal of building 3 submarines per year, 1 Columbia-class SSBN and 2 Virginia-class SSNs.

#### Technology and Innovation

In March and April 2024, Austal Australia and Australian company Greenroom Robotics tested autonomous systems on a decommissioned patrol boat, renamed Sentinel, as part of the Patrol Boat Autonomy Trial (PBAT) for the Australian Navy. Following this event, they established a strategic partnership to further collaborate in remote and autonomous technologies.



# AVIATION INDUSTRY CORPORATION OF CHINA (AVIC)

Chinese conglomerate made up of about 100 subsidiaries, mainly active in civil and military aeronautics, China's largest and world's 2nd-largest defence contractor

#### **BUSINESS AREAS**

#### Platform manufacturer

- Commercial and military aircraft
- ► Commercial and military helicopters
- Unmanned aircraft systems
- Automotive equipment
- ▶ Electronics and electric equipment
- Engineering
- ▶ Financial services

#### **GOVERNANCE**

Chairman	Zhou Xinmir
Chief Executive Officer	Han Zhanning

# KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	59,467	67,983	78,443	110,789
∆ (%) [\$]*	1.58%	18.43%	2.71%	44.99%
Defence (%)	38%	37%	37%	37%
Export (%)	N/A	N/A	N/A	N/A
Operating profit/loss	N/A	N/A	N/A	N/A
Operating margin	N/A	N/A	N/A	N/A
Net income	N/A	N/A	N/A	N/A
Order book	N/A	N/A	N/A	N/A
Employees	400,000	400,000	400,000	400,000

<sup>\*</sup>Variation based on revenue in U.S. dollars See €/\$, p.9

#### OWNERSHIP STRUCTURE

Major shareholders (as of 10.10.2024)

SASAC (Chinese State)

# REVENUE BY BUSINESS SEGMENT (%)



#### MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
AviChina Industry & Technology	58.6%	China
Xi'an AVIC Hamilton Sundstrand Aviation Electric	50%	China
Cessna-AVIC Aircraft (Shijiazhuang)	N/A	China
Cessna-AVIC Aircraft (Zhuhai)	N/A	China

#### REVENUE BY REGION (%)



100%

# AVIATION INDUSTRY CORPORATION OF CHINA (AVIC)

MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	1
Fighter and trainer aircraft	
Shenyang FC-31 future fighter aircraft	
Chengdu J-20 fighter aircraft	
Chengdu J-10 fighter aircraft	•
Shenyang J-16 fighter aircraft	
Shenyang J-15 carrier-based fighter aircraft	•
FC-1/JF-17 fighter aircraft (aerostructures)	• • • •
Guizhou JL-9/FTC-2000G trainer/ light attack aircraft	•
Hongdu JL-10/L-15 trainer/light attack aircraft	•
Transport and special aircraft	
Xi'an Y-20 strategic transport aircraft	
Shaanxi Y-9 transport aircraft	•
Shaanxi KJ-500 surveillance aircraft	
Xi'an H-20 future strategic bomber	
Military helicopters	
Harbin Z-20 twin-engine utility helicopter	
Harbin Z-19 twin-engine reconnaissance and attack helicopter	•
Harbin Z-9 twin-engine utility helicopter	
Unmanned aircraft systems	
Wing Loong I, II and III MALE UAVs	
Wing Loong-10 HALE UAV	
AV500W and AR500C VTOL UAVs	

"Subsidiary of UAC (United Aircraft Corporation), Rostec group "Pakistan Aeronautical Complex ""UkrOboronProm group ""Subsidiary of UEC (United Engine Corporation), Rostec group ""Aero Engine Corporation of China"

# AVIATION INDUSTRY CORPORATION OF CHINA (AVIC)

#### STRATEGIC HIGHLIGHTS

#### Business trends

- AVIC, which includes Chengdu, Shenyang, Guizhou, Hongdu, Xi'an and Shaanxi aircraft manufacturers, as well as Harbin helicopter manufacturer, recorded revenues of \$119.8bn (€110.8bn) in 2023, up 45% year-on-year in U.S. dollars. The group delivered several dozen 5th-generation J-20 (Chengdu) fighter aircraft to the Chinese Air Force over the year.
- AVIC has been an Airbus partner since 1985 on several programmes, including the assembly of the A320 passenger aircraft in China and the local production under licence of the AC352 (H175) civil helicopter and the Z-9 (AS365 Dauphin) military helicopter. Moreover, some of AVIC's military aircraft (J-15 and JL-10) are derived from platforms designed by Russian group United Aircraft Corporation (UAC).
- Several foreign aeronautical groups set up joint ventures with AVIC, such as Safran (via its Snecma subsidiary, turboprop engines for commercial aircraft) and Textron (Cessna-AVIC Aircraft, sale and maintenance of business jets). AVIC is also partnering with Chinese players, via the COMAC joint venture, to produce the ARJ21 (short-range) and the C919 (medium-range) jets, and to develop the C929 and C939 long-range jets. Powered by CFM International's LEAP-1C engine (GE Aerospace / Safran), the C919 made its commercial debut in May 2023.
- AVIC is no longer involved in aircraft propulsion systems, following the sale of its activities in this field to engine manufacturer Aero Engine Corporation of China (AECC) in 2016.

#### Home market

- AVIC generates a large part of its turnover on its domestic market. As the leading company in the Chinese aeronautics sector, the group is directly or indirectly involved in most of the country's military aircraft programmes.
- The group aims to deliver around 100 J-20 (Chengdu) fighter aircraft to the Chinese Air Force in 2024 and 120 in 2025.
- Xi'an is still developing the future H-20 strategic stealth bomber, which could be unveiled at the end of 2024 or in 2025.

#### **Export markets**

- The group generates about 20% of its turnover form exports. Africa, the Middle East and Eastern European countries are AVIC's main target markets.
- AVIC handed over several aircraft to export customers: the first two of 12 L-15 (Hongdu) advanced trainer aircraft to the UAE Air Force in November 2023, an unspecified number of J-10C (Chengdu) fighter aircraft to the Pakistan Air Force and 6 FTC-2000G (Guizhou) light trainer/attack aircraft to the Myanmar Air Force in August 2024.
- In the first half of 2024, Pakistan Aeronautical Complex signed two contracts to supply JF-17 fighter aircraft to Azerbaijan and Iraq. Chengdu will supply aerostructures for the aircraft, representing around 42% of the airframe, with final assembly being carried out in Pakistan.
- Egypt ordered an unspecified number of J-10C (Chengdu) fighter jets in September 2024, becoming the second export customer for the aircraft after Pakistan.

#### Technology and Innovation

- In May 2024, the Chinese Air Force announced that Harbin developed an armed version of the Z-20 utility helicopter with four mounting points for aerial guns and an EO/IR pod.
- Xi'an's self-funded HH-100 unmanned cargo aircraft made its maiden flight in June 2024. With a payload capacity of 700 kg and a full-weight range of 520 km, it will be able to carry out various missions, such as forest firefighting, fire monitoring, disaster-relief supply delivery or relay communication.



# AVIO

Major player in the global space launcher market, prime contractor for the Vega launcher programme and subcontractor for the Ariane 6 programme

### **BUSINESS AREAS**

Platform manufacturer and systems integrator

- ▶ Launch systems
- ▶ Launcher and satellite propulsion systems
- Missile propulsion systems
- Payload adapters
- Space vehicle

#### **GOVERNANCE**

Symbol

Chairman	Roberto Italia
Chief Executive Officer	Giulio Ranzo
Chief Operating Officer	Rosario Esposito

## KEY FIGURES (Fiscal year ended: December 31st)

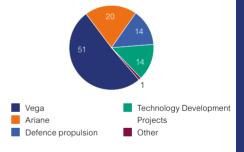
€ millions	2020	2021	2022	2023
Revenue	322	312	357	339
△ (%)	-12.67%	-3.23%	14.67%	-5.21%
Defence (%)	N/A	9%	6%	14%
Export (%)	N/A	N/A	N/A	N/A
Operating profit/loss	16	9	2	5
Operating margin	4.94%	2.86%	0.62%	1.54%
Net income*	14	8	-0,4	6
Order book	736	877	1,014	1,359
Employees	950	991	1,147	1,256

<sup>\*</sup>Net income attributable to shareholders

#### OWNERSHIP STRUCTURE (as of 10.10.2024)

Cy20.	,
Listed on E	Borsa Italiana
Market Cap (€m)	325
Major shareholders (as of 10.10.2024)	
Leonardo	29.63%
Cobas Asset Management SGIIC SA	8.61%
Servizi CGN SrI	7.38%
Self-owned	4.14%

# REVENUE BY BUSINESS SEGMENT (%)



#### MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
Spacelab	70%	Italy
Regulus	60%	France
Europropulsion	50%	France

# REVENUE BY REGION (%)



AVIO

# rd Graini celab ond Gaird Spacelalo MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS Launch vehicles Vega C launcher Vega C+ future launcher Vega E future launcher Launch services (Vega family of launchers) Launcher and satellite propulsion systems P120C solid propellant engine (Ariane 6, Vega C, Vega E) P160 future solid propellant engine (Ariane 6, Vega C+) Zefiro 9 (Vega C) and Zefiro 40 (Vega C, Vega E) solid propellant engines M10 liquid oxygen and methane engine (Vega E) Liquid oxygen turbopumps for Vulcain 2.1 and Vinci engines (Ariane 6) AVUM+ liquid propulsion module (Vega C) Satellite propulsion system for the Hera European space mission Missile propulsion systems CAMM-ER missile propulsion system ASTER 30 missile propulsion and actuation systems and fins Payload adapters Small Spacecraft Mission Service (SSMS) dispenser adaptor Vampire and VESPA C payload adapters Space vehicle Space Rider future space transport system

#### Business trends

- Avio posted revenues of €339m in 2023, down 5.2% year-on-year due to lower production of the P120C engine (the Ariane 6 maiden flight being postponed to mid-2024) and Vega C launcher. Revenues from the Vega and Ariane launchers divisions fell by 22.4% and 26.2% respectively in 2023, while defence propulsion activities and the Technology Development Projects division recorded strong growth.
- The group's order book increased by more than a third to reach €1.36bn at the end of 2023, thanks to orders worth €684m received during the year (mainly in launchers and missile propulsion systems).
- On its final flight in September 2024, the Vega launcher put the Sentinel 2C Earth observation satellite into orbit, as part of the European Copernicus programme.
- Following the completion of tests on the second-stage Zefiro 40 engine, the Vega C launcher, which was grounded since the failure of its first commercial flight at the end of 2022, successfully returned to flight in December 2024. Arianespace will manage the next 4 flights of Vega C, scheduled in 2025, after which responsibility for launch operations and commercialisation rights for the launcher will be transferred to Avio.
- Facilities at the Guiana Space Centre in Kourou (French Guiana) were allocated to Avio to increase the lauch rate of Vega C (target of 4 to 5 launches per year) and Vega E, whose first flight is scheduled for 2026 or 2027.

#### Home market

- In April 2024, the European Space Agency (ESA) selected the Vega C launcher for the Smile (Solar wind Magnetosphere Ionosphere Link Explorer) mission led by ESA and the Chinese Academy of Sciences (CAS) to study the interactions between the Sun and the Earth. The launch is scheduled for the end of 2025 from Kourou.
- Ariane 6 successfully completed its maiden flight in July 2024. Avio has already signed several contracts for the production of P120C engines and liquid oxygen turbopumps for the Vulcain 2.1 and Vinci engines for the first 14 units of the launcher.

#### **Export markets**

- A supplier of boosters for the ASTER 30 missiles to MDBA, Avio signed a €90m contract in April 2023 with deliveries scheduled over the 2025-2029 period. A modernised version of the ASTER 30 booster, called MLU (Mid-Life Update), is currently under development.
- Anticipating strong growth in the U.S. market, Avio established a presence in the country in 2022 through the Avio USA subsidiary, based in Arlington (Virginia). In July 2024, the group partnered with the U.S. Army for the development and fast-prototyping of a solid rocket engine for surface-to-air systems. At the same time, Avio signed a contract with Raytheon (part of the RTX group) to provide engineering services to help develop solid rocket engines for defence applications.

#### Technology and Innovation

- ► The group's self-financed R&D expenditure amounted to €7.7m in 2023, representing 2.3% of revenues.
- Avio is still testing the M10 engine, which will power the third stage of the Vega E launcher. The group is also developing the Space Rider space shuttle, scheduled for a test flight in 2027.
- In September 2024, Avio presented the planned evolution of its Vega launcher family, including the introduction of a more powerful version of the Vega C, called Vega C+, which will use the P160 engine (derived from the P120C) for its first stage. The group will then offer the Vega E launcher, followed by its successor, the Vega Next, expected after 2032 and powered by the M60 engine (based on the M10).



# **BAE SYSTEMS**

Diversified defence group (aviation, naval, land, etc.), with a strong presence on the U.S. market (nearly 50% of revenues), and 7th-largest defence contractor worldwide

#### **BUSINESS AREAS**

Platform manufacturer and systems integrator

- ▶ Military aircraft and UAVs
- Naval platforms and systems (surface ships and submarines)
- ► Land platforms and systems (armoured vehicles and artillery systems)
- ▶ Defence electronics
- Cybersecurity
- ▶ Space

Symbol

#### **GOVERNANCE**

Chairwoman	Cressida Hogg
Chief Executive Officer	Charles Woodburn
Managing Director, Air	Simon Barnes

#### OWNERSHIP STRUCTURE (as of 10.10.2024)

Listed on	LSE
Market Cap (£m)	38,390
Major shareholders (as of 10.10.2024)	
Capital Research & Management Co. (World Investors)	9.80%
Invesco Asset Management Ltd.	4.76%
BlackRock Investment Management (UK) Ltd.	4.05%
Barclays Bank Plc (Private Banking)	3.99%

# MAIN JOINT VENTURES AND ASSOCIATES

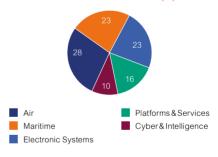
Name	%	Country
CTA International	50%	France
FNSS	49%	Turkey
Rheinmetall BAE Systems Land	45%	United Kingdom
Panavia Aircraft	42.5%	Germany
MBDA	37.5%	France
Eurofighter Jagdflugzeug	33%	Germany

#### KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	21,660	22,699	24,921	26,526
Δ (%) [£]*	5.31%	1.27%	8.90%	8.56%
Defence (%)	95%	95%	95%	94%
Export (%)	81%	80%	77%	74%
Operating profit/loss	2,169	2,778	2,795	2,957
Operating margin	10.01%	12.24%	11.21%	11.15%
Net income**	1,460	2,044	1,865	2,134
Order book	50,278	52,381	66,404	80,322
Employees	89,600	90,500	93,100	99,800

<sup>\*</sup>Variation based on revenue in local currency See €/£, p.9

#### REVENUE BY BUSINESS SEGMENT (%)



#### REVENUE BY REGION (%)



ВА

<sup>\*\*</sup>Net income attributable to shareholders

ned with the any other trees of the state of to the part of the Nothing Edunial Transfer of Dradies MAIN PROGRAMMES COOPERATIONS Airbus Leonardo AND EXPORT PARTNERSHIPS Military aircraft GCAP (Global Combat Air Programme) future fighter aircraft\* F-35 Lightning II fighter aircraft (rear fuselage, electronic warfare suite, etc.) Eurofighter Typhoon fighter aircraft Hawk trainer aircraft Naval platforms and systems River-class future destroyer (Canadian Surface Combatant programme)\*\* (design) Hunter-class future frigate (SEA 5000 programme)\*\* City-class future frigate (Type 26) Dreadnought-class future ballistic missile submarine Astute-class nuclear-powered attack submarine Land platforms and systems CV90 infantry fighting vehicle Armored Multi-Purpose Vehicle (AMPV) Amphibious Combat Vehicle (ACV)\*\*\* M109A7 self-propelled howitzer 40mm Cased Telescoped Armament System (40CTAS)\*\*\*\* M982 Excalibur advanced precision guided artillery shell Defence electronics Advanced Precision Kill Weapon System II (APKWS II)

Referred to as Tempest in the UK "Based on the Royal Navy's City-class frigate "Based on Iveco Defence Vehicles' SuperAV "CTA International joint venture (BAE Systems / KNDS France) "Formerly Raytheon Technologies"

#### Business trends

- ▶ BAE Systems revenues reached £23.1bn (€26.5bn) in 2023, 94% of which in defence. Year-on-year growth of 8.6% in local currency was driven by progress on the construction of submarines and frigates for the Royal Navy, a resumption of orders for electronic components from civil aircraft manufacturers and a large number of contracts for armoured vehicles signed in recent years by the Swedish subsidiary BAE Systems Hägglunds. The group is the leading supplier of defence equipment to the UK, Saudi Arabia and Australia, as well as one of the 10 top contractors to the U.S. Department of Defense.
- The British, Italian and Japanese governments officially signed a treaty in Tokyo in December 2023 for the development of the future 6th-generation GCAP (Global Combat Air Programme) fighter aircraft, known as Tempest in the UK, whose design was presented by BAE Systems, Leonardo and Mitsubishi Heavy Industries at the Farnborough Air Show in July 2024. Other groups involved in the programme include MBDA, Rolls-Royce, Avio Aero, ELT Group, Mitsubishi Electric and IHI Corporation.
- In February 2024, BAE Systems completed the acquisition of equipment manufacturer Ball Aerospace (space vehicles, antennas, tactical systems, optics, mission systems, C4ISR, ground systems, data analysis, sensors, etc.) from its parent company Ball Corporation for \$5.5bn (€5.1bn). Ball Aerospace, renamed Space & Mission Systems, has 9 sites in the United States and employs 5,200 people.

#### Home market

- ▶ BAE Systems generated 26% of its turnover in the UK during 2023.
- In August 2024, the group launched the second of the 8 City-class frigates ordered by the Royal Navy, named Cardiff, at the Scotstoun shipyard (Scotland). The ship is due to enter service in 2028. Three other units are currently under construction.
- BAE Systems is pursuing construction of Astute-class SSN submarines (2 units, scheduled to enter service in 2025-2026) and Dreadnought-class SSBN submarines (3 units, scheduled to enter service in the 2030s).

#### Export markets

- In 2023, 74% of the group's revenue came from exports, with the United States accounting for nearly half of sales, thanks in particular to the F-35 programme.
- ► In February 2024, the group signed a 15-year framework agreement worth DKK 3bn (€403m) with the Danish Defence Acquisition and Logistics Organization (DALO) to provide repair and maintenance services for a fleet of 44 CV9035DK tracked armoured infantry fighting vehicles.
- ▶ BAE Systems signed a \$754m (€698m) contract with the U.S. Army in March 2024 to continue full-scale production of the AMPV tracked armoured personnel carrier.
- The Australian government selected BAE Systems and ASC in March 2024 to build the future SSN-AUKUS submarines, which are expected to enter service in the 2040s.
- ▶ BAE Systems signed a £4.6bn (€5.3bn) contract with the Royal Australian Navy in June 2024 to supply the first three Hunter-class anti-submarine warfare frigates and began construction of the first unit. An order for three additional frigates is expected.
- ► The U.S. Army awarded BAE Systems a \$493m (€456m) contract in August 2024 to continue production of M109A7 self-propelled howitzers and M992A3 ammunition carriers.
- In September 2024, BAE Systems won a \$440m (€407m) contract from the U.S. Army to supply 200 M2A4 Bradley armoured infantry fighting vehicles.

### Technology and Innovation

► The group's self-funded R&D expenditure reached £274m (€315m) in 2023, representing 1.2% of revenues.



# BAYKAR TECHNOLOGY

Family-owned Turkish group specialised in military unmanned aircraft systems, Turkey's leading exporter in the defence and aerospace sector, and 69th defence contractor worldwide\*

\*SIPRI rankings (2023 data)

€ millions

Revenue

Δ (%) [\$1\*

Defence (%)

Export (%)

Operating

profit/loss Operating

margin Net income

Order book

**Employees** 

#### **BUSINESS AREAS**

Platform manufacturer and systems integrator

- Tactical and combat UAVs
- Weapon systems for UAVs
- Avionics and subsystems
- ▶ C4I systems
- Services (MRO, training, etc.)

#### **GOVERNANCE**

Chairman and CTO Selçuk Bayraktar

Chief Executive Officer Haluk Bayraktar

\*Variation based on revenue in U.S. dollars See €/\$, p.9

# OWNERSHIP STRUCTURE

Symbol
Listed on Unlisted group
Market Cap

Major shareholders (as of 10.10.2024)

Bayraktar family 100%

# REVENUE BY BUSINESS SEGMENT (%)

KEY FIGURES (Fiscal year ended: December 31st)

2021

≈ 702

N/A

N/A

80%

N/A

N/A

N/A

N/A

N/A

2022

≈ 1.349

68.67%

95%

84%

N/A

N/A

N/A

N/A

3.100

2023

≈ 1.832

41.43%

N/A

≈ 90%

N/A

N/A

N/A

N/A

3.600

2020

N/A

N/A

N/A

N/A

N/A

N/A

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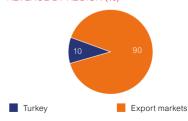
N/A

N/A



#### MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
Black Sea Shield	N/A	Turkey



# MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS

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	42, 50, 471, 45, 40, 40, 640, 80,
Unmanned aircraft systems	
Bayraktar TB3 future carrier-based MALE UCAV*	•
Bayraktar Kizilelma future carrier-based UCAV	• • •
Bayraktar Akinci HALE UCAV	• • • • •
Bayraktar TB2 MALE UCAV	• • •
Bayraktar Kalkan future VTOL reconnaissance and surveillance UAV	
Bayraktar Mini UAV reconnaissance and surveillance UAV	
Weapon systems for UAVs	
Kemankes small cruise missile (for TB2, TB3 and Akinci UAVs)	
Avionics and subsystems	
Avionics	
Data Link systems	
Subsystems (magnetometers, display command modules, etc.)	
C4I systems	
Ground control stations and operations centers	
Mapping systems	
Services	
Maintenance, technical and logistical support, etc.	
Simulators and training services	

\*Based on the TB2 \*\*Defence Industries Research and Development Institute (Turkey)\*\*\*TUSAS Engine Industries
\*\*\*\*UkrOboronProm group \*\*\*\*\*RTX group (formerly Raytheon Technologies)

#### Business trends

- ▶ Baykar posted revenues of around \$1.98bn (€1.83bn) in 2023, up 41.4% year-on-year in U.S. dollars. Growth was driven by export sales, which grew 50% over the year to \$1.76bn (€1.63bn) in 2023, representing around 90% of total revenue.
- ▶ To meet rising international demand, Baykar (which order book amounts to 3 years of production) plans to increase its industrial capacity, in particular to double production of the Bayraktar Akinci UCAV (70 units expected in 2024), while production of the Bayraktar TB2 should rise to 230 units over the year.
- In February 2024, the group started work on the construction of a factory in Ukraine (near Kiev), due to last one and a half years. This plant will employ around 500 people and will be dedicated to the production of Bayraktar TB2 and/or TB3 UCAVs by 2025 (around 120 units per year). The UAVs produced in Ukraine will include a significant proportion of local components and equipment (engines, wheels, etc.).

#### Home market

- The group is one of Turkey's leading UAV manufacturers, and several of its models are in service with the Turkish Armed Forces (Bayraktar Mini UAV, Bayraktar TB2 and Bayraktar Akinci).
- ► In March 2024, Baykar tested Roketsan's MAM-L and MAM-T UAV ammunition for possible integration on its Bayraktar Akinci UCAV.
- The Bayraktar Kizilelma future carrier-based UCAV made its maiden flight in September 2024. It is meant to be operated from the TCG Anadolu, a drone-carrying amphibious assault ship of the Turkish Navy.
- Baykar is still flight testing its Bayraktar Kalkan future VTOL UAV, designed for reconnaissance and surveillance missions. On its 30th flight, the drone reached an altitude of 14,500 feet (4,400 metres) and remained airborne for 70 hours.

#### Export markets

- In 2023, 90% of the group's revenue came from exports. Baykar's greatest success on foreign markets is the Bayraktar TB2, which has been acquired or ordered by nearly 30 countries (mainly in Eastern Europe, Africa, the Middle East and Central Asia).
- ▶ In December 2023, Romania presented the first of the 18 Bayraktar TB2 UCAVs it ordered in April 2023.
- In March 2024, the Maldives took delivery of at least two Bayraktar TB2 UCAVs, which will be used primarily for surveillance missions in the country's maritime areas.
- The Bayraktar Akinci UCAV entered service in Burkina Faso in March 2024. The country ordered at least two units and already operates the Bayraktar TB2 UCAV.
- In May 2024, Baykar handed over to Poland the last of the 24 Bayraktar TB2 UCAVs ordered in 2021. The group also delivered 12 mobile control stations, ground equipment and spare parts, and will provide logistical support and training services.

### Technology and Innovation

- In April 2024, Baykar began testing its Kemankes 2 mini-cruise missile, developed to enhance the attack capabilities of the Bayraktar TB2 UCAV and which could also be fitted to other Bayraktar UCAVs (TB3 and Akinci). The missile has a range of one hour and can strike a target more than 200 km away, which will be recognised using an optical guidance system based on artificial intelligence.
- In June 2024, the Bayraktar TB3 UCAV broke the altitude record for a Turkish drone powered by a Turkish technology engine, in this case the PD170 turbodiesel from TUSAS Engine Industries, flying at an altitude of 36,130 feet (just over 11,000 metres).



# **BOFING**

Industrial group with civil and military activities, mainly active in military aviation (FA-18 combat aircraft, CH-47 Chinook helicopter, etc.), and 6th-largest defence contractor

#### **BUSINESS AREAS**

Platform manufacturer and systems integrator

- Commercial and military aircraft
- Military helicopters
- Unmanned systems
- Missile systems and guided ammunition
- Cybersecurity
- Services (MRO, training, etc.)
- Space

#### **GOVERNANCE**

Symbol

Chairman	S. M. Mollenkopt
Chief Executive Officer	R. K. Ortberg
President, Defense, Space & Security	Steve Parker

<sup>\*</sup>Appointed in September 2024 on an interim basis

#### OWNERSHIP STRUCTURE (as of 10.10.2024)

Listed on	NYSE
Market Cap (\$m)	92,010
Major shareholders (as of 10.10.2024)	
Vanguard Fiduciary Trust Co.	8.27%
Newport Trust Co.	5.14%
BlackRock Advisors LLC	5.07%
State Street Corporation	4.41%

#### MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
Deep Space Transport	50%	United States
Hellfire Systems	50%	United States
Initium Aerospace	50%	United States
Tata Boeing Aerospace	50%	India
United Launch Alliance	50%	United States

# KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	50,926	52,651	63,255	71,965
Δ (%) [\$]*	-24.04%	7.10%	6.94%	16.79%
Defence (%)**	45%	42%	35%	32%
Export (%)***	37%	37%	41%	42%
Operating profit/loss	-11,180	-2,426	-3,342	-715
Operating margin	-21.95%	-4.61%	-5.28%	-0.99%
Net income****	-10,397	-3,552	-4,687	-2,056
Order book	296,173	333,185	378,989	470,765
Employees	141,000	142,000	156,000	171,000

<sup>\*</sup>Variation based on revenue in local currency See €/\$, p.9

BA

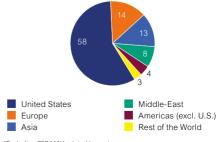
#### REVENUE BY BUSINESS SEGMENT (%)\*





<sup>\*</sup>Revenue distribution based on total sales excluding eliminations

### REVENUE BY REGION (%)\*



\*Excluding 737 MAX-related impacts

<sup>\*\*</sup>Defense, Space & Security division only \*\*\*Excluding 737 MAX-related impacts

<sup>\*\*\*\*</sup>Net income attributable to shareholders

Konta shi Heavy Indistres iteed with the little of the l er Jackeed Mariin C.E. Aerospace. MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS Military aircraft F/A-18E/F Super Hornet fighter aircraft F-15EX Eagle II fighter aircraft T-7A Red Hawk trainer aircraft P-8A Poseidon maritime patrol aircraft KC-46A Pegasus tanker aircraft Military helicopters CH-47 Chinook twin-engine heavy-lift transport helicopter MH-139A Grey Wolf twin-engine multirole helicopter\* (integration of military equipment) AH-64 Apache twin-engine combat helicopter V-22 Osprey tiltrotor transport aircraft Unmanned systems MQ-25 Stingray future refueling unmanned aerial vehicle Orca autonomous underwater vehicle Missile systems and guided ammunition Harpoon anti-ship missile Joint Direct Attack Munition (JDAM) Space Space Launch System (SLS) super-heavy lift launch vehicle CST-100 Starliner spacecraft

<sup>\*</sup>Based on Leonardo's AW139M \*\*Formerly Raytheon Technologies \*\*\*Formerly GE Aviation \*\*\*\*Textron group \*\*\*\*\*Hindustan Aeronautics Ltd \*\*\*\*\*Formerly Huntington Ingalls Industries

#### Business trends

- ▶ Boeing revenues reached \$77.8bn (€72.0bn) in 2023, up 16.8% year-on-year in local currency. Growth was mainly driven by increased activity in the Commercial Airplanes division (+30.3%), which recorded deliveries of 528 aircraft in 2023, compared to 480 in 2022. Nevertheless, the group still recorded losses during the year (operating loss of \$773m, or €715m), mainly due to the Defense, Space & Security division, with programmes suffering from major delays (KC-46A Pegasus, VC-25B or MQ-25 Stingray).
- ▶ Boeing operates in the military sector through its Defense, Space & Security division, which generated sales of \$24.9bn (€23.1bn) in 2023. Deliveries of combat aircraft increased over the year (22 F/A-18E/F Super Hornet and 9 F-15E Strike Eagle / F-15EX Eagle II, compared with 14 and 12 respectively in 2022). On the other hand, the group recorded lower sales of CH-47 Chinook heavy-lift helicopters (11 in 2023, compared with 19 in 2022), new AH-64 Apache helicopters (20 in 2023, compared with 25 in 2022), KC-46A Pegasus tankers (13 in 2023, compared with 15 in 2022) or P-8A Poseidon maritime patrol aircraft (11 in 2023, compared with 12 in 2022). The group also handed over the first 3 T-7A Red Hawk trainer aircraft to the U.S. Air Force.
- In July 2024, Boeing announced the acquisition of its subcontractor Spirit AeroSystems for \$4.7bn (€4.3bn). Spirit AeroSystems (revenue of \$6bn, or €5.6bn in 2023) produced faulty parts for Boeing's civil aircraft, in particular the 737 MAX. Boeing means to re-internalise part of the production of its aircraft in order to better detect any defects.
- ▶ In October 2024, the group announced that the first deliveries of its 777X civil aircraft will be delayed by one year and that production of its 767 civil cargo aircraft will cease by 2027, resulting in the loss of around 17,000 jobs (around 10% of the total workforce).

#### Home market

- ► The group generated 58% of its turnover in the United States in 2023. In defence, the U.S. remains by far Boeing's largest market (80% of sales).
- The Vulcan Centaur heavy launcher from United Launch Alliance (ULA, a joint venture with Lockheed Martin) successfully carried out its first launch in January 2024. It will be able to place a payload of 15.3 tonnes into GTO orbit.
- ▶ Boeing signed a \$178m (€165m) contract with the U.S. Army in April 2024 for the supply of 7 additional MH-139A Grey Wolf multirole helicopters. The first production helicopter was handed over to the U.S. Army in August 2024.

#### Export markets

- The group generated 42% of its revenues from exports in 2023. About half of exports sales were generated by the Commercial Airplanes division.
- ▶ In February 2024, Australia committed to investing a further A\$400m (€242m) in Boeing's MQ-28 Ghost Bat UCAV programme, for the acquisition of 3 additional units and the development of the Block 2 version of the drone.
- ► The U.S. Navy awarded Boeing a \$3.4bn (€3.1bn) contract in February 2024 to supply 17 P-8A Poseidon maritime patrol aircraft, of which 14 to Canada and 3 to Germany.
- ▶ In August 2024, Poland committed to procure 96 Boeing AH-64E Apache attack helicopters, worth around \$10bn (€9.3bn), under FMS procedures as part of the Kruk programme.
- In August 2024, the U.S. government approved the sale to Israel of 50 F-15IA Ra'am II fighter aircraft and midlife upgrade kits for 25 F-15I aircraft for \$18.8bn (€17.4bn).

### Technology and Innovation

► The group's total R&D expenditure reached \$3.4bn (€3.1bn) in 2023, representing 4.3% of revenues.



# DAMEN

Dutch family-owned group mainly operating in commercial shipbuilding, major global player in the patrol vessel segment

#### BUSINESS AREAS

#### Platform manufacturer

- Military shipbuilding (combat ships, patrol vessels, auxiliary ships, etc.)
- Commercial shipbuilding (tugs, yachts, ferries, utility ships, etc.)
- Spare parts and components
- MRO, conversion and refit of commercial and military ships

#### **GOVERNANCE**

Chairman	Kommer Damen
Chief Executive Officer	Arnout Damen

Chief Operating Officer Marc van Heyningen

### KEY FIGURES (Fiscal year ended: December 31st)

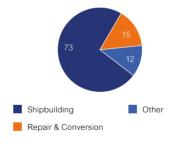
€ millions	2020	2021	2022	2023
Revenue	2,082	2,415	2,486	3,090
∆ (%)	13.53%	15.98%	2.94%	24.31%
Defence (%)	N/A	N/A	N/A	25%
Export (%)	N/A	N/A	79%	71%
Operating profit/loss	-190	11	5	60
Operating margin	-9.15%	0.46%	0.19%	1.93%
Net income	-162	2	15	43
Order book	8,000	8,800	8,800	11,300
Employees	10,446	10,291	9,897	9,399

#### OWNERSHIP STRUCTURE

Symbol	
Listed on	Unlisted group
Market Cap	
Major shareholders (as of	10.10.2024)

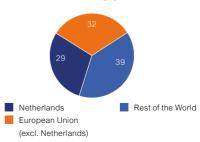
Damen family 1009

### REVENUE BY BUSINESS SEGMENT (%)



#### MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
Damen Shipyards Cape Town	70%	South Africa
Delta Marine Engineering	N/A	Belgium



Sound Ward Wate Keets wind shipping and an army shipping and army shipping army shipping and army shipping a The distant Brais indiction of Marin AM Croup OTO Melara MAIN PROGRAMMES, COOPERATIONS Caterdillar Hensoldt AND EXPORT PARTNERSHIPS Thales Combat ships F126 Niedersachsen-class future multi-purpose frigate (design) Future anti-submarine warfare frigate (Belgian and Dutch Navies) Sigma family of light frigates and corvettes Patrol vessels OPV family of offshore patrol vessels Stan Patrol family of patrol vessels Interceptor family of fast attack craft Fast Crew Supplier family Amphibious support ships Enforcer family of landing platform docks (LPD) Stan Lander-class landing ship Landing Ship Logistics and Landing Ship Transport families Landing Craft Utility and Landing Craft Vehicle Personnel families Auxiliary ships Den Helder future replenishment oiler Multi-Purpose Support Ships (MPSS) 7000 and 9000 Snellius-class hydrographic survey vessel FMulti-Role Auxiliary Vessel family NEGS and RGS submarine rescue vessels

<sup>&</sup>quot;Formerly Lürssen Defence "Prinvinvest group ""Corporación de Ciencia y Tecnología para el Desarrollo de la Industria Naval Marítima y Fluvial (Colombia) ""Subsidiary of Leonardo

#### Business trends

- Damen revenues increased 24.3% in 2023 to €3,090m. The group delivered 129 ships during the year, compared with 104 in 2022.
- Damen delivered several vessels in the military sector in 2023 (around 25% of revenues), including the second of three Warrior-class patrol boats, christened King Shaka Zulu (P1572), to the South African Navy. The group also completed the mid-life update of the Royal Netherlands Navy's Johan de Witt landing platform dock (LPD).
- Damen recorded a net profit of €43m in 2023 after reaching losses of €466m between 2018 and 2020. The group is facing difficulties in naval defence following the loss of several contracts, for example to supply 12 minehunters to the Belgian and Dutch Navies (awarded to Naval Group and Exail) and 4 Tamandaré-class frigates (awarded to tkMS and Embraer) in 2019, or to build 3 frigates for the Greek navy in 2022 (won by Naval Group).

#### Home market

- The group has been a key supplier to the Royal Netherlands Navy for its surface ship programmes since it took control of Royal Schelde (the former Royal Arsenal), renamed Damen Schelde Naval Shipbuilding, in 2000.
- Since June 2023, Damen has been responsible for supplying four anti-submarine warfare frigates to the Belgian and Dutch navies (two units each), to be delivered between 2028 and 2030 under the ASWF (Anti-Submarine Warfare Frigate) programme. The ships will replace the Karel Doorman-class frigates currently in service and already built by Damen.
- The Royal Netherlands Navy plans to acquire four new air defence frigates to replace the De Zeven Provinciënclass ships from 2036, a programme in which Damen expects to be involved.

#### Export markets

- Damen generated 71% of its revenues from exports in 2023. Its extensive network of shipyards abroad (Poland, Romania, South Africa, United Arab Emirates, Turkey, China, Vietnam, etc.) allows the group to win international tenders in both the civil and military sectors.
- Since 2020, Damen has been prime contractor for the German Navy's F126 Niedersachsen-class multimission frigate programme, in partnership with Thales Nederland and NVL Group, and at a cost of more than 68bn for 6 ships. Damen is designing the ships, which will be built in Germany by two NVL Group shipyards, Blohm+Voss and Peene-Werft, and German Naval Yards Kiel. The keel of the first frigate was laid in June 2024, with delivery of the ship scheduled from 2028 onwards.
- ► The Portuguese Navy awarded Damen a contract worth an estimated €130m in November 2023 for the construction of a Multi-Purpose Support Ship (MPSS) 7000, dedicated to ocean and deep-sea surveillance, humanitarian support, scientific research and projection missions. Named D. João II, the ship is scheduled for delivery in the second half of 2026.
- Damen was awarded a €11m contract by the Lithuanian Ministry of National Defence in August 2024 to supply the country's Naval Forces with an ice-breaking ASD Tug 3010 ICE.
- ► In September 2024, the group delivered a ship named Jacklyn to Blue Origin, dedicated to the recovery of the New Glenn space launcher following its return to Earth.

#### Technology and Innovation

► The group's self-financed R&D expenditure amounted to €5m in 2023, representing 0.2% of revenues.



# DASSAULT AVIATION

Aerospace and defence group operating in military aviation (including the Rafale fighter jet) and business jets, 38th-largest defence company in the world

#### **BUSINESS AREAS**

Platform manufacturer and systems integrator

- ▶ Fighter aircraft
- Mission aircraft (maritime patrol, surveillance, etc.)
- Unmanned aircraft systems
- Pyrotechnics and space activities
- Business iets
- MRO and modernisation services

#### **GOVERNANCE**

Chairman and CEO	Éric Trappie
Chief Operating Officer	Loïk Segaler
Executive Vice President, International	Richard Lavaud
Executive Vice President, Military and Space Programmes	Jean-Marc Gasparin
Executive Vice President, Military Customer Support	Bruno Chevalier

# KEY FIGURES\* (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	5,489	7,233	6,929	4,801
Δ (%)	-25.23%	31.77%	-4.20%	-30.71%
Defence (%)	59%	73%	70%	62%
Export (%)	89%	89%	82%	68%
Operating profit/loss	261	527	572	349
Operating margin	4.75%	7.29%	8.26%	7.27%
Net income**	396	693	830	886
Order book	15,895	20,762	35,008	38,508
Employees	12,441	12,371	12,768	13,533

<sup>\*</sup>Figues adjusted

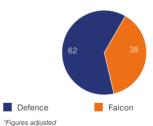
# OWNERSHIP STRUCTURE (as of 10.10.2024)

Symbol	AM
Listed on	Euronext Paris
Market Cap (€m)	14,556

# Major shareholders (as of 10.10.2024)

GIMD (Dassault family)	66.42%
Airbus	10.53%
Self-owned	2.26%

# REVENUE BY BUSINESS SEGMENT (%)\*



# MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
GIE Rafale International	60%	France
SECBAT	54%	France
Dassault Reliance Aerospace	49%	India
Thales	26%	France
Cognac Formation Aéro	10%	France



<sup>\*\*</sup>Net income attributable to shareholders

MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	Trade Saltar Pitor loga September 1 Trade Saltar Sa
Fighter aircraft	
NGWS (Next Generation Weapon System), including the future NGF fighter aircraft and its Remote Carrier	• • •
Rafale (F3R, F4 and F5 standards)	• •
Mirage 2000	• • •
Mission aircraft	
Future maritime and patrol reconnaissance aircraft (AVSIMAR programme)*	•
Falcon 8X future intelligence aircraft, CUGE programme (Capacité Universelle de Guerre Electronique)	•
Falcon 2000 multirole maritime aircraft	• • •
Unmanned aircraft systems	
European MALE RPAS future UAS (Eurodrone programme)	• • •
nEUROn UCAV demonstrator	
Pyrotechnics and space activities	
VEHRA** future reusable space transportation system for satellites	
MLA future airborne micro launcher	
Ejection seat ignition systems	
Initiators and pyrotechnic lines for space launchers	
MRO and modernisation services	
MRO of the Rafale (Ravel contract) and Mirage 2000 (Balzac contract) fighter aircraft	
Modernisation of the ATL2 maritime patrol aircraft	

<sup>\*</sup>Based on the Falcon 2000 LXS \*\*Véhicule hypersonique réutilisable aéroporté \*\*\*Hindustan Aeronautics Ltd \*\*\*\*\*RTX group (formerly Raytheon Technologies) \*\*\*\*\*Subsidiary of GE Aerospace (formerly GE Aviation)

#### Business trends

- Dassault Aviation adjusted revenues reached €4,801m in 2023, down 30.7% year-on-year. The Falcon division recorded lower sales, as fewer business jets were delivered (26 during the year, compared with 32 in 2022). Deliveries of Rafale fighter jets also declined (13 units in 2023, compared with 14 in 2022).
- ► The group's order book stood at €38.5bn at the end of 2023, up 10% year-on-year. It mainly consisted of defence orders (87.9% in value) and included 211 new Rafale, of which 141 are to be delivered overseas and 70 to France (compared with 125 and 39 respectively at the end of 2022). In France, the order book also included 7 Falcon 2000LXS multirole maritime aircraft, 2 Falcon 8X intelligence aircraft, the RAVEL (Rafale), BALZAC (Mirage 2000) and OCEAN (ATL2) MRO contracts, the upgrading of the Rafale F3R to the F4.1 standard and phase 1B of the FCAS demonstrator.
- ► For 2024, Dassault Aviation expects a rebound in revenues, mainly driven by the delivery of 20 Rafale and 35 Falcon aircraft.

#### Home market

- Dassault Aviation generated 32% of its turnover in France in 2023, up by 14 percentage points year-on-year due to the large number of Rafale deliveries during the year (11 units, compared to 1 in 2022).
- ▶ In December 2023, the French defence procurement agency (DGA) notified Dassault Aviation of an order for 42 Rafale fighter aircraft, known as Tranche 5, to be delivered to the French Air and Space Force between 2027 and 2032.
- ▶ In December 2023, the group announced that it would be able to produce 3 Rafale aircraft per month at its plant in Mérignac (near Bordeaux) by the end of 2024, compared with 2 per month in 2023, representing 33 aircraft in a full year.
- The French Ministry of Armed Forces awarded Dassault Aviation a contract in the summer of 2024 for development studies on the F5 standard for the Rafale fighter jet, which should be operational in 2033. This standard will include the integration of the future 4th-generation hypersonic nuclear missile (ASN4G) and a UCAV derived from the nEUROn.
- ► The group is still working on phase 1B of the FCAS programme alongside Airbus and Indra Sistemas under a €3.2bn contract awarded in 2022. The first flight of a demonstrator is scheduled for 2030.
- Dassault Aviation is also involved in the architecture study of the future maritime patrol system (Patmar), based on its Falcon 10X. The group is competing with Airbus on this programme, which is intended to replace the French Navy's 22 ATL2s by 2030.

#### Export markets

- Negotiations between the Indian government and the DGA on an order for 26 Rafale fighter jets, valued at around €4bn, officially began in October 2023. The aircraft, which should be able to carry the Astra airto-air missile (developed by Bharat Dynamics), are to be operated from two Indian Navy aircraft carriers. First delivery is scheduled in 2027.
- The final tranche of 18 Rafale aircraft for Indonesia came into effect in January 2024, following the entry into force, in September 2022 and August 2023, of the first two tranches of 6 and 18 aircraft. The fleet of Rafale aircraft on order for Indonesia under the contract signed in February 2022 for the acquisition of 42 units is now complete.
- In April 2024, France handed over to Croatia the first 6 of the 12 second-hand Rafale aircraft ordered in 2021 for more than €1bn. The other 6 aircraft will be delivered by early 2025.

### Technology and Innovation

► The group's self-financed R&D expenditure amounted to €483m in 2023, representing 10.1% of revenues.



# **FATON**

Manufacturer of electrical and hydraulic systems for various civil and military applications (aerospace, military vehicles and vessels, etc.), and 65th-largest defence contractor worldwide

#### **BUSINESS AREAS**

Systems integrator and components supplier

- Components for civil and military aircraft and space applications
- ▶ Components for military vehicles and vessels
- Electrical and power distribution components
- ► Automotive components
- Aircraft MRO and modernisation

#### **GOVERNANCE**

Chairman and CEO	Craig Arnold
President and Chief Operating Officer	Paulo Ruiz
President, Aerospace Group	John Sapp

# OWNERSHIP STRUCTURE (as of 10.10.2024)

Symbol	ETN
Listed on	NYSE
Market Cap (\$m)	134,136

#### Major shareholders (as of 10.10.2024)

Vanguard Fiduciary Trust Co.	9.27%
BlackRock Advisors LLC	5.55%
JPMorgan IM, Inc.	5.40%
Fidelity Management & Research Co.	5.04%

#### MAIN JOINT VENTURES AND ASSOCIATES\*

Name	%	Country

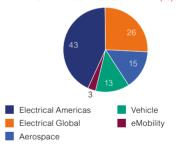
<sup>\*</sup>No information available

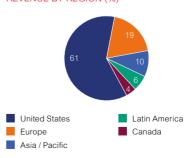
### KEY FIGURES\* (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	15,637	16,592	19,708	21,458
∆ (%) [\$]*	-16.51%	9.91%	5.73%	11.78%
Defence (%)	N/A	5%	6%	6%
Export (%)	44%	45%	40%	39%
Operating profit/loss	1,567	2,130	2,877	3,636
Operating margin	10.02%	12.84%	14.60%	16.94%
Net income**	1,235	1,812	2,338	2,977
Order book	4,564	6,796	10,684	11,765
Employees	92,000	86,000	92,000	94,000

\*Variation based on revenue in local currency See €/\$, p.9

#### REVENUE BY BUSINESS SEGMENT (%)





<sup>\*\*</sup>Net income attributable to shareholders

MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	speing Tothera havin the three Defend Dudines
Military aircraft	
Hydraulic system components (valves, pumps, etc.) (C-17, F/A-18E/F, V-22, F-22, C-130, Typhoon aircraft and CH-47, UH-60, OH-58D helicopters)	• • •
Engine components (sensors, actuators, etc.) (C-17, F/A-18E/F, V-22, F-22, C-130, Typhoon aircraft and CH-47, UH-60, OH-58D helicopters)	• • •
Fuel tank components (valves, gauges, etc.) (C-17, F/A-18E/F, V-22, F-22, C-130, Typhoon aircraft and CH-47, UH-60, OH-58D helicopters)	• • •
Cockpit components (seals, ducting, etc.) (F/A-18E/F, F-22, Typhoon aircraft)	• • •
Electro-mechanical seat actuator for the Advanced Concept Ejection System (ACES II) (F-22 aircraft)	• •
Electric components (power conversion and distribution, wiring, connectors, etc.)	
Fluid and air conveyance systems (hoses, tubing, ducting, etc.)	
Wheeled military vehicles	
Differentials and transmissions (JLTV, M-ATV, FMTV, HET, HEMTT*, Stryker, Humvee)	• • •
Naval vessels	
Electric and hydraulic components	
Space	
Components and connectors for space launchers	
Components and connectors for satellites	
Services	
Aircraft MRO and modernisation	

<sup>\*</sup> JLTV: Joint Light Tactical Vehicle, M-ATV: MRAP (Mine-Resistant Ambush Protected) All Terrain Vehicle, FMTV: Family of Medium Tactical Vehicles, HET: Heavy Equipment Transporter, HEMTT: Heavy Expanded Mobility Tactical Truck "Textron group ""Airbus, BAE Systems and Leonardo"

#### Business trends

- ► Eaton revenues reached \$23.2bn (€21.5bn) in 2023, up 11.8% year-on-year in local currency. All divisions reported higher revenues, particularly Electrical Americas, Aerospace and eMobility.
- Defence activities accounted for 6% of group revenue in 2023. They are mainly included in the Aerospace division, which supplies hydraulic and pneumatic systems for civil and military aeronautics, as well as MRO services. The division also produces a range of equipment (tanks, valves, power supply and interconnect systems, etc.) for space applications (launchers, space vehicles and satellites).
- Eaton has made a number of acquisitions in recent years, including the Mission Systems division of British group Cobham in 2021 for \$2.85bn (€2.41bn). Mainly intended for military applications, these activities (in-flight refuelling systems, actuation systems, oxygen systems, etc.) had 2,000 employees and several production sites in the United Kingdom and the United States, and were integrated into Eaton's Aerospace division.

#### Home market

- ▶ Eaton generated 61% of its turnover in the U.S. market in 2023. Founded in the United States, the group established its headquarters in Ireland in 2013 following the acquisition of Irish group Cooper Industries, a manufacturer of electrical equipment. Eaton's operational headquarters are based in Beachwood. Ohio.
- Eaton supplies components and equipment for many U.S. military platforms. In the aerospace sector, the group produces components for hydraulic systems (valves, pumps, etc.), engines (sensors, actuators, etc.) and fuel tanks (valves, gauges, etc.) for Boeing, Lockheed Martin and Bell (Textron group) aircraft and helicopters. Eaton also supplies components for wheeled vehicles and naval vessels for the U.S. Armed Forces.
- Eaton signed a contract with Bell in March 2024 to supply components for Bell's future V-280 Valor tiltrotor aircraft, selected for the U.S. Army's Future Long Range Assault Aircraft (FLRAA) program. Eaton will produce hydraulic equipment for propulsion and fluid handling systems and accumulators.

#### Export markets

- Eaton generated 39% of its turnover outside the United States in 2023, mainly in Europe and Asia. The group has more than 200 manufacturing facilities in 35 countries.
- At the end of 2019, Eaton acquired French company Souriau for \$903m (€806m). This company produces interconnect systems (connectors, fittings, harnesses, etc.), particularly for the aeronautics, space and defence industries (aircraft, land vehicles, missiles, etc.). Dassault Aviation, Airbus, Boeing and Lockheed Martin are among its customers.

# Technology and Innovation

- ► The group's self-financed R&D expenditure amounted to \$754m (€698m) in 2023, representing 3.3% of revenues.
- In early 2024, French subsidiary Souriau announced a €14m investment to modernise and expand its Champagné site in western France. The company has developed an alternative technology to the use of hexavalent chromium (chromium VI) for its surface treatment process.



# FI BIT SYSTEMS

Israel's main defence group, world leader of helmet-mounted sights and displays for aircraft pilots, and 22nd-largest defence contractor worldwide

#### **BUSINESS AREAS**

Systems integrator/equipment supplier

- Military aircraft and helicopter systems
- Unmanned aircraft systems
- ▶ Defence electronics (C4ISR, electronic warfare, night vision systems, etc.)
- ▶ Land systems and artillery systems
- Ammunition (all calibre)
- Cybersecurity
- Simulation and training solutions

#### **GOVERNANCE**

Chairman	David Federmann
Chief Executive Officer	Bezhalel Machlis
General Manager Aerospace	Yoram Shmuely

# OWNERSHIP STRUCTURE (as of 10.10.2024)

Symbol	ESLT
Listed on	TASE and NASDAQ
Market Cap (ILSm)	34,265
Major shareholders (as of 10.10.2024)	

Michael Federmann	44.02%
Clal Pension & Provident Funds Ltd.	4.31%
1832 Asset Management LP	4.27%
Phoenix Investments House Ltd.	3.39%

#### MAIN JOINT VENTURES AND ASSOCIATES

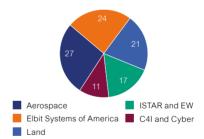
Name	%	Country
UAV Tactical Systems (U-TacS)	51%	United Kingdom
Collins Elbit Vision Systems	50%	United States
Adani Elbit Advanced Systems India	49%	India
Atharva Advanced Systems & Technologies	44%	India
Halbit Avionics	26%	India

#### KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	4,083	4,462	5,234	5,527
Δ (%) [\$]*	3.42%	13.21%	4.41%	8.40%
Defence (%)	91%	90%	90%	92%
Export (%)	76%	79%	81%	80%
Operating profit/loss	285	354	349	341
Operating margin	6.99%	7.93%	6.67%	6.18%
Net income**	208	232	262	199
Order book	8,985	12,057	14,169	16,069
Employees	16,676	17,787	18,407	18,984

<sup>\*</sup>Variation based on revenue in U.S. dollars See €/\$, p.9

# REVENUE BY BUSINESS SEGMENT (%)





<sup>\*\*</sup>Net income attributable to shareholders

MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	Airid	ng boging	7 och e	hartin Inbraer	n Defence	Adani A	rafel Ce Only box	polics polics	namice Alibur A	nardo Thales
Aircraft systems and equipments										
Avionic systems (F-15, F-16l, F/A-18, C-130, C295, C-390)	•	•	•							
Helmet Display and Tracking System (HDTS) ANVIS/HUD (helicopters)	•	•							•	
F-35 Gen III Helmet Mounted Display System (HMDS) (F-35)		•			•					
Joint Helmet-Mounted Cueing System II (JHMCS II) (F-15, F-16, F/A-18)		•			•					
Unmanned aircraft systems										
Hermes (450, 650 Spark, 900, 900 StarLiner) family of UAVs						•				
Skylark (I, 3) family of small UAVs										•
Seagull unmanned surface vehicle (USV)						•			•	
Defence electronics										
Weapon-integrated Battle Management System (WinBMS)										
Tadiran and E-Lynx tactical radio and communication systems										
CoMPASS and SPECTRO XR electro-optic payloads										
SkEye Wide Area Persistent Surveillance (WAPS)										
J-MUSIC directed IR countermeasures (DIRCM) system	•	•	•	•					•	
ENVG-B and SBNVG binocular night vision systems										
Land systems and artillery systems										
Sabrah* light armoured vehicles (design)							•	•		
ATMOS 155 mm self-propelled howitzer										
RCWS, MT30, UT30 and UT30 MK2 remote weapon stations										

\*Based on General Dynamics' ASCOD 2 and Excalibur Army's Pandur II (subsidiary of Czechoslovak Group)
\*\*RIX group (formerly Raytheon Techologies) \*\*\*Subsidiary of Czechoslovak Group

#### Business trends

- ▶ Elbit Systems revenues reached \$5,975m (€5,527m) in 2023, up 8.4% year-on-year in U.S. dollars terms. Growth was driven by the Land division (+15.3%), mainly thanks to sales of artillery systems and remote weapon stations in Europe and ammunition in Israel.
- In February 2024, Collins Elbit Vision Systems (CEVS), a joint venture with Collins Aerospace (part of RTX), delivered its 3,000th F-35 Gen III Helmet Mounted Display System (HMDS) for pilots of the F-35 Lightning II fighter aircraft (Lockheed Martin).
- ▶ In May 2024, the group entered into a partnership with Lufthansa Technik to cooperate on the Hermes 900 Starliner MALE UAV programme. Should the German Navy acquire the Hermes UAV (possibly 8 units), Lufthansa Technik would be responsible for maintenance.

#### Home market

- The Israeli market accounted for 20% of Elbit Systems' business in 2023. The group strengthened its positions in its home market with the acquisition of Israeli weapons manufacturer IMI Systems in 2018.
- ► In July 2024, Elbit Systems signed a \$190m (€176m) contract with Israel's Ministry of Defense for the supply of Iron Sting 120mm laser-guided mortar ammunition.
- The group received several contracts worth a total of \$1.1bn (€1.0 bn) in 2024 for the production of ammunition of all calibres for Israel's Ministry of Defense.

#### Export markets

- Exports accounted for 80% of the group's sales in 2023. Elbit Systems alone accounts for around 40% of Israeli
  arms exports by value.
- ▶ Subsidiary Elbit Systems of America signed a contract worth up to \$500m (€463m) in November 2023 with the U.S. Marine Corps for the supply of SBNVG binocular night vision systems. The company was awarded an initial contract worth \$127m (€117m).
- In January 2024, Adani Group delivered to the Indian Navy the first Drishti-10, a MALE UAV designed for ISR missions. The UAV is an Indian version of Elbit Systems' Hermes 900 Starliner and was produced locally under a technology transfer agreement.
- ► Elbit was awarded a \$300m (€278m) contract in February 2024 to supply an unspecified European customer with weapons, reconnaissance and control systems for around 230 armoured vehicles over a 6-year period.
- In February 2024, Elbit Systems received a \$600m (€555m) contract from South Korean group Hanwha to supply advanced protection systems, combat capabilities and sensor suites for the Australian Army's 129 AS21 Redback armoured infantry fighting vehicles.
- The Philippine Army commissioned 15 Elbit Systems vehicles in March 2024: 10 Sabrah ASCOD 2 light tanks (with a chassis supplied by General Dynamics European Land Systems) and 5 VBTP-MR Guarani 6x6 amphibious armoured personnel carriers assembled in Brazil by Iveco Defence Vehicles.
- ▶ BAE Systems awarded Elbit Systems a \$130m (€121m) contract in August 2024 to supply Iron Fist active protection systems for the CV90 armoured infantry fighting vehicles of an unspecified European country.
- ▶ In August 2024, Elbit Systems also won a \$270m (€250m) contract to produce artillery rockets for an unspecified customer, to be delivered until 2028.

#### Technology and Innovation

- ▶ Self-financed R&D expenditure amounted to \$424m (€393m) in 2023, representing 7.1% of revenues.
- In February 2024, Elbit Systems introduced the Hermes 650 Spark, a new MALE UAV for military and civil applications equipped with six hardpoints and able to carry a 120 kg payload.



# **EMBRAFR**

Aerospace manufacturing group mainly present in civil and military aviation (attack, surveillance and transport aircraft), leading Brazilian and South American defence company

#### **BUSINESS AREAS**

Platform manufacturer and systems integrator

- Military aircraft (fighter, trainer, transport, reconnaissance, etc.)
- Radar and C4ISR systems
- MRO and modernisation
- Cybersecurity
- Commercial aircraft (passenger aircraft, business jets)

#### **GOVERNANCE**

Chairman	A. Gonçaves Silva
Chief Executive Officer	F. Gomes Neto

President and CEO,
J. B. da Costa Júnior

Defense & Security

J. B. da Cos

# OWNERSHIP STRUCTURE (as of 10.10.2024)

Symbol	EMBR3, ERJ
Listed on	B3 (55%), NYSE (45%)
Market Cap (BRLm)	34,617

#### Major shareholders (as of 10.10.2024)

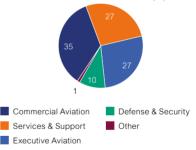
BNDES Participações SA	5.37%
Brandes Investment Partners LP	4.78%
Banco Santander Brasil SA (Private Banking)	2.99%
LarrainVial Asset Management AGF SA	1.20%

#### KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	3,302	3,548	4,312	4,874
Δ (%) [\$]*	-30.97%	11.30%	8.18%	16.04%
Defence (%)**	17%	14%	9%	10%
Export (%)	90%	89%	89%	91%
Operating profit/loss	-283	170	-105	291
Operating margin	-8.58%	4.80%	-2.43%	5.97%
Net income***	-641	-38	-176	152
Order book	11,706	15,039	16,390	16,944
Employees	15,658	16,067	17,133	18,997

<sup>\*</sup>Variation based on revenue in U.S. dollars

# REVENUE BY BUSINESS SEGMENT (%)



#### MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
OGMA-Indústria Aeronáutica de Portugal	65%	Portugal
Tempest Serviços de Informática	61%	Brazil
Visiona Tecnologia Espacial	51%	Brazil



See €/\$, p.9

<sup>\*\*</sup>Defense & Security division only

<sup>\*\*\*</sup>Net income attributable to shareholders

AND EXPORT PARTNERSHIPS	SaaD	ALL Sistem	as alwayada a	alebras Satran	ant systems	Trales Aleri	belo k	ochoos TA System
Fighter and trainer aircraft								
F-39E/F fighter aircraft* (assembly)	• •	•						
EMB 314 Super Tucano (A-29) trainer and light attack aircraft	•	•				•		
Phenom 100 MEPT trainer aircraft								
Transport aircraft								
C-390 Millennium tactical transport aircraft	•	)		• •		•	•	
Special transportation aircraft								
AEW&C aircraft								
P600 AEW&C future aircraft							•	
EMB 145 AEW&C aircraft	•		•				•	
Radar and C4ISR systems								
SABER-M60, SABER-M200 and SABER-S200 3D surveillance radars					•			
SISFRON integrated border monitoring system	• •	)				•		
Naval systems								
Tamandaré-class future guided-missile frigate (armament and electronic systems integration)				•				•
Space								
SGDC Geostationary Defense and Strategic Communications Satellite			•			•		
VCUB Earth observation nano-satellites			•					

#### Business trends

- ▶ Embraer revenues grew 16% in U.S. dollars in 2023 to \$5,269m (€4,874m). The group recorded higher revenues in its Commercial Aviation division (+19.6%), thanks to higher deliveries of civil aircraft (64 aircraft delivered, compared with 57 in 2022), and Executive Aviation division (business jets, +13.2%). The Defense & Security division, which includes most of the group's defence activities, also recorded a sharp increase in revenues (+24.9%). It delivered two C-390 Millennium aircraft (one each to Brazil and Portugal) and an E-99 surveillance aircraft, upgraded to the E-99M standard, to Brazil.
- ▶ Embraer recorded a net profit of \$164m (€152m) in 2023, after 5 consecutive years of losses (€1.3bn in cumulative losses between 2018 and 2022). The least profitable divisions are Defense & Security (with an operating margin of 5.5% of revenues in 2023) and Commercial Aviation (1.3%).

#### Home market

- ▶ Embraer is the main beneficiary of the major military programmes launched by the Brazilian government in the last decade (F-39 fighter aircraft, C-390 Millennium tactical transport aircraft, etc.). 28% of the Defense & Security division's revenues came from its domestic market in 2023.
- ➤ The Águas Azuis consortium, made up of tkMS, Embraer and its subsidiary Atech, laid the keel of the second Tamandaré-class guided-missile frigate, named Jerônimo de Albuquerque, at the Santa Catarina shipyard in June 2024. The first frigate was launched in August 2024, with delivery scheduled for the end of 2025.
- ▶ In September 2024, the group delivered a seventh C-390 Millennium aircraft to the Brazilian Air Force, which intends to procure 19 units.

#### Export markets

- ► The Defense & Security division generated 72% of its revenues from exports in 2023, a share that has increased by 20 percentage points over the 2021-2023 period. This upward trend follows the sharp rise in sales in Europe, in particular for the C-390 Millennium tactical transport aircraft.
- In December 2023, Embraer's C-390 Millennium won the South Korean Defense Acquisition Program Administration's (DAPA) Large Transport Aircraft (LTA) II programme, the group's first success in Asia for this aircraft. Three units were ordered under the KRW 710bn (€503m) contract.
- In December 2023, Embraer also signed a contract with the Hellenic Air Force to continue to support its fleet of four EMB 145H AEW&C (surveillance) and one ERJ 135LR (VIP transport) aircraft, including the supply of spare parts, maintenance and repair services, etc.
- ► The Netherlands and Austria signed a contract in July 2024 with Embraer for the joint purchase of 9 C-390 Millennium aircraft (5 and 4 units respectively), to be delivered from 2026.
- In the summer of 2024, the group won two contracts for its EMB 314 Super Tucano trainer and ground attack aircraft: six units for Paraguay in July and one unit (+5 optional) for Uruguay in August.
- The Czech Republic acquired two C-390 Millennium aircraft in October 2024 for CZK 11.3 bn (6471m). Czech groups Aero Vodochody and LOM Praha will be involved in the production and support of the aircraft.
- Embraer handed over two C-390 Millennium aircraft in 2024, the second of the 5 ordered by Portugal in June and the first of the two ordered by Hungary in September.

#### Technology and Innovation

Embraer and the Brazilian Navy teamed up in April 2024 to develop new onboard surface search and coastal surveillance radars, potentially based on the Gaivota X radar.



# **EURENCO**

European leader in military explosives, powders and combustible objects, and a major partner of European ammunition providers and systems integrator

#### **BUSINESS AREAS**

Explosives and subsystems supplier

- Explosives
- Powders (single and multi-base, low vulnerability, spherical)
- Combustible objects (modular propellant charges, rounds, nitrofilm)
- Additives (EHN, for fuel)

#### **GOVERNANCE**

Chairman and CEO	Thierry Francou
Deputy CEO	Suzanne Kucharekova Milko

Bruce lehl

100%

#### OWNERSHIP STRUCTURE

Chief Financial Officer

SNPE (French State)

Symbol	
Listed on	Unlisted group
Market Cap	
Major shareholders (as o	of 10.10.2024)

# KEY FIGURES (Fiscal year ended: December 31st)

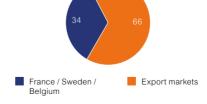
€ millions	2020	2021	2022	2023
Revenue	215	274	302	350
∆ (%)	-8.12%	27.44%	10.22%	15.89%
Defence (%)	N/A	≈ 66%	≈ 66%	≈ 66%
Export (%)	N/A	≈ 66%	≈ 66%	≈ 66%
Operating profit/loss	N/A	N/A	N/A	N/A
Operating margin	N/A	N/A	N/A	N/A
Net income	N/A	22	N/A	N/A
Order book	N/A	N/A	N/A	N/A
Employees	N/A	1,200	1,100	1,200

# REVENUE BY BUSINESS SEGMENT (%)



#### MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
Eurenco Bofors	100%	Sweden
PB Clermont	100%	Belgium



MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	AND HEAD CHOIL HEAD TONG CHOIL THOUGH TO STUTE THE STUTE OF STUTE
Explosives	
High-performance explosives (for melt-cast, compressed and composite charges, priming relays, etc.)	•
Composite explosive charges for insensitive munitions (warheads, bombs, shells and underwater mines)	• • •
Base drag reduction blocks for extended-range artillery ammunition	
Powders	
Single and multi-base powders (for reloading, military ammunition of all calibres, mortar increments, anti-tank missiles, etc.)	•
Spherical powders for small calibre military ammunition	
Combustible objects	
Modular propellant charges for artillery ammunition	• • •
Combustible cases and rounds for tank and artillery ammunition	•
Nitrofilm for mortar increments	•

<sup>\*</sup>Subsidiary of Czechoslovak Group \*\*Subsidiary of Rheinmetall

#### Business trends

- Eurenco revenues increased 15.9% in 2023, to €350m. The group benefited from international geopolitical instability, particularly with the war in Ukraine. Eurenco aims for €500m sales in 2024 and €1bn by 2030.
- ► Through its Pourpre project, Eurenco invested €60m, including €10m funded by the French defence procurement agency (DGA), to increase the group's production capacity for propellant powders for large-calibre ammunition. This activity, currently carried out at its Swedish plant in Karlskoga, will be supplemented by a new production line at its Bergerac site in southwestern France. Due for 2025, it will allow the group to produce between 500,000 and 800,000 modular charges a year by 2026, mainly for 155 mm shells. Eurenco will also invest €200m over the 2020-2025 period at its Sorgues site (France) to double its production capacity, particularly for hexogen, as well as €80m by 2026 at its Clermont-sous-Huy site (Belgium) for propellant powder for small-calibre ammunition cases.
- Eurenco is facing pressure on its raw materials supplies, particularly nitric acid (an unstable chemical compound that cannot be stored for more than a week). Faced with these difficulties, the group is relocating many of its suppliers in France and developing new production processes. Eurenco is also striving to secure its supplies and increase its production of strategic upstream products such as nitrocellulose, nitroglycerine, nitrogelatine and nitroguanidine.

#### Home market

- Around a third of the group's revenues are generated in its home market. For instance, it supplies modular charges for the 155 mm artillery systems of KNDS France, as well as explosive charges for the F21 heavy torpedo (Naval Group) and the ANL / Sea Venom light anti-ship missile (MBDA, Franco-British programme).
- ► The European Defence Agency (EDA) awarded a €15m contract to Eurenco in June 2024 for the production of modular charges as part of a €1.6bn contract involving nine European defence groups responsible for producing 155mm ammunition for the CAESAR (KNDS France), PzH 2000 (KNDS Germany and Rheinmetall), Krab (PGZ) and Zuzana (Czechoslovak Group) howitzers.
- Eurenco and Thales entered into a strategic partnership in June 2024 to secure their mutual supply of energy materials until 2030. Thales will be able to order specialised powders or compositions for guided and unguided munitions from Eurenco, while Eurenco will be able to order TNT and RDX produced by Thales for its highperformance explosives.

#### Export markets

- Exports account for about two-thirds of the group's revenues. Its main customers include Rheinmetall, Czechoslovak Group, BAE Systems and Saab.
- ► Eurenco and its American partner Day & Zimmermann (D&Z) are building a factory in Texarkana (Texas) that will produce 1,500,000 modular load cases from the end of 2024, as part of a contract worth almost \$1bn (€925m) awarded to D&Z by the U.S. Department of Defense in October 2023.
- In June 2024, the group renewed its partnership with Saab to supply propellant powders and explosives for the ammunition used in Saab's AT4 and Carl-Gustaf M4 rocket launchers until 2028.

#### Technology and Innovation

Eurenco relies on a vast network of partners (laboratories, universities, public and private research centres) around the world to develop new innovative solutions: explosives and powders with improved performance, less toxic 'green' powders, smaller and lighter explosives for drones, products and processes for civil and military applications, etc.



# EXAIL TECHNOLOGIES (FORMERLY GROUPE GORGÉ)

High-tech industrial group mainly active in navigation systems and civil and military robotics. Exail was formed by ECA Group and iXblue joining forces in 2022.

#### **BUSINESS AREAS**

Systems integrator and cutting-edge equipment supplier

- Unmanned systems (USVs, AUVs, UGVs, UAVs)
- Mine warfare systems
- Navigation and positioning systems
- Onboard sensors (sonars)
- Onboard equipment for naval platforms
- Photonic components and quantum instruments

#### **GOVERNANCE**

Chairman and CEO	Raphaël Gorgé
Deputy CEO - Finance	Loïc Le Berre
CEO of the Defense	

and Aerospace Business Line

Jérôme Bendell

# KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022**	2023
Revenue	-	116	278	323
△ (%)	-	-	140.03%	16.03%
Defence (%)	-	N/A	51%	54%
Export (%)	-	59%	72%	72%
Operating profit/loss	-	13	37	40
Operating margin	-	10.79%	13.30%	12.36%
Net income*	-	47	N/A	16
Order book	-	490	628	630
Employees	-	1,282	1,636	1,781

<sup>\*</sup>Net income attributable to shareholders

# OWNERSHIP STRUCTURE (as of 10.10.2024)

Symbol	EXA
Listed on Euro	next Paris
Market Cap (€m)	306
Major shareholders (as of 10.10.2024)	
Gorgé family*	43.83%
Self-owned	2.40%

OFI Invest Asset Management SA \*Voting rights as of 31.12.2023 : 61.03%

Amundi Asset Management SA (IM)

# REVENUE BY BUSINESS SEGMENT (%)\*



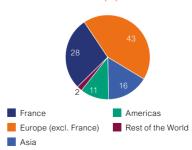
Navigation and Maritime Advanced technologies robotics

### MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
Exail Holding*	62%	France

<sup>\*</sup>Control as of 31.12.2023: 87.70%

### REVENUE BY REGION (%)



2 27%

1.33%

<sup>\*\*</sup>Pro forma figures (with iXblue accounted for over 12 months)

<sup>\*</sup>Revenue distribution based on total sales excluding eliminations

# EXAIL TECHNOLOGIES (FORMERLY GROUPE GORGÉ)

MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	Maric Franklicher Wafe
iXblue ECA Group	Maric Maral Herrer Luge
Unmanned systems	
Inspector 90, 120 and 125 USVs	• •
DriX USV	
Ulyx AUV	•
R7 ROV (Remotely Operated Vehicle)	
Aerial and ground unmanned vehicles	
Mine warfare systems	
UMIS (Unmanned MCM Integrated System)	
A18-M mine detection AUV	• •
K-STER C underwater mine identification and disposal system	•
Navigation systems	
Marins and Phins inertial navigation systems for naval platforms	•
Advans inertial navigation systems for land platforms	
Netans navigation data distribution systems	•
Onboard sensors	
T18-M towed sonar	•
SeapiX-FLS mine and obstacle avoidance sonars	
GAPS underwater acoustic positioning systems	
Onboard equipment for naval platforms	
Auxiliary propulsion systems, magnetic and acoustic signature management systems, etc.	
Components and photonics	
Special optical fibers and quantum instruments	

# EXAIL TECHNOLOGIES (FORMERLY GROUPE GORGÉ)

#### STRATEGIC HIGHLIGHTS

#### Business trends

Exail Technologies revenues reached €323m in 2023, up 16% year-on-year thanks to strong growth in both divisions. The group recorded new orders worth €324m in 2023 and had an order book of €630m at year-end, representing almost two years of sales.

#### Home market

- Created by the combination of iXblue and ECA Group, the new company Exail is a major player in the following fields: maritime autonomous robotic systems; very high performance inertial navigation solutions; photonic, quantum and space solutions.
- In September 2024, Exail was chosen by Naval Group to supply Phins inertial navigation systems and Netans data distribution systems for the French Navy's future offshore patrol vessels. Seven ships, designed by Naval Group, are due to be delivered between 2026 and 2030.
- ► In October 2024, Exail was selected to supply the French Navy with an autonomous underwater vehicle (AUV) capable of operating at depths of up to 6,000 metres. The A6K-M will be based on the Ulyx AUV developed by Exail and Ifremer, and will incorporate a Phins inertial navigation system.

#### Export markets

- ▶ Exail Technologies generated 72% of its revenues from exports in 2023, and has customers in 80 countries.
- Exail Technologies is positioned on several major defence contracts, in particular since 2019 alongside Naval Group (Belgium Naval & Robotics consortium) for the design, construction and maintenance of 12 mine warfare vessels equipped with mine-clearing drones for the Belgian and Dutch navies. Exail's share of this contract amounts to 6500m over 10 years, out of a total value of 62.1bn.
- Exail Technologies signed a €28m contract in January 2024 to supply a drone system to the United Arab Emirates Navy, as part of a 3-year programme.
- ▶ In April 2024, Belgium ordered six R7 remotely operated vehicles (ROVs) from Exail for the inspection and disposal of underwater explosive ordnance (EOD).
- Exail signed a contract with Navantia in May 2024 to supply its Gecdis-W navigation system for the Spanish Navy's four S-80 Plus submarines.
- In July 2024, Exail was selected by the German company Anschutz to supply Marins inertial navigation systems for the British Royal Navy's Type 31 (Inspiration-class) frigates. Three ships are currently being built by Babcock, and two more units are planned.
- In August 2024, Exail Robotics Belgium received an order worth almost €60m from the NATO Support and Procurement Agency (NSPA) for the supply, mainly to the Belgian and Dutch navies, of several hundred K-STER C underwater mine disposal vehicles, K-STER CT training vehicles (without explosive charges) and associated equipment.
- Exail signed two contracts for inertial navigation systems: in September 2024 with Danish company Precision Technic Defence to supply the Land Forces of a northern European country with several dozen Advans Vega systems for integration into mobile surveillance systems, and with Rheinmetall in June 2024 to supply 1,004 Advans Ursa systems from January 2025 for integration into the German Army's Caracal 4x4 vehicles.

### Technology and Innovation

- ► The group's R&D expenditure reached €48.7m in 2023, representing 15.1% of revenues.
- Exail Technologies was selected in June 2024 to contribute to the E=MCM (European Extended Mine Countermeasures) project, led by Naval Group and due to be launched at the end of the year for a 3-year period. The group will receive €10m in funding to enhance the capabilities of its UMIS system.



# **FINCANTIFRI**

Among the leading European players in naval defence and world's main cruise shipbuilding group, 48th-largest defence company worldwide

#### **BUSINESS AREAS**

Platform manufacturer and systems integrator

- Military shipbuilding (surface ships, submarines)
- ► Commercial shipbuilding
- Naval systems (propulsion systems, platform systems)
- ► Offshore (drilling units, offshore support vessels)
- ▶ MRO, modernisation and services

#### **GOVERNANCE**

Symbol

Chairman	Biagio Mazzotta
Chief Executive Officer	Pierroberto Folgiero
General Manager Naval Vessels	Dario Deste

# OWNERSHIP STRUCTURE (as of 10.10.2024)

Listed on Boil Market Cap (€m)	rsa Italiana 1,556
Major shareholders (as of 10.10.2024)	
Italian State	71.44%
Cassa Nazionale di Previdenza ed Assistenza per gli Ingegneri	1.50%
Fideuram Asset Management SGR SpA	0.57%
Self-owned	0.19%

# MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
Marinette Marine	87.44%	United States
Centro per gli Studi di Tecnica Navale Cetena	86.1%	Italy
Orizzonte Sistemi Navali	51%	Italy
Naviris	50%	Italy
Maestral	49%	UAE
Etihad Ship Building	35%	UAE

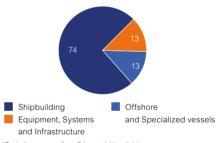
#### KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022***	2023
Revenue	5,879	6,911	7,440	7,651
Δ (%)	0.51%	17.55%	7.65%	2.84%
Defence (%)*	21%	23%	27%	25%
Export (%)	87%	87%	87%	82%
Operating profit/loss	148	289	-10	162
Operating margin	2.52%	4.18%	-0.13%	2.12%
Net income**	-240	22	-309	-53
Order book	27,781	25,819	23,826	23,072
Employees	20,150	20,774	20,792	21,215

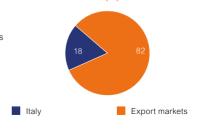
<sup>\*</sup>Naval vessels revenue only

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#### REVENUE BY BUSINESS SEGMENT (%)\*



<sup>\*</sup>Excluding revenue from Other activities division



<sup>\*\*</sup>Net income attributable to shareholders

<sup>\*\*\*</sup>Figures restated

d charlet see I hadicule of detheed Marin in all the of coting Mara Group EDGE Group Rolls Royce TWC Wain Leonardo ELT Group MAIN PROGRAMMES, COOPERATIONS Havantia AND EXPORT PARTNERSHIPS Surface ships Trieste Landing Helicopter Dock (LHD) San Giorgio-class/BDSL Landing Platform Dock (LPD) Constellation-class future guided-missile frigate (FFG-62 programme)\* FREMM Bergamini-class multipurpose frigate Multi-Mission Surface Combatant (MMSC) future light frigate\*\* Freedom-class LCS frigate MMPC future European corvette (Modular and Multirole Patrol Corvette) Thaon di Revel-class multipurpose offshore patrol vessel (PPA) P51MR-class future OPV Jan Maven-class coastquard vessel Vulcano-class Logistic Support Ship (LSS) BRF logistic support and refuelling ship (FlotLog programme)\*\*\* (front part) Submarine Todaro-class U212 NFS future conventionally-powered attack submarine (under tkMS licence) Propulsion and guidance systems Diesel engines for ships and military vehicles Naval steam turbines Shaft lines and propellers Rudder roll governance and fin stabilizers MRO and modernisation services Horizon-class air defence frigates mid-life upgrade 

#### Business trends

- Fincantieri revenues increased 2.8% in 2023, to €7,651m. Growth was driven by the Offshore and Specialized vessels and Equipment, Systems and Infrastructure divisions. On the other hand, revenues in the Shipbuilding division fell by 3.8% year-on-year, following declines in both naval vessels (-4.7%) and civil ships (-3.0%).
- ▶ Revenues in the Naval vessels segment reached €2,060m in 2023 (before intra-group eliminations). During the year, Fincantieri delivered four naval vessels (one Thaon di Revel multipurpose offshore patrol vessel to the Italian Navy, one Freedom-class LCS frigate to the U.S. Navy, the fourth and last Doha-class corvette to the Qatari Emiri Navy and the second BRF logistic support and refuelling ship to Chantiers de l'Atlantique for the French Navy). In addition, the Vard subsidiary handed over two Jan Mayen-class coastguard vessels to the Norwegian Coast Guard.
- The group reached an agreement with Leonardo in May 2024 to acquire the Italian company WASS by early 2025, for around €400m. WASS produces torpedoes (A184, A244, Black Shark, MU90) and sonars (ATAS) and generates revenues of around €160m. The company is based in Livorno and employs over 500 people.
- In May 2024, Fincantieri and UAE's EDGE Group created a 49%-51% joint venture called Maestral, based in Abu Dhabi (United Arab Emirates). The joint venture will be responsible for building ten P51MR-class offshore patrol vessels for the UAE Navy, at a cost of €400m.

#### Home market

- With nine shipyards and over 11,100 employees in Italy, Fincantieri is the prime contractor for the Italian Navy's main programmes (surface ships, special vessels, submarines under German licence, naval systems, etc.). However, the group generates a small share of its sales on its domestic market (18% in 2023).
- ➤ OCCAr awarded Fincantieri a contract worth €500m in June 2024 to build a fourth Todaro-class U212 NFS conventionally-powered attack submarine. It will be equipped with lithium-ion batteries, unlike the three previous units.
- Orizzonte Sistemi Navali (a joint venture between Fincantieri and Leonardo) signed a €1.5bn contract with OCCAr in July 2024 to build two FREMM EVO multipurpose frigates for the Italian Navy. These ships will be fitted with upgraded equipment compared with the FREMM frigates, including a new anti-drone system.
- Fincantieri launched three naval vessels between May and July 2024: the second Vulcano-class Logistic Support Ship (Atlante), the tenth FREMM multipurpose frigate (Emilio Bianchi) and the seventh Thaon di Revelclass multipurpose offshore patrol vessel (Domenico Millelire).

#### Export markets

- Export sales accounted for 82% of the group's revenues in 2023. Through its subsidiaries Marinette Marine and Vard, Fincantieri is well positioned in the United States and the Nordic countries.
- In March 2024, Fincantieri signed a €1.18bn contract with the Indonesian Ministry of Defense for the supply and customisation of two Thaon di Revel-class multipurpose offshore patrol vessels, initially intended for the Italian Navy (Marcantonio Colonna and Ruggiero di Lauria). Several subcontractors, including Leonardo for the combat system, will be involved in this contract.
- Marinette Marine was awarded a \$1bn (€925m) contract by the U.S. Navy in May 2024 to build the fifth and sixth units of the Constellation-class guided-missile frigates programme (ten ships planned).

#### Technology and Innovation

► The group's total R&D expenditure amounted to €152m in 2023, representing 2.0% of revenues.



# GE AEROSPACE (FORMERLY GE AVIATION)

One of the world's leading manufacturers of engines for civil and military aircraft and ships, 26th-largest defence contractor, and parent company of Italian engine manufacturer Avio Aero

#### **BUSINESS AREAS**

Engine manufacturer, systems integrator/ equipement supplier

- Propulsion systems (fighter aircraft, transport aircraft, helicopter and UAS engines, gas turbines)
- ► Aircraft systems and equipment (avionics, engine components, etc.)
- Support services and maintenance solutions

#### GOVERNANCE

CEO Avio Aero

Chairman and CEO	H. Lawrence Culp
President and CEO, Defense & Systems	Amy Gowder

Riccardo Procacci

# OWNERSHIP STRUCTURE (as of 10.10.2024)

Symbol	GE
Listed on	NYSE
Market Cap (\$m)	203,668

#### Major shareholders (as of 10.10.2024)

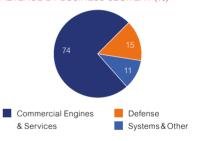
Vanguard Fiduciary Trust Co.	8.24%
Fidelity Management & Research Co.	6.24%
BlackRock Advisors LLC	5.91%
Capital Research & Management Co. (Global Investors)	5.88%

#### KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	19,301	18,014	24,739	29,389
Δ (%) [\$]*	-32.95%	-3.32%	22.24%	21.96%
Defence (%)**	21%	19%	17%	15%
Export (%)	49%	55%	59%	58%
Operating profit/loss	1,076	2,436	4,535	5,657
Operating margin	5.58%	13.52%	18.33%	19.25%
Net income	N/A	N/A	N/A	N/A
Order book	N/A	110,567	126,767	139,238
Employees	40,000	40,000	45,000	52,000

<sup>\*</sup>Variation based on revenue in local currency

### REVENUE BY BUSINESS SEGMENT (%)



#### MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
Advanced Ceramic Coatings	50%	United States
TUSAS Engine Industries	46.2%	Turkey
NGS Advanced Fibers	25%	Japan
	•	



See €/\$, p.9 \*\*Defense division only

MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	Harning	perospac atracar	S PERO	Corpor	ation Aero	Z Perc	res so	da Turk nardo Sta	ines ines andarda	Refor	Light As	ospace Nantia
Aircraft engines												
F404 (F/A-18C/D Hornet, T-50, T-7A Red Hawk, JAS-39 Gripen C/D)	•				•				•			
F414 (F/A-18E/F, EA-18G, JAS-39 Gripen E/F, Tejas Mk II, KF-21)		•		•	•				•			•
F110 (F-16C/D, F-16E/F, F-15, F-15EX)	•	•	•		•			•		•		
F108/CFM56-7B (737 AEW&C, P-8A Poseidon)	•											
F138/CF6 (C-5M, KC-10, B767 AWACS, A310 MRTT)	•											
Helicopter engines												
Future T901 (AH-64, UH-60)												
T408 (CH-53K)		•										
T700/CT7 (UH-60, AH-64, NH90, Surion)	•		•	•						•		
UAS propulsion system												
Future Catalyst (European MALE RPAS)												
Gas turbines												
GE LM2500 (FREMM, Arleigh Burke, Cavour, Vikrant, Independance, Constellation)	•	•	•	•	•	•	•			•	•	•
GE LM500 (PKX-A, PKX-B, 24DDH, 22DDH)	•		•									
Aircraft systems and equipment												
Avionics systems (data storage and transfer, displays, navigation systems, etc.)												
Electrical power (generation, conversion, distribution, etc.)												
Engine components (Avio Aero)												
Propeller systems (C-27J, C-130J, US-2) (Dowty Propellers)												

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\*Hanwha group \*\*U.S. subsidiary of Leonardo \*\*\*Hindustan Aeronautics Ltd

#### Business trends

- GE Aerospace, which became independent following the demerger of the General Electric (GE) conglomerate
  in April 2024, is the world's leading supplier of engines for commercial aircraft (through CFM International, its
  joint venture with Safran) and is one of the world's top three engine manufacturers for military aircraft, alongside
  Rolls-Royce and Pratt & Whitney.
- ► GE Aerospace revenues reached \$31.8bn (€29.4bn) in 2023, up 22% year-on-year in local currency. Growth was driven by civil activities, with the delivery of more than 2,000 engines and stronger demand for maintenance services. Military activities also performed well, despite a decline in engine deliveries (556 units in 2023, compared with 632 in 2022).
- GE Aerospace announced plans to invest more than \$650m (€600m) in 2024 in its manufacturing facilities and supply chain in North America, Europe and India. In July 2024, the group also announced its intention to invest more than \$1bn (€920m) over 5 years in its global MRO capabilities, mainly for its civil engines (in particular the LEAP engines produced by CFM). Facilities in the United States, South America, Europe, the Middle East and Asia are due to receive \$250m (€230m) in 2024.
- GE Aerospace signed an agreement in July 2024 with the U.S. group Kratos to develop and produce small engines for military applications, in particular to power unmanned aerial systems (UAS) and collaborative combat aircraft.

#### Home market

- GE Aerospace is still testing its adaptive cycle engine, designed to power future combat aircraft. The group is developing the XA102 engine (an evolution of the XA100) to take part in the U.S. Air Force's Next Generational Adaptive Propulsion (NGAP) programme, which aims to provide the future NGAD (Next Generation Air Dominance) fighter aircraft with a more powerful propulsion system. Pratt & Whitney (RTX group) is working on a rival concept, the XA103 engine.
- In June 2024, Sikorsky (Lockheed Martin group) received two T901 engines for testing on UH-60 Black Hawk helicopters. Developed as part of the U.S. Army's Improved Turbine Engine Program (ITEP), the T901 is designed to re-engine the UH-60 Black Hawk (Sikorsky) and AH-64 Apache (Boeing) helicopters.
- In July 2024, GE Aerospace was chosen by Sierra Nevada Corp (SNC) to partner on the U.S. Air Force's Survivable Airborne Operations Center (SAOC) programme. With a budget of \$13bn (€12bn), the programme aims to replace the E-4B Nightwatch aircraft (based on the Boeing 747-200), which entered service in 1974 and are already powered by GE, by 2036. GE Aerospace will participate in the modernisation of the GEnx-2B engines of the new aircraft, derived from the Boeing 747-8i, and will provide various support services.

#### Export markets

- Most of GE Aerospace's export sales (58% of turnover in 2023) relate to civil engines, mainly in Europe and Asia. European subsidiaries include Italian aerospace company Avio and British engineering company Dowty Propellers.
- Chosen to equip the Turkish Navy's first eight Istif-class frigates with LM2500 gas turbines, the group signed an additional contract in July 2024 for the following ships (units 9 to 12).
- GE Aerospace finalised an agreement with the Polish Ministry of National Defence in August 2024 for the supply of T700 engines to power 96 AH-64E Apache Guardian helicopters (Boeing) currently being procured. WZL-1, a subsidiary of PGZ, will provide maintenance services under licence for the T700/CT7 engines powering the Polish military helicopter fleet (Apache, Sikorsky S-70) Black Hawk and Leonardo AW149 and AW101).

# Technology and Innovation

Self-financed R&D expenditure amounted to \$1,006m (€931m) in 2023, representing 3.2% of revenues.



# GENERAL ATOMICS

American family-owned group, a leading player in the military UAV market (MQ-9, MQ-1C, MQ-9B), operating in the defence and space sectors, and 61st-largest defence contractor\*

\*SIPRI rankings (2023 data)

#### BUSINESS AREAS

#### Platform manufacturer and systems integrator

- Military aircraft (unmanned aircraft systems, utility aircraft, MRO)
- UAS pavloads
- Naval systems
- Weapon systems
- Satellite and space systems
- Nuclear engineering (fusion and fission technologies)

#### GOVERNANCE

Chairman and CEO	James N. Blue
CEO, General Atomics Aeronautical Systems	Linden P. Blue
CEO, General Atomics	Scott Forney

# Electromagnetic Systems

# KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	N/A	≈ 2,649	≈ 2,985	N/A
Δ (%) [\$]*	N/A	N/A	N/A	N/A
Defence (%)	N/A	N/A	N/A	N/A
Export (%)	N/A	N/A	N/A	N/A
Operating profit/loss	N/A	N/A	N/A	N/A
Operating margin	N/A	N/A	N/A	N/A
Net income	N/A	N/A	N/A	N/A
Order book	N/A	N/A	N/A	N/A
Employees	≈ 15,000	≈ 15,000	≈ 15,000	≈ 15,000

<sup>\*</sup>Variation based on revenue in local currency See €/\$, p.9

#### OWNERSHIP STRUCTURE

Symbol	
Listed on	Unlisted group
Market Cap	

Major shareholders (as of 10.10.2024)

Blue family 100%

# REVENUE BY BUSINESS SEGMENT (%)



#### MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
ConverDyn	50%	United States
TRIGA International	50%	United States



MAIN PROGRAMMES, COOPERATIONS

- 3 the state of t Polet Astorbilitus recording Edinhar Level Dradies ury odkeed wattin yradi Aeroepace HAK SISHEMS AND EXPORT PARTNERSHIPS Unmanned aircraft systems MQ-20 Avenger / Predator C UCAV MQ-9A Reaper / Predator B UCAV MQ-9B SkyGuardian and SeaGuardian **ÍSTAR MALE UAVs** Moiave future reconnaissance and close support STOL UAV MQ-1C Gray Eagle and Gray Eagle Extended Range (GE-ER) MALE UAVs Eaglet, LongShot and Sparrowhawk future light airborne UAVs Military aircraft Dornier 228 NXT utility aircraft UAS payloads Eagle Eye and Lynx multi-mode radars Due Regard collision avoidance radar Naval systems Electromagnetic Aircraft Launch System (EMALS) Advanced Arresting Gear (AAG) Virginia Payload Tubes (VPT) Lithium-ion Fault Tolerant (LiFT) battery systems Weapon systems High Energy Liquid Laser Area Defense System (HELLADS) Hypersonic missiles components

<sup>\*</sup>Formerly Raytheon Technologies \*\*Formerly Huntington Ingalls Industries

#### Business trends

- ► General Atomics posted revenues of around \$3.1bn (€3.0bn) in 2022 (latest figure available). In 2023, the group delivered the first of the 16 MALE Protector RG Mk1 UAVs (armed version of the MQ-9B SkyGuardian) ordered by the Royal Air Force in 2020.
- The U.S. Air Force selected General Atomics and Anduril in April 2024 to continue the development of a future UCAV for the Collaborative Combat Aircraft (CCA) programme, designed to operate with the future sixth-generation NGAD fighter aircraft. General Atomics' offer is a platform based on its XQ-67A UCAV, while Anduril is offering its Fury drone. The winner of this programme should be announced in 2026.
- ▶ In September 2024, General Atomics started assembling the wing of the first Dornier 228 NXT multipurpose aircraft at its Oberpfaffenhofen site in Germany. The group will assemble around five aircraft a year.

#### Home market

- General Atomics is a key drone supplier to the U.S. government. However, U.S. drone requirements are changing and the U.S. Air Force may stop purchases of MQ-9A Reaper UAVs in the near future, as they may no longer be suitable against new threats.
- The group is also involved in the U.S. Navy's Gerald R. Ford-class aircraft carrier programme as a supplier of EMALS (Electromagnetic Aircraft Launch System) and AAG (Advanced Arresting Gear) systems. Both systems are in service on the first unit of the class (CVN-78) and are being installed on the next three sisterships (CVN-79, CVN-80 and CVN-81).
- General Atomics was awarded a \$389m (\$360m) contract in December 2023 by the U.S. Army to supply an unspecified number of MQ-1C Gray Eagle 25M MALE surveillance UAVs for testing, to be delivered by November 2024.
- In August 2024, the group signed a contract worth \$500m (€463m) over 5 years with U.S. SOCOM to provide technical services for its fleet of MQ-9A Reaper and MQ-1C Gray Eagle UAVs.

#### Export markets

- The group's export strategy is constrained by the U.S. Administration's ITAR regulations and Missile Technology Control Regime (MTCR). Most sales are made under the FMS (Foreign Military Sales) programme and mainly on the basis of unarmed offers. Western European contries (Spain, France, Italy, the Netherlands and the United Kingdom) are among the target markets for General Atomics.
- ▶ In December 2023, the Canadian Department of National Defence approved the acquisition of the armed version of the MQ-9B SkyGuardian MALE surveillance UAV as part of its Remotely Piloted Aircraft Systems (RPAS) programme. Worth CAD 2.49bn (€1.71bn), the order includes 11 UAVs, 6 ground control stations, missiles and aerial bombs.
- ► The U.S. Air Force awarded General Atomics a \$174m (€161m) contract in April 2024 to upgrade the capabilities of the four MQ-9A Reaper UCAVs and two ground control stations in service with the Royal Netherlands Air Force by January 2029.
- ► In August 2024, the Japan Coast Guard ordered two MQ-9B SeaGuardian MALE maritime surveillance UAVs from General Atomics, to be delivered by 2025.
- In October 2024, the Indian Ministry of Defence signed a contract with the U.S. government for the supply of 31 MQ-9B MALE UAVs (15 SeaGuardian and 16 Sky Guardian) in armed version for 32,000 crores of rupees (€3.1bn), including missiles and laser-quided bombs.

#### Technology and Innovation

In February 2024, the group carried out ammunition firing tests on a fixed target using its future Mojave UAV, armed with two Dillon Aero M134 7.62 mm multi-barrel machine guns.



## GENERAL DYNAMICS

Diversified defence group (naval platforms, armoured vehicles, weapon systems, C5ISR, etc.) with commercial aerospace activities, and 5th-largest defence contractor worldwide

#### **BUSINESS AREAS**

Platform manufacturer and systems integrator

- Military vessels and commercial ships
- Armoured vehicles and unnmanned ground vehicles
- Weapon systems and ammunition
- Mission systems and C5ISR
- IT solutions and cybersecurity
- Aeronautics (Gulfstream multimissions jets)

#### GOVERNANCE

Chairwoman and CEO	Phebe N. Novakovic
Executive VP Marine Systems	Robert E. Smith

Executive VP Danny Deep **Combat Systems** 

## OWNERSHIP STRUCTURE (as of 10.10.2024)

Symbol	GD
Listed on	NYSE
Market Cap (\$m)	80,999
Major shareholders (as of 10.10.2024)	1

Longview Asset Management LLC	10.23%
Vanguard Fiduciary Trust Co.	8.06%
Newport Trust Co.	5.63%
Wellington Trust Co.	5.13%

#### MAIN JOINT VENTURES AND ASSOCIATES

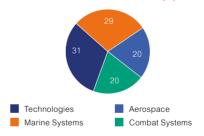
Name	%	Country
Defense Munitions International	50%	United States
Range Generation Next	50%	United States
EuroTrophy	N/A	Germany

#### KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	33,209	32,518	37,424	39,105
Δ (%) [\$]*	-3.62%	1.43%	2.44%	7.27%
Defence (%)	66%	67%	67%	69%
Export (%)**	18%	18%	15%	14%
Operating profit/loss	3,619	3,519	3,999	3,927
Operating margin	10.90%	10.82%	10.69%	10.04%
Net income	2,773	2,753	3,219	3,067
Order book	72,933	77,312	85,414	84,730
Employees	100,700	103,100	106,500	111,600

<sup>\*</sup>Variation based on revenue in local currency See €/\$, p.9

#### REVENUE BY BUSINESS SEGMENT (%)



#### REVENUE BY REGION (%)



<sup>\*\*</sup>Excluding Foreign Military Sales

MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	liller, 470	throp C	Turninar Luminar	Schueeg.	Martin Haris	Etnologie Levrell	Systems	JhB T	tales put	id Sa
Naval shipbuilding										
Arleigh Burke-class destroyer	•	•	•			•				
John Lewis-class replenishment oiler										
Columbia-class future nuclear-powered ballistic missile submarine (SSBN)	• •									
Virginia-class nuclear-powered attack submarine (SSN)	• •					•				
Armoured vehicles and unnmanned ground vehicles										
M1A2 Abrams main battle tank					•		•			
M10 Booker assault gun (Mobile Protected Firepower programme)										
ASCOD / Ajax family of tracked armoured vehicles		•	•					•		
Piranha family of wheeled armoured vehicles										
8x8 LAV family of armoured vehicles*	•									
8x8 Stryker family of armoured vehicles**	•	•					•			
Multi-Utility Tactical Transport unnmanned ground vehicle										
Weapon systems and ammunition										
GAU-22/A, M61A1, M61A2, M197 and XM915 aircraft guns			•				•			
70 mm Hydra-70 family of rockets										
Mission systems and C5ISR										
Open architecture computing infrastructure (OPEN CI) (Independence-class LCS frigate)									•	
Bowman C4I system (British Army)		•		•		•	•			
Warfighter Information Network-Tactical (WIN-T)		•	•	•		•				
Aeronautics										
Gulfstream multimission jets  *Canadian version of the Piranha *American version of the LAV  ***Formerly Raytheon Technologies ************************************	III ***Formerl esti, subsidiar	y Hunti y of R0	ngton I DMARN	ngalls i	Industri Israel A	es erospac	e Industr	ies		•

#### Business trends

- ▶ General Dynamics revenues reached \$42.3bn (€39.1bn) in 2023, up 7.3% year-on-year in local currency. Growth was driven by the Combat Systems division (+13.1%), wich recorded higher sales of M1 Abrams main battle tanks to U.S. allies and M10 Booker tracked assult guns for the U.S. Army. The Marine Systems division also recorded strongh growth (+12.9%), driven by shipbuilding activities for the U.S. Navy (Arleigh Burke-class destroyer, John Lewis-class tanker, future Columbia-class SSBN, Virginia-class SSN, etc.).
- The group has a very diversified portfolio of defence activities (69% of total revenues in 2023): surface ships and submarines, armoured vehicles, weapon systems and ammunition, cybersecurity, etc. The Aerospace division, however, is predominantly civilian-oriented (10% of defence turnover only in 2023).

#### Home market

- The United States remains General Dynamics' largest market, accounting for 86% of total revenues in 2023. The U.S. Department of Defense alone accounted for 58% of revenues in 2023.
- General Dynamics Information Technology signed a \$922m (€853m) contract in February 2024 to modernise the IT architecture of the U.S. Central Command (CENTCOM), which runs military operations in 21 countries in North East Africa, the Middle East, Central Asia and South Asia.
- The fourth Expeditionary Sea Base support ship built by General Dynamics NASSCO, named John L. Canley (ESB-6), entered service with the U.S. Navy in February 2024.
- In May 2024, General Dynamics Land Systems handed over a first production M10 Booker assault gun to the U.S. Army. The division received \$323m (€299m) in June 2024 to continue vehicle production.
- ▶ General Dynamics Electric Boat signed a \$1.32bn (€1.22bn) contract with the U.S. Navy in August 2024 to purchase long lead time materials for the future Block VI Virginia-class SSNs.
- The group is currently competing for three U.S. Armed Forces programmes: XM30 Mechanized Infantry Combat Vehicle (tracked infantry combat vehicle, up against Rheinmetall), Robotic Combat Vehicle (reconnaissance and escort UGV, up against Oshkosh Defense) and DDG(X) (guided-missile destroyer, up against HII).

#### Export markets

- The group generated 14% of its revenues from exports in 2023 (without FMS programmes), mostly through General Dynamics European Land Systems (based in Germany, Austria, Denmark, Spain, the Czech Republic, Romania and Switzerland) and General Dynamics UK (United Kingdom).
- ▶ General Dynamics Mission Systems was awarded four contracts worth a combined CAD 1.68bn (€1.15bn) in December 2023 by the Canadian government to support the Canadian Army's C4ISR systems.
- In February 2024, the Austrian Federal Ministry of Defence awarded a €1.2bn contract to General Dynamics European Land Systems - Steyr for the production of 225 Pandur EVO 6x6 wheeled armoured vehicles in around ten variants.
- ▶ In June 2024, Marshall Canada and General Dynamics Land Systems signed two contracts worth a combined CAD 2.58bn (€1.77bn) with the Canadian Armed Forces for the production, integration and support of 1,500 logistics vehicles and associated equipment (trailers, protection kits, etc.) over 25 years.

- Self-financed R&D expenditure amounted to \$510m (€472m) in 2023, representing 1.2% of revenues.
- In May 2024, the U.S. Army awarded a contract for the preliminary design of the future version of the M1 Abrams main battle tank. Named M1E3, this version will be lighter than its predecessors and will feature an active protection system.



## HANWHA OCEAN (FORMERLY DSME)

South Korean shipbuilder with civil and military activities, acquired by the Hanwha conglomerate in 2023 after a failed takeover by KSOE (holding company for HHI)

#### **BUSINESS AREAS**

Platform manufacturer and systems integrator

- Naval vessels (surface combatants and submarines)
- Commercial ships
- Offshore plants

#### **GOVERNANCE**

Chairman and CEO	Hyek Woong Kwon
Head of Geoje shipyard (South Korea)	In Sub Jung

KEY FIGURES	(Fiscal	year	ended:	Decemb	er 31st)

€ millions	2020	2021	2022	2023
Revenue	5,225	3,313	3,579	5,243
Δ (%) [KRW]*	-15.89%	-36.18%	8.33%	52.43%
Defence (%)**	≈ 10%	14%	10%	11%
Export (%)	1%	1%	4%	3%
Operating profit/loss	114	-1,296	-1,188	-139
Operating margin	2.18%	-39.11%	-33.20%	-2.65%
Net income***	64	-1,255	-1,285	113
Order book (USD)	15,500	20,900	29,500	25,400
Employees	9,032	8,628	8,303	8,424

<sup>\*</sup>Variation based on revenue in local currency

## OWNERSHIP STRUCTURE (as of 10.10.2024)

Symbol	A042660
Listed on	Korea Stock Exchange
Market Cap (KRWbn)	9,713

#### Major shareholders (as of 10.10.2024)

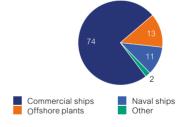
Hanwha Aerospace Co., Ltd.	23.14%
South Korean State	21.17%
Hanwha Systems Co., Ltd.	11.57%
Hanwha Energy Corp.	10.88%

## MAIN JOINT VENTURES AND ASSOCIATES\*

Name	%	Country

<sup>\*</sup>No information available

## REVENUE BY BUSINESS SEGMENT (%)\*



<sup>\*</sup>Revenue distribution based on total sales excluding eliminations

#### REVENUE BY REGION (%)\*



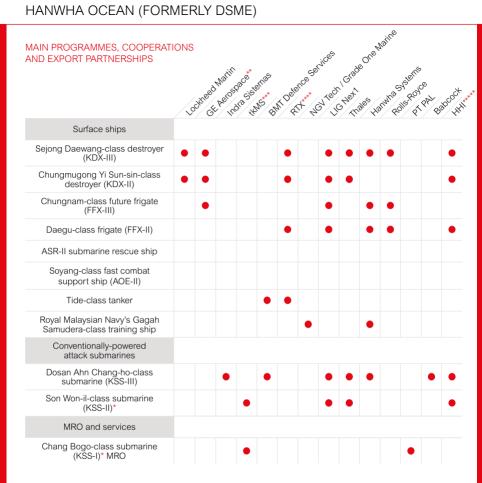
\*Revenue distribution based on total sales excluding eliminations

See €/KRW, p.9

<sup>\*\*</sup>Naval ships division only

<sup>\*\*\*</sup>Net income attributable to shareholders

## HANWHA OCEAN (FORMERLY DSME)



<sup>\*</sup>Based on tkMS' submarines

<sup>\*\*</sup>Formerly GE Aviation

<sup>\*\*\*</sup>thyssenkrupp Marine Systems, thyssenkrupp group

<sup>\*\*\*\*</sup>Formerly Raytheon Technologies

<sup>\*\*\*\*\*</sup>Hyundai Heavy Industries (KSOE group)

#### Business trends

- ► Hanwha Ocean revenues reached 7.408 trillion won (€5.2bn) in 2023, up 52.4% year-on-year in local currency thanks to sustained growth across all divisions. The group also improved its financial performance and recorded a net profit after two years of substantial losses.
- In June 2024, the Hanwha group, through Hanwha Ocean and Hanwha Systems, signed an agreement to acquire Philly Shipyard, based in Philadelphia and owned by the Norwegian group Aker, for \$100m (€93m). The shipyard is involved in the U.S. Maritime Administration's (MARAD) programme to build five National Security Multi-Mission Vessels (NSMV). Two ships were delivered in 2023-2024 and the last three are under construction.
- ► However, in September 2024, Hanwha Ocean withdrew its bid for shipbuilder Austal (an Australian group with a strong presence in the United States), made in April 2024 for A\$1.02bn (€620m).

#### Home market

- Hanwha Ocean is a major supplier to the Republic of Korea Navy (ROKN). The group will supply the last two of the six FFX-III Chungnam-class frigates, scheduled to enter service in 2027-2028.
- Hanwha Ocean is competing with its domestic peer Hyundai Heavy Industries (HHI) on two ROKN programmes: the future CVX aircraft carrier (which prospects are, however, uncertain) and the KDDX/KDX-IV new-generation stealth destroyer.
- In December 2023, Hanwha Ocean signed a contract worth 1.102 trillion won (€780m) with the South Korean Defense Acquisition Program Administration (DAPA) to supply the third KSS-III Dosan Ahn Chang-ho-class submarine from the second batch. The three units of that batch, all supplied by Hanwha Ocean, are due to be delivered between 2027 and 2031.
- ► The ROKN ordered a second Soyang-class fast combat support ship (AOE-II) from Hanwha Ocean in July 2024, for 460 billion won (€326m). The vessel is due to enter service at the end of 2028. The first unit was supplied by HHI and commissioned in 2018.
- ▶ The ASR-II submarine rescue ship, named Ganghwa-do, was handed over to the ROKN in November 2024.

#### **Export markets**

- ▶ To increase its ability to win submarine tenders abroad, particularly in Poland and Canada, Hanwha Ocean strengthened its cooperation with the British group Babcock and local operators in 2024. Hanwha Ocean is offering the KSS-III submarine for the Polish Orka (up to 4 units) and Canadian CPSP (Canadian Patrol Submarine Project, up to 12 units) programmes.
- Hanwha Ocean was awarded two MRO contracts for the U.S. Navy. The Geoje shipyard in South Korea will carry out maintenance operations on the dry cargo ship USNS Wally Schirra and the replenishment oiler USNS Yukon, until January and April 2025 respectively. Having received a Master Ship Repair Agreement (MSRA) in July 2024, Harwha Ocean can now participate in MRO tenders for U.S. Navy ships for 5 years.
- Hanwha Ocean took part in the tender for Australia's SEA 3000 programme to acquire up to 11 general purpose frigates, but was not selected. The group offered its new Ocean 4300 frigate, an improved version of the Daegu-class frigate.

- ▶ The group's R&D expenditure amounted to 74.7 billion won (€52.9m) in 2023, representing 1% of revenues.
- In 2023-2024, Hanwha Ocean was selected to carry out a hydrogen fuel cell project for unmanned submersibles and to design unmanned underwater and surface vehicles (reconnaissance UUVs and mine warfare USVs), in partnership with Hanhwa Systems. These projects are part of the ROKN Navy Sea Ghost concept, which aims to jointly operate manned and autonomous systems.

## HENSOI DT

Defence electronics group majority-owned by the German State and Italian group Leonardo and 54th-largest defence company worldwide, which acquired ESG in April 2024

#### BUSINESS AREAS

Systems integrator/equipment supplier

- Radar systems
- Defence electronics
- Optronics
- Communications and display systems
- Identification Friend or Foe (IFF) systems

#### **GOVERNANCE**

Symbol

Chairman of the Supervisory Board	Reiner Winkler
Chief Executive Officer	Oliver Dörre
Chief Financial Officer	Christian Ladurner

#### KEY FIGURES (Fiscal year ended: December 31st)

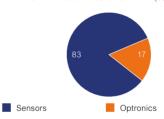
€ millions	2020	2021	2022	2023
Revenue	1,207	1,474	1,707	1,847
Δ (%)	8.35%	22.12%	15.81%	8.20%
Defence (%)	≈ 95%	≈ 95%	≈ 95%	≈ 95%
Export (%)	50%	43%	42%	45%
Operating profit/loss	69	126	166	162
Operating margin	5.72%	8.55%	9.72%	8.77%
Net income*	-65	63	78	54
Order book	3,424	5,092	5,366	5,530
Employees	5,605	6,316	6,463	6,907

\*Net income attributable to shareholders

#### OWNERSHIP STRUCTURE (as of 10.10.2024)

Cyrribor	TIAC
Listed on	XETRA
Market Cap (€m)	3,333
Major shareholders (as of 10.10.2024)	
German State	25.10%
Leonardo	22.82%
Capital Research & Management Co. (World Investors)	5.39%
Lazard Asset Management LLC	4.54%

#### REVENUE BY BUSINESS SEGMENT (%)\*



\*Revenue distribution based on total sales excluding eliminations

#### MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
Hensoldt Cyber	90.6%	Germany
DEGFA	66.7%	Germany
Euro-ART International EWIV	50%	Germany
Atlas Optronics	49%	UAE
SCAFSE	49%	Algeria
Euro-ART Advanced Radar Technology	25%	Germany
EuroMIDS	25%	France

#### REVENUE BY REGION (%)\*



HAG

MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	trales indi	a Sistemas	i Skiens ed	Martin T Group	Minaria Techni	Schwart Mades F.S.
Radar systems						
ECRS Mk1 AESA radar (Typhoon)	•	•				
PrecISR and ASR air surveillance radars						
Counter Battery Radar (COBRA)	•		•			
TRS-3D and TRS-4D naval radars	•					
Defence electronics						
NGF future fighter aicraft (FCAS programme) (Sensors pillar, Combat Cloud pillar)	• •				• •	•
Praetorian Defensive Aids Sub-System (DASS) (Typhoon)	•	• •	•			
European MALE RPAS' future ISTAR solution	• •		•			
PEGASUS programme				•		
Airborne Missile Protection System (AMPS)						
MILDS and MILDS-F missile warning systems						
Advanced Laser Threat Alerting System (ALTAS)						
Kalaetron family of radar warning receivers						
Future Multifunctional Self-protection System 2.0 (MUSS 2.0) for armoured vehicles						
Optronics						
European MALE RPAS' Euroflir 610 future multispectral optronical targeting and observation system				•		•
SETAS optronical system for armoured vehicles						
Communication and display systems						
MIDS Low Volume Terminals (MIDS-LVT)	• •	•				
Identification Friend or Foe (IFF) systems						
MSR 1000 I and MSSR 2000 I IFF interrogators		•				
*Acquired by Hensoldt in April 2024						

#### Business trends

- ► Hensoldt revenues increased 8.2% to €1,847m in 2023. Growth was mainly driven by the Sensors division (+10.1%, before consolidation) and its main programmes (PEGASUS airborne surveillance system; TRML-4D radars; Praetorian DASS self-protection system, radars and services for the Typhoon fighter aircraft, etc.). Revenues in the Optronics division remain almost stable (-0.3%, before consolidation), despite growth in landbased systems and South Africa.
- In April 2024, Hensoldt completed the acquisition of German defence electronics group ESG from investment holding Armira, for €675m. To integrate ESG, Hensoldt will divide its operations into four divisions: Radar, Optronics, Multi Domain Solutions, and Services & Training.
- In October and November 2024, Hensoldt signed agreements with Raytheon (RTX group) to strengthen cooperation in EO/IR systems for NATO Forces and with Lockheed Martin to cooperate in maritime command and control systems and radar technologies.

#### Home market

- ► In July 2024, Rheinmetall Air Defence awarded Hensoldt a contract worth almost €100m to supply Spexer 2000 air defence radars for installation on Skyranger 30 turrets fitted to German and Austrian vehicles.
- In August 2024, Hensoldt received an order from Thales for additional TRS-4D radars to equip the German Navy's future F126 frigates. The contract for these radars was initiated in 2022 and its total value now exceeds €200m. Germany's Federal Office of Bundeswehr Equipment, Information Technology and In-Service Support (BAAINBw) also notified a follow-up order for Dynahawk fire control systems.
- The first aircraft in the German PEGASUS (Persistent German Airborne Surveillance System) programme, based on a modified Bombardier Global 6000 business jet, made its maiden flight in October 2024. The programme includes three aircraft, which will carry out surveillance missions for the German Armed Forces. As prime contractor, Hensoldt is supplying its Kalætron Integral SIGINT system, with Lufthansa Technik Defense as its main partner.
- ▶ In November 2024, Hensoldt was awarded a contract worth several tens of millions of euros by KNDS Deutschland to supply 92 BAA III observation and reconnaissance sensors, to be delivered from early 2026. The sensors will be used to modernize Fennek reconnaissance vehicles of the German Army.

#### Export markets

- ▶ The group generated 45% of its revenues from exports in 2023, mainly in Europe.
- In May 2024, Hensoldt UK was selected by Navantia UK to supply naval radars and air traffic management systems for the UK Royal Fleet Auxiliary's three future Fleet Solid Support (FSS) supply ships, due to enter service from 2031
- As part of the European Sky Shield Initiative (ESSI), Hensoldt was awarded a contract by Diehl Defence worth more than €100m in July 2024 for the supply of TRML-4D air defence radars to Latvia and Slovenia, including maintenance and training services.
- ▶ In October 2024, Hensoldt signed a contract worth around €20m with Space Centre Australia to supply two ASR-NG radars (Air Surveillance Radar - Next Generation systems) by the end of 2026. From 2027, the group will also provide sustainment services for 20 years to enhance Australia's air surveillance capabilities.

#### Technology and Innovation

► The group's self-financed R&D expenditure amounted to €30m in 2023, representing 1.6% of revenues.



## HII (FORMERLY HUNTINGTON INGALLS INDUSTRIES)

Leading military shipbuilder in the United States, where its Newport News and Ingalls shipvards are based, and 15th-largest defence company in the world

#### **BUSINESS AREAS**

Platform manufacturer and systems integrator

- Surface ships (nuclear-powered aircraft carriers, LHAs, LPDs, combat ships, etc.)
- ► Submarines (SSNs, SSBNs)
- Autonomous systems (USVs, UUVs)
- ► Training and integrated logistic support
- MRO and modernisation
- Energy sector services

President, Ingalls Shipbuilding

#### **GOVERNANCE**

Chairman	K. H. Donald
Chief Executive Officer	C. D. Kastner
President, Newport News Shipbuilding	J. Boykin

K. Wilkinson

#### KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	8,197	8,051	10,139	10,596
<i>∆</i> (%) [\$]*	5.19%	1.74%	12.10%	7.29%
Defence (%)	92%	99%	100%	100%
Export (%)	N/A	N/A	N/A	N/A
Operating profit/loss	700	434	537	722
Operating margin	8.54%	5.39%	5.29%	6.82%
Net income	609	460	550	630
Order book	37,504	42,763	44,164	43,548
Employees	42,000	44,000	43,000	44,000

<sup>\*</sup>Variation based on revenue in local currency See €/\$, p.9

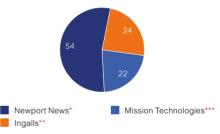
#### OWNERSHIP STRUCTURE (as of 10.10.2024)

Symbol	HII
Listed on	NYSE
Market Cap (m\$)	9,916

#### Major shareholders (as of 10.10.2024)

Vanguard Fiduciary Trust Co.	12.80%
Fidelity Management & Research Co.	8.48%
BlackRock Advisors LLC	8.23%
State Street Corporation	7.69%

## REVENUE BY BUSINESS SEGMENT (%)



<sup>\*</sup> Nuclear-powered submarines and aircraft carriers

#### MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
H&B Defence	N/A	Australia
Naval Shipbuilding Institute	N/A	Australia
Newport News Nuclear BWXT-Los Alamos (N3B)	N/A	United States
Sea Machines Robotics	N/A	United States

## REVENUE BY REGION (%)



<sup>\*\*</sup> Surface ships

<sup>\*\*\*</sup> Professional and government services

## HII (FORMERLY HUNTINGTON INGALLS INDUSTRIES)

MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	Hothice Grant Bechel of Perceptage of Color of the first State of States of
Aircraft carriers	
Gerald R. Ford-class aircraft carrier	• • •
Nimitz-class aircraft carriers refueling and complex overhaul	• • •
Amphibious assault ships	
America-class Landing Helicopter Assault (LHA)	
San Antonio-class Landing Platform Dock (LPD)	• • • •
Combat ship	
Arleigh Burke-class destroyer	• • • • •
Patrol ship	
Legend-class National Security Cutter (NSC)	•
Submarines	
Future Columbia-class balistic missile submarine*	
Virginia-class nuclear-powered attack submarine	
Autonomous systems	
REMUS family of UUVs	
Proteus USV	
Integrated logistic support	
U.S. Navy's surface vessel and submarine integrated logistic support	
U.S. Air Force's Training Systems Acquisition IV (TSA IV) programme (sustainment of training systems)	•

## HII (FORMERLY HUNTINGTON INGALLS INDUSTRIES)

#### STRATEGIC HIGHLIGHTS

#### Business trends

- ► HII revenues reached \$11.5bn (€10.6bn) in 2023, up 7.3% year-on-year in local currency. The Mission Technologies division recorded the strongest growth (+13.1%), ahead of shipbuilding activities (+4.8% for Newbort News and +7.1% for Ingalls).
- HII, Babcock Australasia and Bechtel Australia signed a letter of intent in December 2023 to cooperate on the SSN-AUKUS next-generation nuclear attack submarine programme, jointly led by the United States, the United Kingdom and Australia.
- In March 2024, Newport News announced that 3,000 people will be hired in 2024 and 19,000 over the next 10 years to meet its growing submarine workload.

#### Home market

- HII operates almost exclusively in the U.S. naval defence sector, with the U.S. Navy and U.S. Coast Guard as
  its main customers.
- In January 2024, Newport News delivered the stern of the first Columbia-class SSBN (SSBN-826) currently being built by General Dynamics Electric Boat.
- In February 2024, Newport News tested the EMALS electromagnetic catapult system on the Gerald R. Ford nuclear-powered aircraft carrier John F. Kennedy (CVN-79). The ship is scheduled for delivery to the U.S. Navy in the summer of 2025.
- In April 2024, Newport News completed the refueling and overhaul (RCOH) of the Nimitz-class nuclear-powered aircraft carrier John C. Stennis (CVN-74), which entered service in 1995.
- Ingalls handed over the San Antonio-class LPD amphibious landing dock named Richard M. McCool Jr (LPD-29), the last unit of Flight I, to the U.S. Navy in August 2024. The first unit of Flight II, named Harrisburg (LPD-30), was launched in October 2024.
- ▶ In September 2024, Ingalls won a \$9.6bn (€8.9bn) contract from the U.S. Navy to build three San Antonioclass landing platform docks (LPD) and one America-class landing helicopter assault (LHA) amphibious ship.
- ► The Virginia-class SSN called New Jersey (SSN-796), built by Newport News, entered service with the U.S. Navv in September 2024.

#### Export markets

- HII's export sales are mainly made of unmanned underwater vehicles, which were sold to 30 countries. Former contracts include four REMUS 300 UUVs for the Royal New Zealand Navy in 2021 and one REMUS 620 UUV sold to a country in the Indo-Pacific region in March 2024 for surveillance and data collection missions.
- ▶ In March 2024, Mission Technologies signed a 5-year, \$305m (€282m) contract with the U.S. Defense Intelligence Agency (DIA) to provide intelligence data analysis services (threat detection, determination of adversaries' plans of action in the event of conflict, etc.) to the Joint Intelligence Operations Center-Korea (JIOC-K), which supports the U.S. Armed Forces based in South Korea.
- The Royal Navy ordered 8 REMUS UUVs from Mission Technologies in May 2024 for underwater exploration, surveillance and mine countermeasures missions (3 REMUS 100 and 5 REMUS 300).

- ➤ Self-financed R&D expenditure amounted to \$35m (€32m) in 2023, representing 0.3% of revenues. Most of the R&D costs of the group's programmes are funded by government contracts.
- ▶ In March 2024, Mission Technologies unveiled a new unmanned underwater vehicle, the REMUS 130. Developed in-house, this UUV can be used for a variety of missions, including mine countermeasures operations, data collection, search and rescue and offshore oil and gas exploration.



## HONEYWELL INTERNATIONAL

Commercial and military provider (mainly propulsion systems), 24th-largest defence contractor worldwide

#### **BUSINESS AREAS**

Engine manufacturer, systems integrator/ equipment supplier

- Commercial and military aeronautics (propulsion systems, avionics, wheels, brake systems)
- ▶ Defence electronics and ISR systems
- Space
- Protection solutions
- Infrastructures, energy
- ▶ Healthcare, pharmaceutical industry

#### **GOVERNANCE**

Symbol

Chairman and CEO	Vimal Kapui
Chief Technology Officer	Suresh Venkatarayalu
President and CEO, Aerospace	Jim Currie

#### OWNERSHIP STRUCTURE (as of 10.10.2024)

Listed on	NYSE
Market Cap (\$m)	138,645
Major shareholders (as of 10.10.2024)	
Vanguard Fiduciary Trust Co.	9.37%
BlackRock Advisors LLC	5.26%
State Street Corporation	4.76%

#### MAIN JOINT VENTURES AND ASSOCIATES

JPMorgan Investment Management, Inc.

Name	%	Country
Honeywell TAECO Aerospace (Xiamen)	65%	China
Integrated Guidance Systems	50%	United States
ITEC	50%	United States
LHTEC	50%	United States

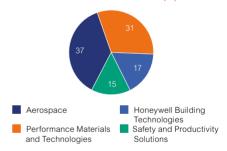
#### KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	28,579	29,072	33,681	33,915
Δ (%) [\$]*	-11.09%	5.38%	3.12%	3.37%
Defence (%)**	18%	15%	13%	14%
Export (%)	52%	52%	52%	56%
Operating profit/loss	4,988	5,241	6,104	6,553
Operating margin	17.45%	18.03%	18.12%	19.32%
Net income***	4,185	4,685	4,716	5,234
Order book	21,002	24,432	27,702	28,757
Employees	103,000	99,000	97,000	95,000

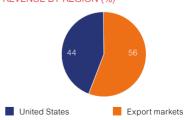
<sup>\*</sup>Variation based on revenue in local currency

HON

#### REVENUE BY BUSINESS SEGMENT (%)



#### REVENUE BY REGION (%)



See €/\$, p.9

<sup>\*\*</sup>Defense and Space activity of the Aerospace division only \*\*\*Net income attributable to shareholders

# A Disabasa kudakésa polis Rode ed Mariti MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS Propulsion systems and Auxiliary Power Units (APUs) T55 turboshaft engine (CH-47 Chinook) CTS800 turboshaft engine (Lynx / Super Lynx, AW159 Wildcat, T129 ATAK) F124/F125 turbofan engines (M346 Master, T-5 Brave Eagle, L-159 Alca) TPE331 turboprop engine (MQ-9 Reaper, Do228 NXT, HTT-40, NC-212i) AGT1500 gas turbine (M1 Abrams) 36-150 APUs family (AH-64 Apache, UH-60 Black Hawk, CH-47 Chinook) G230 and G250 APUs (F-35 Lightning II, F-22 Raptor) Avionics and navigation systems Enhanced Ground Proximity Warning System (EGPWS) Embedded GPS/INS (EGI) Tactical Advanced Land Inertial Navigator (TALIN) Weather radar systems RDR-4000/7000 weather radar systems Security and maintenance Health and Usage Monitoring System (HUMS) Control and actuation systems CAS and FCA directional steering control systems for missiles and GMLRS TVC steering control system for launch vehicles and spacecraft Satellite communication systems JetWave satellite communication system

\*Aerospace Industrial Development Corp. \*\*Formerly Raytheon Technologies \*\*\*Kawasaki Heavy Industries \*\*\*\*Hindustan Aeronautics Ltd

#### Business trends

- ► Honeywell revenues reached \$36.7bn (€33.9bn) in 2023, up 3.4% year-on-year in local currency. Three of the group's four divisions reported higher sales, including Honeywell Building Technologies (construction, +0.5%) and Performance Materials and Technologies (industrial equipment, +7.3%). The revenues of the Aerospace division (aeronautics and defence) grew 15.2% following the recovery in the aerospace industry, but were still 3.1% below their 2019 level.
- In September 2024, Honeywell completed the acquisition of the Advanced Electronic Solutions (CAES) division of British equipment manufacturer Cobham from private equity investor Advent International for \$1.9bn (€1.8bn). CAES produces RF systems installed on the F-35 Lightning II (Lockheed Martin) and EA-18G Growler (Boeing) aircraft, the AIM-120 AMRAAM missile (RTX), the GMLRS guided rocket (Lockheed Martin) and the AESA AN/SPY-6 naval radar (RTX).

#### Home market

- In 2023, Honeywell generated 44% of its revenues in the United States. Sales to the U.S. Department of Defense amounted to \$2.9bn (€2.7bn), or 59% of the group's defence activities.
- Under multi-year contracts, Honeywell is involved in the maintenance and modernisation of various key equipment for the U.S. Armed Forces. The group is in particular in charge of upgrading its T55 turboshaft engine that powers the U.S. Army's CH-47 Chinook helicopters (development of the T55-GA-714C version, which provides a 22% increase in power and an 8% reduction in fuel consumption compared with the T55-GA-714A version).
- In April 2024, the group signed a contract worth a potential \$70m (€65m) over 8 years (including 3 years of options) with the U.S. Defense Logistics Agency to supply spare parts (notably transceivers) for the APN-209 radio altimeter installed on U.S. Army helicopters.

#### Export markets

- Honeywell generated 56% of its revenues from exports in 2023. 42% of production is located outside the United States, mainly in Europe and Asia (but only 28% in the Aerospace division).
- MRO contracts are key drivers of export sales. They are supported by engine production licences and partnerships, for example with Japan's KHI (for the T55 engines of the CH-47JA helicopters), Turkey's Turkish Aerospace (for the CTs800 engines of the T129 ATAK and T625 Gökbey helicopters) and Taiwan's AIDC (for the F125 engines of the F-CK-1 Ching-kuo multirole combat aircraft).
- Honeywell signed a letter of intent with the Indonesian group PT Dirgantara Indonesia (PTDI) in February 2024 to cooperate on the Indonesian Ministry of Defense's programme to acquire around twenty S-70M (Sikorsky) transport helicopters. The group will supply various avionics and mechanical components, such as weather radars, which PTDI will integrate into the helicopters.
- In February 2024, Honeywell secured a contract for the production, under FMS procedures, of 105 T55-GA-714A turboshaft engines to power the 60 CH-47F Chinook heavy-lift helicopters (Boeing) currently being acquired by Germany.

- ► Self-financed R&D expenditure amounted to \$1.5bn (€1.3bn) in 2023, representing 4.0% for revenues.
- In April 2024, the U.S. Army's General Technical Services awarded Honeywell a contract to develop a hydrogen fuel cell system designed to power electronic devices carried by foot soldiers and weighing half as much as current batteries.



## **HYPRSPACE**

French company founded in 2019, developing a hybrid rocket engine and the Orbital Baquette 1 (OB-1) mini-launcher scheduled for maiden launch in 2027

#### **BUSINESS AREAS**

Platform manufacturer

- Space transportation (small launcher)
- Hybrid propulsion system for civil and military applications

#### **GOVERNANCE**

CEO and CTO	Alexandre Mangeot
On-board electronics & software lead engineer	Vincent Rocher

Chief Strategy Officer Sylvain Bataillard

Key figures (Fiscal year ended: December 31st) 

€ millions	2020	2021	2022	2023
Revenue	N/A	N/A	N/A	N/A
△ (%)	N/A	N/A	N/A	N/A
Defence (%)	N/A	N/A	N/A	N/A
Export (%)	N/A	N/A	N/A	N/A
Operating profit/loss	N/A	N/A	N/A	N/A
Operating margin	N/A	N/A	N/A	N/A
Net income	N/A	N/A	N/A	N/A
Order book	N/A	N/A	N/A	N/A
Employees	N/A	15	20	30

#### OWNERSHIP STRUCTURE

Symbol	
Listed on	Unlisted company
Market Cap	

Major shareholders (as of 10.10.2024)

Founders	N/A
Other shareholders*	N/A

<sup>\*</sup>Including Geodesic and Bpifrance

#### REVENUE BY BUSINESS SEGMENT (%)



#### MAIN JOINT VENTURES AND ASSOCIATES\* REVENUE BY REGION (%)

Name	%	Country
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\*No information available





#### Business trends

- Created in 2019, the French company HyPrSpace (Hybrid Propulsion for Space) is based in Le Haillan (near Bordeaux) and employs over 60 people. It is developing a hybrid rocket engine (HRE) combining a liquid oxidizer (oxygen) and a solid fuel (polyethylene, a very common polymer). This technology does not require turbopumps to feed the engine's combustion chamber, thereby reducing production costs. The company's rocket engines can be used for both civil and military applications (including missile propulsion).
- HyPrSpace is also developing a suborbital demonstrator called Baguette One (7 metres high), scheduled to make its first flight in 2026. It will be followed by an orbital version, the Orbital Baguette 1 (OB-1) mini-launcher. Two versions were announced, measuring between 11 and 16 metres in height and capable of carrying a payload of 200 to 250 kg into low Earth orbit. The first flight is scheduled for 2027. The aim is to eventually carry out 15 launches a year.
- ► HyPrSpace raised €1.1m in April 2022 from the Geodesic fund, French public sector investment bank Bpifrance and private investors.

#### Home market

- ▶ HyPrSpace and the French defence procurement agency (DGA) entered into a partnership in September 2023 to qualify the hybrid propulsion technology developed by HyPrSpace, which will be able to use the DGA missile testing facilities in Gironde (in southwestern France).
- At the end of 2023, a consortium led by HyPrSpace and including Telespazio France and CT Ingénierie, received funding of 635m under the France 2030 plan for its PADA1 project (Projet Agile de Développement d'Accès à l'espace 1). The programme aims to support the development of the OB-1 mini-launcher (detailed design phase) and to ensure the first flight of the Baguette One suborbital demonstrator in the first quarter of 2026.
- HyPrSpace is one of four French operators of small space launchers selected in March 2024, along with Latitude, MaiaSpace and Sirius, whose first flight will be purchased by the French Space Agency (CNES). HyPrSpace and Latitude were competing in the mini-launchers segment, capable of placing a payload of 100 to 200 kg into orbit at an altitude of 400 km. Total funding of €400 m is planned as part of the France 2030 plan. However, most of the funding will be conditional on successful launches, expected between 2026 and 2027.

#### Technology and Innovation

▶ In July 2024, HyPrSpace carried out the first fire test of the Terminator hybrid propulsion engine demonstrator (measuring 6 metres long by 1 metre wide and weighing 8 tonnes) at the DGA Essais de Missiles site in Saint-Médard-en Jalles (near Bordeaux).



## **INDRA SISTEMAS**

Company with civil and military activities, leader in the Spanish defence electronics market, involved in the FCAS programme, and 86th-largest defence contractor worldwide

#### BUSINESS AREAS

Systems integrator/equipment supplier

- Defence and security (defence electronics, C4ISR systems, radar and sonar systems, simulation, etc.)
- Transportation and air traffic
- Public and healh sectors
- Energy and industry
- ▶ Financial services
- ▶ Telecom and media

#### **GOVERNANCE**

Symbol Listed on

Chairman	Marc Murtra
Chief Executive Officer	José Vicente de los Mozos
President, Defence & Security	Borja Ochoa

#### OWNERSHIP STRUCTURE (as of 10.10,2024)

Market Cap (€m)	3,003
Major shareholders (as of 10.10.2024)	
SEPI (Spanish State)	28.00%
Escribano Mechanical & Engineering	8.00%
SAPA Placencia SL	7.94%
Amber Capital	7.24%

#### MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
UTE Indra-Eurocopter	62.5%	Spain
SAES Capital	49%	Spain
Inmize Sistemas	40%	Spain
Eurofighter Simulations System	26%	Germany
Euromids	25%	France
Tess Defence	25%	Spain
A4 Essor	23%	France

#### Key figures (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	3,043	3,390	3,851	4,343
Δ (%)	-5.02%	11.40%	13.60%	12.78%
Defence (%)*	17%	19%	17%	19%
Export (%)	48%	49%	50%	50%
Operating profit/loss	-33	256	300	347
Operating margin	-1.08%	7.55%	7.79%	7.99%
Net income**	-65	143	172	206
Order book	5,229	5,459	6,309	6,776
Employees	49,027	52,083	56,735	57,755

<sup>\*</sup>Defence and Security division only

\*\*Net income attributable to shareholders

## REVENUE BY BUSINESS SEGMENT (%)



#### **REVENUE BY REGION (%)**



IDR

Bolsa de Madrid

\*Spanish subsidiary of General Dynamics

MAIN PROGRAMMES, COOPERATIONS IND EXPORT PARTNERSHIPS	41	Hers	John P	d Walt	Systems	Dassault P	nato dat	Dara S
Defence electronics								
NGF future fighter aicraft (FCAS programme) (Sensors pillar, Combat Cloud pillar)		•	•		•			•
Praetorian Defensive Aids Sub-System (DASS) (Typhoon)	•	•	•	•		•		
RF ALQ-500 countermeasure system (Spanish F/A-18)					•			
InSHIELD DIRCM countermeasure system (A400M)			•					
RIGEL naval electronic defence system							•	
C4ISR systems								
European MALE RPAS' future ISTAR solution	•	•	•			•		•
Mission system of the 8X8 Dragón wheeled combat vehicles							•	
SILVER Battlefield Management System (BMS)								•
Radar and sonar systems								
Naval suite for submarines (209/212/214, S-80)							•	
Lanza 3D radar family							•	
E-Captor and ECRS MK1 AESA radars (Typhoon)		•	•	•		•		
S-Band AESA naval radar (F-100/F-110)							•	
X-Band maritime surveillance radar (F-110)							•	
Simulation								
Aircrew Synthetic Training Aids (ASTA) simulator (Typhoon)			•	•		•		
Transport aircraft simulators (A400M, C130, A330 MRTT)			•					
Military helicopter simulators (Tiger, NH90, AW159, Chinook, etc.)			•		•	•		

#### Business trends

- Indra revenues rose by 12.8% to €4,343m in 2023. The group's four divisions all contributed to growth, particularly Information Technology (+10.1%), which generated just under two-thirds of total turnover. Revenues in the Defence & Security division grew 23.4% in 2023.
- In February 2024, Indra completed the acquisition of Spanish company Global Training Aviation. The group now covers the entire simulation value chain, from the development of state-of-the-art simulators and training systems to the supply of training services for civil and military pilots.
- Indra and EDGE Group signed an agreement in March 2024 to develop and produce new-generation radars in the United Arab Emirates through a future joint venture based in Abu Dhabi. The two partners aim to sell up to 300 sophisticated radar systems to non-NATO and non-EU customers.

#### Home market

- Indra generated 50% of its revenues in its domestic market in 2023. The group is expected to benefit from increased public support, particularly due to the announced rise in Spain's military spending (2% of GDP in the coming years) and the Spanish state's increased stake in the group (28% of shares), through the holding company SEPI.
- Indra, in partnership with Thales and the German consortium FCMS (Diehl Defence, ESG, Hensoldt and Rohde & Schwarz), is jointly designing the NSDAS (Networked and distributed Sensors, Defensive aids and Attack Systems) sensor suite for the future NGF fighter aircraft as part of phase 1B of the FCAS programme.
- The future Dragón 8x8 VCR armoured vehicle began a test phase in March 2024. The Tess Defence consortium (Indra, Santa Bárbara Sistemas, SAPA Placencia and Escribano) is responsible for vehicle development and production.
- ► In September 2024, the group signed a framework agreement with the Spanish Ministry of Defence for the supply of Mode 5/S IFF secondary radars to be integrated into the Armed Forces' air defence systems.
- ▶ In October 2024, the Spanish Air Force began deploying five Lanza 3D long-range air surveillance radars supplied by the group, four of them fixed and one transportable.

#### Export markets

- Indra generated half of its sales from exports in 2023, mainly in the civilian sector.
- Lockheed Martin awarded Indra a contract in February 2024 to equip the four future MMSC light frigates for the Royal Saudi Navy with threat detection, identification and classification systems.
- The group received an order worth PLN 1.1bn (€242m) in September 2024 from the Polish Air Force to supply up to 15 transportable ground-based air traffic control radars for civil and military use. 8 units are to be delivered by 2028, with a further 7 (as an option) to be delivered by 2031.

- ▶ The group's total R&D expenditure amounted to €373m in 2023, representing 8.6% of revenues.
- In summer 2024, the Spanish Armed Forces tested the Future Soldier System (SISCAP, in Spanish) supplied by Indra and GMV. It includes a day and night vision system attached to the helmet that uses augmented reality to visualise the route to follow and the position of other soldiers, and to receive information on threats and identified targets. The assault rifle also incorporate its own viewfinders and cameras to extend the range and accuracy of fire.



## ITP AFRO

Spanish engine manufacturer among the top 10 global players and involved in the development and production of aeronautical propulsion parts and subsystems

#### **BUSINESS AREAS**

Engine manufacturer and equipment supplier

- Aircraft propulsion parts and subsystems
- Equipment and components
- ► Aircraft engines MRO

## GOVERNANCE

Chairman	Juan María Nin Génova

Eva Azoulay

Chief Executive Officer

CEO, Defence
Business Unit

Álvaro Santodomingo

## KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	735	915	1,047	1,305
Δ (%) [\$]	-25.23%	24.49%	14.43%	24.64%
Defence (%)	29%	30%	N/A	N/A
Export (%)	N/A	N/A	N/A	N/A
Operating profit/loss	2	40	104	N/A
Operating margin	0.27%	4.37%	9.93%	N/A
Net income	-13	67	N/A	N/A
Order book	N/A	N/A	N/A	N/A
Employees	3,559	4,175	4,493	5,007

#### OWNERSHIP STRUCTURE

Symbol	
Listed on	Unlisted group
Market Cap	

## Major shareholders (as of 10.10.2024)

Bain Capital	76.50%
Indra Sistemas	9.50%
JB Capital	8.00%
Basque government	6.00%

#### REVENUE BY BUSINESS SEGMENT (%)



#### MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
BP Aero	> 50%	United States
MTU Turbomeca Rolls-Royce ITP	25%	Germany
EuroProp International	16%	Germany
EuroJet Turbo	13%	Germany

#### REVENUE BY REGION (%)

N/A

MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	Sakar I'I peortialises peor es belong es peortia es militar
Fighter aircraft engine parts	
NEFE (Next European Fighter Engine, FCAS programme)	• •
EJ200 (Eurofighter Typhoon)*	• • •
F414-GE-400 (F/A-18E/F)	•
J85-GE-21 (F-5E/F) and J85-GE-5 (T-38)	•
Transport aircraft engine parts	
TP400-D6 (A400M)	• • •
Helicopter turbine parts	
CT7-8F5 (NH90)*	•
MTR390-E (Tiger)	• • •
Gas turbine parts	
LM2500 family	•
Aircraft engines MRO	
EJ200 and F404 fighter aircraft turbofans	• • • •
CT7, TPE331 and TP400 transport aircraft turboprops	• • • •
CT7, M250, MTR390-E, PW200 and T700 helicopter turboshafts	

<sup>\*</sup>Parts and assembly of engines for Spanish aircraft
\*\*Subsidiary of GE Aerospace
\*\*Formerly GE Aviation
\*\*\*\*RTX group (formerly Raytheon Technologies)

#### Business trends

- ► ITP Aero revenues reached €1,305m in 2023, up 24.6% year-on-year, thanks in particular to the recovery in the civil aeronautics market (around 70% of sales). The group is a subcontractor to Rolls-Royce for the Trent family of turboshaft engines used on Airbus and Boeing passenger aircraft, and to the U.S. groups GE Aerospace, Honeywell and Pratt & Whitney, for whom it produces engine parts for business jets.
- In February 2024, ITP Aero completed the acquisition of a majority stake in BP Aero, a U.S. company specialising in after-sales services for civil and military aircraft engines. Based at three sites near Dallas-Fort Worth airport in Texas, the company has more than 200 employees. BP Aero's founders and some of its current shareholders retained a minority stake in the company.
- ► ITP Aero and Rolls-Royce Deutschland teamed up in June 2024 to develop a propulsion system for large remote carriers (Wingman Engine).

#### Home market

- ► ITP Aero is Spain's leading engine manufacturer. In the defence sector, the group operates mostly through partnerships with the other main European engine manufacturers (Avio Aero, MTU Aero Engines, Rolls-Royce and/or Safran), to which it supplies parts and components. ITP Aero is part of several consortiums: EuroJet Turbo (EJ200 turbofan engine for the Typhoon fighter), Europrop International (TP400-D6 turboprop for the A400M Atlas transport aircraft) and MTRI (MTR390-E turboshaft engine for the EC665 Tiger attack helicopter). The group also assembles the EJ200 and CT7-8F5 engines for Spain's Typhoon aircraft and NH90 helicopters respectively.
- ▶ In addition, ITP Aero is the main partner of MTU Aero Engines and Safran in the EUMET joint venture for the development of the NEFE (Next European Fighter Engine) propulsion system for the future NGF European fighter aircraft. ITP Aero is reponsible for the low-pressure turbine and the nozzle of the future engine.
- The Spanish Air and Space Force awarded Indra and ITP Aero a €40m contract to provide engineering and maintenance services for its aircraft and certain space systems (command and control, communication and navigation aids, etc.) over a period of 2 years (+2 years as an option).
- In July 2024, the group signed a €173m framework agreement over 2 years (+1 year as an option) with the Spanish Armed Forces for the maintenance of aircraft and helicopter engines for the Air Force, Army and Navy.

#### Export markets

- In export markets, ITP Aero supplies GE Aerospace with components for the F414-GE-400 (F/A-18E/F Super Hornet fighter aircraft) and J85 (F-5E/F Tiger II fighter aircraft and T-38 Talon trainer aircraft) turbojet engines, and for the LM2500 gas turbine installed on several frigates (FREMM, Álvaro de Bazán-class, Independenceclass, etc.).
- In December 2023, ITP Aero extended its partnership with the Canadian company Heli-One to support fleets of military, parapublic and private helicopters in the North American, European, Middle Eastern and Asia-Pacific markets, including the AS332 Super Puma (Airbus), AW139 (Leonardo) and S-92 (Sikorsky) helicopters.
- In April 2024, the Colombian Air Force awarded ITP Aero a contract to provide maintenance services for the T700 turboshaft engine powering its fleet of Black Hawk utility helicopters until June 2026.

#### Technology and Innovation

► The group's self-financed R&D expenditure amounted to €66m in 2023, representing 5.1% of revenues.



## IVECO DEFENCE VEHICLES

Claudio Catalano

Subsidiary of Italian group Iveco, specialised in military vehicles (tracked and wheeled armoured vehicles, logistic vehicles, etc.)

#### **BUSINESS AREAS**

Platform manufacturer and systems integrator

- Wheeled armoured vehicles
- Light tactical vehicles
- Logistic vehicles
- Civil security vehicles
- MRO and modernisation services
- Robotics and unmanned ground systems

## KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	366	475	560	747
△ (%)	2.69%	29.95%	17.91%	33.30%
Defence (%)	≈ 100%	≈ 100%	≈ 100%	≈ 100%
Export (%)	N/A	N/A	N/A	N/A
Operating profit/loss	3	24	29	32
Operating margin	0.83%	4.99%	5.21%	4.28%
Net income	-3	11	13	14
Order book	N/A	N/A	N/A	N/A
Employees	809	843	880	925

#### **GOVERNANCE**

Chairman Alessandro Nasi

# OWNERSHIP STRUCTURE

Chief Executive Officer

## Symbol

Listed on Unlisted subsidiary

Market Cap

Major shareholders (as of 10.10.2024)

Iveco Group\* 100%

\*Group incorporated under Dutch law with headquarters in Amsterdam (Netherlands) and main site in Turin (Italy).

lveco Group's majority shareholder (27.06% of shares) is Exor, a Netherlands based investment company controlled by the Agnelli Family.

#### MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
IDV Robotics	80%	United Kingdom
Consorzio Iveco - OTO Melara (CIO)	50%	Italy

## REVENUE BY BUSINESS SEGMENT (%)



#### **REVENUE BY REGION (%)**

N/A

MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	OC Meldri Selete berick Strate breeze och transport och tr
Wheeled armoured vehicles	
8x8 Centauro II tank destroyer	•
8x8 VBM Freccia armoured infantry fighting vehicle	•
8x8 VBA future amphibious armoured vehicle*	• •
Amphibious Combat Vehicle (ACV)*	•
6x6 VBTP-MR Guarani amphibious armoured vehicle	• •
4x4 MTV multirole tactical vehicle (Manticore / 12kN)	• •
4x4 Medium Protected Vehicle (MPV / VTMM Orso)	•
Light tactical vehicles	
4x4 Light Multirole Vehicle 2 (LMV 2 / VTLM Lince 2)	•
Miltary Utility Vehicle (MUV) light vehicle	•
Logistic vehicles	
8x8 M320, SM88 and M1250 high mobility logistic vehicles	
4x4 M170 and 6x6 M250 high mobility logistic vehicles	
4x4 MLL 110/150 Eurocargo logistic vehicles	
8x8 PPT logistic vehicle (chassis)	•
MRO and modernisation services	
Modernisation of the Ariete main battle tank	•
Robotics and unmanned ground systems	
6x6 Viking multirole vehicle	•
MACE autonomy kit	

\*Based on SuperAV \*\*Subsidiary of Leonardo \*\*\*Iveco group \*\*\*\*Subsidiary of Elbit Systems

#### Business trends

- ► Iveco Defence Vehicles (IDV) revenues grew 33.3% in 2023 to €747m. Financial performance remained slightly positive, after six consecutive years of losses between 2015 and 2020.
- Iveco Defence Vehicles is a wholly-owned subsidiary of the Iveco Group, an entity incorporated under Dutch law which was spun off from the CNH Industrial conglomerate on 1 January 2022 and listed on the Milan Stock Exchange.
- Leonardo is considering acquiring Iveco Defence Vehicles for approximately €750m. As the parent company of OTO Melara, Leonardo is associated with Iveco Defence Vehicles within the Iveco OTO Melara (CIO) consortium.

#### Home market

- Directly and through the Iveco-OTO Melara consortium (CIO), Iveco Defence Vehicles is a major supplier of land vehicles to the Italian Army. A major acquisition programme is planned for Centauro II and Freccia armoured vehicles, produced by the CIO consortium (with a total value of €2.2bn over the 2020-2032 period), as well as VTLM Lince 2 multirole vehicles.
- ► The Italian Secretariat General of Defence awarded a contract worth €849m in August 2023 to the CIO consortium for the mid-life modernisation of 90 C1 Ariete main battle tanks. The tanks will be upgraded to C2 standard, which includes the 1500 hp MTCA V-12 diesel engine, the C2N EVO command and control system (Leonardo) and an additional 12.7 mm machine qun. 25 tanks are to be modernised each year.
- ▶ In June 2024, the CIO consortium signed a contract with the Italian Secretariat General of Defence for the supply of 28 Centauro II 8x8 tank destroyers, bringing the total number of vehicles ordered to 150.

#### Export markets

- To reduce its dependence on orders from the Italian Army, Iveco Defence Vehicles targets export markets, mainly in Europe and Brazil but also in the United States through its partnership with BAE Systems for the production of the Amphibious Combat Vehicle (ACV) for the U.S. Marine Corps. The acquisition of a 80% stake in MIRA UGV (now IDV Robotics) may also enable Iveco Defence Vehicles to participate in future British defence programmes.
- ► In November 2023, Iveco Defence Vehicles delivered the first 4x4 MTV 12kN tactical multirole vehicle to the Dutch agency Command Materiel and IT (COMMIT). A total of 1,185 vehicles were ordered in 2019.
- ► Iveco Defence Vehicles benefits from contracts awarded to BAE Systems to supply 8x8 Amphibious Combat Vehicles (ACV) for the U.S. Marine Corps, in particular two contracts worth a combined \$468m (€433m) awarded in 2023 for a total of 84 vehicles.
- Iveco Defence Vehicles, in partnership with bodybuilder EMPL Fahrzeugwerk, handed over the first 4x4 Miltary Utility Vehicle (MUV) in command post configuration to the Austrian Federal Ministry of Defence in March 2024. 185 vehicles are to be produced by the end of 2025.
- In July 2024, the Brazilian Army ordered an additional 420 LMV 2 (Guaicurus) 4x4 light multirole vehicles from Iveco Defence Vehicles for BRL 1.4bn (6259m). These vehicles will be assembled locally at IDV's Sete Lagoas plant and delivered from 2026. 105 of them will be equipped with a REMAX IV remotely operated weapon station from Ares Aeroespacial e Defesa.

#### Technology and Innovation

Iveco Defence Vehicles received €20m from the European Defence Fund in June 2024 to lead a consortium of 22 partners from 11 countries working on the ARCHYTAS project, to investigate non-conventional Artificial Intelligence (AI) accelerators for defence applications.



## JOHN COCKERILL

Belgian group specialised in civil and military industrial activities (turrets, weapons systems, anti-tank missiles and simulation / training), owner of Arguus since July 2024

€ millions

#### **BUSINESS AREAS**

Systems integrator/equipment supplier

- Turrets and weapons systems for armoured vehicles and naval ships
- Services (simulation, training and MRO)
- Armored vehicles (see also Arguus)
- Energy supply equipments
- Heat treatment furnaces
- Water pumping solutions
- Renewable energies (hydrogen)

#### **GOVERNANCE**

Chairman	Bernard Serir
Chief Executive Officer	François Miche
President, John Cockerill Défense	Thierry Renaudir

Revenue	1,014	947	1,046	1,201
Δ (%)	-19.52%	-6.61%	10.45%	14.82%
Defence (%)	≈ 35%	≈ 25%	≈ 20%	≈ 20%
Export (%)	N/A	N/A	N/A	N/A
Operating profit/loss	54	54	47	57
Operating margin	5.34%	5.71%	4.46%	4.75%
Net income	N/A	N/A	N/A	N/A
Order book	N/A	N/A	N/A	N/A
Employees	5,176	5,480	6,003	> 6,000

KEY FIGURES (Fiscal year ended: December 31st)

2020 2021 2022 2023

#### OWNERSHIP STRUCTURE

Symbol	
Listed on	Unlisted group
Market Cap	

Major shareholders (as of 10.10.2024)

Ebenis SA (Bernard Serin)	80.65%
Dodeca SA (management)	19.35%

#### REVENUE BY BUSINESS SEGMENT (%)



#### MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
John Cockerill Defence	80%	Belgium
SAMI CMI Defence Systems	N/A	Saudi Arabia

#### REVENUE BY REGION (EN %)



MAIN PROGRAMMES, COOPERATIONS

nume thou to the top of the top o Hoth Sed Bodis Trate ceretal Dynamics Rheinnetall urizari pindad AND EXPORT PARTNERSHIPS Hannha Ground weapon systems Série 3000 family of modular weapon turrets (25 to 105 mm calibre guns) CSE 90LP two-person turret (90 mm calibre low pressure gun) LCTS 90MP two-person turret (90 mm calibre gun) 1030 remote controlled turret (30 mm calibre gun) CPWS Gen.2 multirole remote controlled weapon station (25 and 30 mm calibre guns) CLWS 25 & 30 weapon station (25 and 30 mm calibre guns) Naval weapon systems C1030 turret (30 mm calibre gun) (Tank Boat programme) Ground vehicles i-X future ground interceptor (data fusion, armament) Missile systems Falarick 105 gun-launched anti-tank guided missile Services Agueris simulator Shooting training Weapon systems MRO

<sup>\*</sup>Subsidiary of EDGE Group \*\*Subsidiary of UkrOboronProm

#### Business trends

- ▶ John Cockerill revenues grew 14.8% year-on-year to €1,201m in 2023, of which approximately 20% from defence activities (compared with 35% in 2020). Over the year, the group booked €1,095m in new orders (civil and military sectors combined).
- This reduced share of defence revenues reflects John Cockerill's recent acquisition of several civil companies, including the Hamon group in 2022 (industrial heat recovery systems, with operations in Belgium and France) and the French company STIN in 2023 (welding and pipework for the nuclear sector). John Cockerill also created the Rely joint venture with Technip Energies in 2023 (green hydrogen).
- ▶ In July 2024, through its subsidiary John Cockerill Défense, the group completed the acquisition of Arquus, a French manufacturer of high mobility armoured vehicles with revenues of around €577m in 2023. Arquus was acquired from the Volvo group for an estimated €300m. To strengthen industrial cooperation in the defence sector between the two countries, the French and Belgian governments each acquired 10% of John Cockerill Défense, with the John Cockerill group retaining 80% of the shares.

#### Home market

- The group is a key partner of the Belgian Ministry of Defence for land programmes (design, production and integration of turrets and provision of associated services such as maintenance, simulation and training), just like FN Herstal (production of assault rifles and machine guns).
- John Cockerill was to participate, as a partner of KNDS France (prime contractor), in the Belgian Army's CaMo (Motorised Capability) programme to acquire 382 Griffon armoured multirole vehicles and 60 Jaguar armoured reconnaissance and combat vehicles. The group was to carry out the final assembly of the Griffon vehicles and the Jaguar's T-40 turrets in Belgium. However, the contract was awarded to the Flemish company Mol in 2022.
- In May 2024, the Belgian Council of Ministers approved the Logistic Support for Land Systems programme, which aims to establish a 30-year strategic partnership between the Belgian Armed Forces and an industrial consortium responsible for servicing and maintaining Griffon and Jaguar vehicles. Only one consortium, comprising John Cockerill, FN Herstal and Thales, is competing for this programme.

#### Export markets

- John Cockerill has a strong international presence with subsidiaries or representative offices for its defence activities in nine countries (Spain, France, Poland, Brazil, United States, Saudi Arabia, United Arab Emirates, Indonesia and Singapore).
- In May 2023, John Cockerill presented the French Army's Technical Section (STAT) with its i-X ground interceptor prototype, which could serve as the basis for the future armoured engagement support vehicle (VBAE in French) intended to replace the light armoured vehicle (VBL) as part of the Scorpion programme. The STAT carried out a new evaluation of the i-X in November 2023, including road tests and firing sessions.
- The Belgian Ministry of Defence awarded John Cockerill a contract in April 2024 to upgrade and convert several dozen Bv206 Beowulf high mobility tracked vehicles (BAE Systems Hägglunds) into medical vehicles for transfer to Ukraine.

#### Technology and Innovation

In January 2024, the European Commission signed a €49m funding agreement to launch the Land Tactical Collaborative Combat (LATACC) project. Coordinated by Thales, this programme is designed to improve the cooperative capabilities of European coalition forces. It brings together 34 industrial operators and research institutes (including John Cockerill, Indra, Leonardo, Rheinmetall and Saab) from 13 European countries.



## KNDS

Leading European defence land sytems group, resulting from the 50-50 merger between Germany's KMW and France's Nexter, and 36th-largest defence company in the world

#### **BUSINESS AREAS**

Platform manufacturer and system architectintegrator

- Tracked and wheeled armoured vehicles
- Artillery and weapon systems
- ► Ammunition
- ▶ Defence and security robotics
- ▶ Embedded electronics
- ► Simulation and training solutions

# GOVERNANCE

Chairman	Philippe Petitcolin
Chief Operating Officer	Frank Haun
CEO of KNDS France	Nicolas Chamussy
CEO of KNDS Germany	Ralf Ketzel

#### OWNERSHIP STRUCTURE

Symbol Listed on Unli Market Cap	sted group
Major shareholders (as of 10.10.2024)	
Giat Industries S.A. (French State)	50%
Wegmann & Co. GmbH	50%

#### MAIN JOINT VENTURES AND ASSOCIATES

1 1

	Name	%	Country			
KNDS France						
	CTA International	50%	France			
	TNS-MARS	37.5%	France			
KNDS Germany						
	Projekt System & Management	50%	Germany			
	ARTEC	36%	Germany			
	Milrem Robotics	24.9%	Estonia			
	EuroTrophy	N/A	Germany			

#### KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	2,409	2,682	3,172	3,250
∆ (%)	-5.12%	11.33%	18.26%	2.46%
Defence (%)	100%	100%	100%	100%
Export (%)	N/A	N/A	N/A	N/A
Operating profit/loss	283	296	389	408
Operating margin	11.74%	11.03%	12.28%	12.55%
Net income	183	216	291	336
Order book	10,600	10,700	11,000	15,700
Employees	8,270	8,619	8,952	9,491

#### REVENUE BY BUSINESS SEGMENT (%)



#### REVENUE BY REGION (%)



Joint programmes  KNDS France KNDS Germany	P <sub>Q</sub>	*Shell	Sp. Sp.	To to	SW BA		WAY.			***
Armoured vehicles										
Main Ground Combat System (MGCS) future French-German main battle tank						•				
Leopard 2 main battle tank						•		•		
VBCI 8x8 infantry fighting vehicle	•									
Boxer 8x8 infantry fighting vehicle (ARTEC consortium)						•	•			
Jaguar 6x6 armoured reconnaissance and combat vehicle	•	•	•							
Griffon 6x6 multirole armoured vehicle	•	•	•							•
Titus ®* 6x6 multirole armoured vehicle									•	
Serval 4x4 light multirole armoured vehicle	•	•		•						
Dingo 2 4x4 family of armoured vehicles										
Artillery and weapon systems										
CIFS (Common Indirect Fire System) future French-German artillery system										
CAESAR 155 mm self-propelled howitzer	•								•	
PzH 2000 155 mm self-propelled howitzer						•				
40 mm Cased Telescoped Armament System (40CTAS)**					•					
FLW 100, 200 and 500 remote controlled weapon stations										
Ammunition										
KATANA future guided ammunition (155 mm)										
Bonus Mk II 155 mm artillery shell					•					
Ground artillery (105 and 155 mm), tank (76, 90, 105 and 120 mm) and medium calibre (20, 25, 30 and 40 mm) ammunition										
Naval artillery ammunition (20, 40, 76, 100 and 127 mm)										

#### Business trends

► KNDS revenues reached €3,250m in 2023, up 2.5% year-on-year. Growth was driven by deliveries of ammunition, Jaguar and Griffon armoured vehicles to France, Leopard 2A7 HU main battle tanks to Hungary and PzH 2000 self-propelled howitzers. Following the increase in new order intake (€7.8bn, compared to €3.4bn in 2022), the group order book reached a solid €15.7bn at the end of 2023.

#### Home markets (France, Germany)

- KNDS France, Arquus and Thales are jointly in charge of the Scorpion programme for the supply of wheeled armoured vehicles to the French Army. 1,872 Griffon VBMR/MEPAC multirole armoured vehicles as well as 300 Jaguar EBRC armoured reconnaissance and combat vehicles should be ordered, and around half of the vehicles should be delivered by 2025. The three groups delivered 123 Griffon and 22 Jaguar vehicles in 2023, bringing the total number of vehicles delivered since 2019 to 575 and 60 respectively.
- ▶ In January 2024, KNDS France and Texelis handed over the 200th Serval 4x4 light multirole armoured vehicle to the French Army, out of a total target of 2,038 vehicles for the Scorpion and VLTP programmes.
- ▶ In January 2024, the French defence procurement agency (DGA) awarded a contract to KNDS France for the production of 109 CAESAR 6x6 Mkll 155 mm artillery systems. Deliveries are due to start in 2026.
- ► KNDS France and Junghans Defence (a joint venture between Thales and Diehl Defence) won an order worth around €1.1bn from the NATO Support and Procurement Agency (NSPA) in January 2024 to produce around 220,000 artillery shells compatible with the CAESAR and PzH 2000 self-propelled howitzers.
- In April 2024, France and Germany officially launched phase 1A of the MGCS future main battle tank project (development of a demonstrator and testing of technological building blocks). In particular, KNDS France will be responsible, alongside Rheinmetall, for the programme's second pillar (turret and gun) within a future joint venture to be formed between Rheinmetall, KNDS Germany and KNDS France.

#### Export markets

- Together with Thales and Arquus, KNDS France is participating in the CaMo (Motorised Capability) programme to supply the Belgian Army with 60 Jaguar EBRC and 382 Griffon VBMR vehicles from 2025 onwards. The €1.6bn contract includes training and maintenance services. Flemish company Mol will carry out the final assembly of the Griffon vehicles and the Jaquar's T-40 turrets in Belgium.
- ► The UK Ministry of Defence awarded KNDS Germany a £150m (€172m) contract in January 2024 for the production of crossing systems, which will be mounted on chassis supplied by Rheinmetall MAN Vehicles.
- In May 2024, Luxembourg announced the acquisition of 38 Jaguar EBRC, 16 Griffon VBMR and 5 Serval vehicles from KNDS France over the 2025-2033 period, at a cost of €2.05bn (including maintenance and support until 2055). These vehicles will be assigned to a bi-national Belgian-Luxembourg combat reconnaissance battalion.
- In June 2024, KNDS France signed two contracts at the Eurosatory trade show for its CAESAR 155 mm artillery system, with Armenia for 36 units (Mkl version) and with Estonia for 12 units. Croatia also signed a framework agreement with France for the supply of 12 units.
- In June 2024, the Czech government confirmed its intention to acquire 61 Leopard 2A8 main battle tanks from KNDS Germany in 6 variants (combat, command, repair, engineering, crossing and pilot training), with an option for 16 additional units.

#### Technology and Innovation

In December 2023, OCCAr awarded a contract for the pre-design of the future armoured engagement support vehicle (VBAE in French) to KNDS France, Arquus and John Cockerill. The VBAE is intended to replace the light armoured vehicle (VBL) in the French Army and to join the Belgian Army by 2030.



## KONGSBERG

Technology group with civil and military activities, 50% owned by the Norwegian State, specialist for RWS and missile systems (NSM, JSM), and 59th-largest defence contractor

€ millions

Revenue

Δ (%) [NOK]\*

Defence (%)\*\*

Export (%)

Operating

profit/loss

Operating

margin Net income\*\*\*

Order book

**Employees** 

See €/NOK, p.9

#### **BUSINESS AREAS**

Missile manufacturer, systems integrator/equipment supplier

- Remote weapon stations (RWS)
- ▶ Missile and air defence systems
- Naval platforms and systems
- ISR and communication systems
- Aeronautics (aerostructures, MRO) and space
- Systems and equipment for commercial ships

#### **GOVERNANCE**

Chairman	Eivind Reiten
Chief Executive Officer	Geir Håøy
President, Kongsberg Defence	Eirik Lie

& Aerospace

## \*\*Kongsberg Defence & Aerospace division only

## Variation based on revenue in local currency \*\*\*Net income attributable to shareholders

## OWNERSHIP STRUCTURE (as of 10.10.2024)

Symbol	KOG
Listed on	Oslo Stock Exchange
Market Cap (NOKm)	189,820

## Major shareholders (as of 10.10.2024)

-	
Norwegian State	50.00%
Folketrygdfondet	5.67%
Erik Christian Must	1.14%
Alfred Berg Kapitalforvaltning AS	1.11%

#### MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
NanoAvionics	78.5%	Lithuania
Kongsberg Aviation Maintenance Services	50.1%	Norway
Kongsberg Satellite Services	50%	Norway
Kta Naval Systems	50%	Norway
Patria	49.9%	Finland
Andøya Space	10%	Norway

## REVENUE BY BUSINESS SEGMENT (%)

KEY FIGURES (Fiscal year ended: December 31st)

2021

2 701

7 17%

37%

81%

282

10.43%

212

4.940

2022

3 148

15 86%

37%

79%

328

10 40%

275

6.016

12.187

2023

3 555

27 71%

39%

80%

403

11.33%

325

7.877

13.341

2020

2 389

10 18%

33%

80%

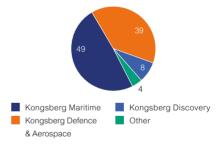
178

7 44%

270

3.433

10.689



## REVENUE BY REGION (%)

Norway

Asia



MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	The Sacration of the Street of
Remote weapon stations	
PROTECTOR family (RWS, MCT, Lite)	• • • • •
Missiles and air defence systems	
3SM Tyrfing future anti-ship missile	
Naval Strike Missile (NSM) / Joint Strike Missile (JSM)	• •
Penguin anti-ship missile	
National Advanced Surface-to-Air Missile System (NASAMS)	•
Coastal Defence System (CDS)	• •
Naval platforms and systems	
Vanguard Naval Vessel System (design)	
HUGIN autonomous underwater vehicles	
MCM C2 countermeasures system	
ORCCA submarine combat system	•
PROTEUS naval training solutions	
ISR and communication systems	
Kongsberg Tactical Communication System (K-TaCS)	•
NATO Alliance Ground Surveillance (AGS) System Master Archival/Retrieval Facility information (SMARF)	•
Aeronautics	
F-35 Lightning II fighter aircraft (fuselage parts, main landing gear, JSM carriage, etc.)	• •
Aircraft (F-16, F-35) and helicopters (NH90, AB412, AW101, AW169) MRO	•

<sup>\*</sup>Formerly Raytheon Technologies \*\*thyssenkrupp Marine Systems, thyssenkrupp group

#### Business trends

- ▶ Kongsberg revenues rose 27.7% year-on-year in local currency, to NOK 40.6bn (€3,555m) in 2023. The Kongsberg Defence & Aerospace division recorded solid growth (+34%), mostly driven by increased deliveries of NASAMS air defence sytems (Hungary, Australia), aerostructures for F-35 Lightning II fighter aircraft (Lockheed Martin) and aeronautical maintenance operations. The division generated revenues of NOK 15.9bn (€1.388m) in 2023, accounting for 39% of the group's total turnover, and has 4.365 employees.
- In March 2024, Kongsberg Satellite Services, a 50-50 joint venture between Kongsberg and the Norwegian Space Agency, acquired a 70% stake in the Norwegian start-up VAKE, which specialises in maritime warning systems based on artificial intelligence algorithms.
- Kongsberg is expanding its production facilities to meet growing global demand for NSM and JSM missiles. The group inaugurated a new production site in Kongsberg (Norway) in June 2024 and started construction of two plants in the United States and Australia.

#### Home market

- The group generated 20% of its turnover in its domestic market in 2023. Defence revenues generated in Norway reached NOK 3.8bn (€334m), representing 24% of total defence revenues.
- ▶ Kongsberg signed two contracts worth a total of NOK 3.7bn (€324m) in February and June 2024 with the Norwegian Defence Materiel Agency (FMA) for the supply of NASAMS medium-range air defence systems to replace the systems sold to Ukraine, for delivery in 2026-2027.
- ▶ In July 2024, the group signed a NOK 1.5bn (€131m) contract with the FMA to develop a future anti-ship missile, referred to as the SuperSonic Strike Missile (3SM) Tyrfing, which should be operational from 2035. Diehl Defence, MBDA Deutschland and Nammo are also involved in the programme.
- ► Kongsberg was awarded a NOK 436m (€38m) contract by the FMA to modernise the combat systems of the Royal Norwegian Navy's Ula-class submarines.

#### Export markets

- Kongsberg generated 76% of its defence sales from exports in 2023. The group's main export market is North America (39% of defence revenues), ahead of Europe excluding Norway (27%).
- ▶ Patria awarded Kongsberg a contract worth around NOK 1.2bn (€105m) in March 2024 to supply more than 300 PROTECTOR remote weapon stations from 2025, to be installed on the 6x6 wheeled armoured vehicles in the Common Armoured Vehicle Systems (CAVS) programme.
- In April 2024, Kongsberg signed a contract with Damen to supply propellers and shafting for the four future anti-submarine warfare frigates being built for the Netherlands and Belgium.
- ► The group signed two contracts in 2024 for the production of JSM cruise missiles to arm F-35A fighter aircraft: one worth \$141m (€130m) in June with the United States and one worth around NOK 1bn (€88m) in September with Australia.

- Kongsberg Defence & Aerospace's R&D expenditure amounted to NOK 114m (€10m) in 2023, representing 0.7% of the division's revenues.
- In February 2024, the U.S. Defense Innovation Unit (DIU) selected Kongsberg and its HUGIN family of AUVs to develop large-scale civilian autonomous underwater vehicles that could be used for military purposes.



# KOREA AEROSPACE INDUSTRIES (KAI)

Δ0//7810

Aerospace and defence group, mainly operating in military aviation (T-50 training aircraft, future KF-21 Boramae fighter aircraft), and 56th-largest defence contractor worldwide\*
\*SIPRI rankings (2023 data)

#### BUSINESS AREAS

Platform manufacturer and systems integrator

- Military aircraft (fighter, trainer)
- Commercial and military helicopters
- Unmanned aircraft systems
- ▶ Commercial and military aerostructures
- ► Services (MRO, modernisation and simulation)
- ▶ Space

#### **GOVERNANCE**

Symbol

Chief Executive Officer Goo-young Kang

# OWNERSHIP STRUCTURE (as of 10.10.2024)

Symbol		A041010
Listed on	Korea Exchange	
Market Cap (KRWbn)		5,147
Major shareholders (as of 10.10.2	024)	
South Korean State		26.41%
National Pension Service of Korea		8.31%
Fidelity Management & Research (Hong Kong) Ltd.		2.35%
Employee stock ownership		1.45%

## MAIN JOINT VENTURES AND ASSOCIATES

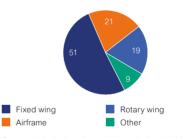
Name	%	Country
Korea Aviation Engineering & Maintenance Service	66.4%	South Korea
Defense Industry Mutual Aid Association	23%	South Korea

## KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	2,100	1,892	2,052	2,703
Δ (%) [KRW]*	-9.16%	-9.30%	8.77%	37.05%
Defence (%)	72%	77%	73%	N/A
Export (%)	32%	28%	31%	48%
Operating profit/loss	104	43	104	175
Operating margin	4.94%	2.27%	5.08%	6.48%
Net income**	55	47	87	159
Order book	13,743	13,857	18,299	15,189
Employees	5,028	5,012	5,079	5,098

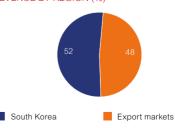
<sup>\*</sup>Variation based on revenue in local currency See €/KRW. p.9

## REVENUE BY BUSINESS SEGMENT (%)\*



<sup>\*</sup>Revenue distribution based on total sales excluding eliminations

## REVENUE BY REGION (%)\*



<sup>\*</sup>Revenue distribution based on total sales excluding eliminations

<sup>\*\*</sup>Net income attributable to shareholders

MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	kitche Tockhood Mariti, Dickling ling ling fire of the sheire states the child be sheired to the child be
Military aircraft	
KF-21 Boramae future fighter aircraft	• • •
KA-1 and FA-50 light fighter aircraft	
T-50 and TA-50 advanced trainer aircraft	• •
KT-1 and KT-100 basic trainer aircraft	
Military helicopters	
Future Korean Mine Countermeasures Helicopter (KMCH)	•
Single-turbine future Light Attack Helicopter (LAH)	•
KUH-1 Surion twin-turbine transport helicopter	•
Unmanned aircraft system	
Next Corps Surveillance, NI500 VT and NI600 VT future ISR UAVs	
Aerostructures	
F-15 (fuselage, wings) and F-16 (fuselage) fighter aircraft	•
AH-64 (fuselage) attack helicopter	•
Services	
ROKAF's FA-50, P-3CK, E-737 AEW&C and C-130H aircrfat, and Lynx helicopter MRO and modernisation	•
US Air Force's F-16 fighter aircraft maintenance	
T-50, TA-50 and FA-50 aircraft simulators	
Space	
Nuri (KSLV-II) launcher	• • •
Observation radar satellites (425 Project)	

\*Korea Shipbuilding & Offshore Engineering group (KSOE) \*\*Korea Aerospace Research Institute \*\*\*Textron group

#### Business trends

- ► Korea Aerospace Industries (KAI) posted revenues of 3.819 trillion won (€2,703m) in 2023, up 37% year-on-year in local currency. Growth was mainly driven by a sharp rise in aircraft export sales (revenue multiplied by 8.2), following the delivery during the year of the first 12 FA-50 Fighting Eagle light fighter aircraft ordered in 2022 by the Polish Air Force (out of a total of 48 units worth \$3bn, or €2.8bn). Helicopter sales fell by 25.3%, while sales of aerostructures rose by 7.7%.
- ► KAI ambitions to reach a turnover of 15 trillion won (around €11bn) by 2030, as was announced in January 2023, meaning a more than five-fold increase on 2022 revenues, and of 40 trillion won (around €29bn) by 2050 to rank among the world's top seven aircraft manufacturers. To achieve its goals, the group aims to boost its exports of military aircraft and enter promising military and civil segments, such as transport aircraft (MC-X), advanced aerial vehicles (AAVs), urban air eco-mobility and artificial intelligence solutions for autonomous piloting of aircraft, satellites and drones.
- In April 2024, SpaceX's Falcon 9 Block 5 launcher placed South Korea's Project 425 second satellite into low-Earth orbit. Assembled by KAI, this satellite is the first to be equipped with a SAR radar.
- In August 2024, South Korea accepted Indonesia's proposal to reduce its share of the funding for the KF-21 Boramae / F-33 fighter aircraft programme from 1.6 trillion won (€1.1bn) to 600 billion won (€425m), or 7.5% of total project costs. In return, PT Dirgantara Indonesia, which is to assemble 48 aircraft for the Indonesian Air Force, will receive fewer technology transfers from KAI.

#### Home market

- As South Korea's sole aircraft manufacturer, KAI is involved in the main programmes of the Republic of Korea Air Force (ROKAF). In particular, the group is in charge of developping the future KF-21 Boramae fighter aircraft, in partnership with PT Dirgantara Indonesia, as well as the future Light Armed Helicopter (LAH), in partnership with Airbus.
- In December 2023, the South Korean Defense Acquisition Program Administration (DAPA) ordered an unspecified number of additional LAH light attack helicopters for the ROK Army at a cost of 1.4 trillion won (€991m), to be delivered from the fourth quarter of 2025.
- In June 2024, the group completed deliveries of KUH-1 Surion transport helicopters to the ROK Armed Forces, representing 210 KUH-1s and 8 KUH-1Ms in service.
- In June 2024, the DAPA ordered an initial batch of 20 KF-21 Boramae fighter aircraft from KAI for 1.96 trillion won (€1.4bn), to be delivered between the end of 2026 and August 2027.

#### Export markets

- ▶ The group generated 48% of its revenues from exports in 2023, mainly through the sale of aircraft and aerostructures.
- In September 2024, KAI signed a contract worth 27 billion won (€19m) with the Philippine Air Force to provide MRO services for the fleet of FA-50PH Fighting Eagle aircraft over a one-year period.
- Several countries are said to be interested in acquiring the FA-50 Fighting Eagle, or have been offered the aircraft by KAI (Bulgaria, Egypt, Senegal, Peru, etc.).

- Self-financed R&D expenditure amounted to 90.4 billion won (€64m) in 2023, representing 2.4% of revenues.
- In March 2024, the group invested 35.56 billion won (€25m) to develop a single-seat version of the FA-50 Fighting Eagle aircraft. KAI hopes to sell up to 300 units of the aircraft, on its domestic market and for export.



# KOREA SHIPBUILDING & OFFSHORE ENGINEERING (KSOE)

Holding company with civil and military activities which gathers three shipyards, including Hyundai Heavy Industries (HHI), one of South Korea's largest military shipbuilders

## **BUSINESS AREAS**

Platform manufacturer and engine manufacturer

- Military vessels (surface combatants and conventionally-powered submarines)
- Commercial ships
- Naval engines and turbines
- Power and petrochemical plants
- Offshore plants
- Civil nuclear energy

#### **GOVERNANCE**

Co-Chief Executive Officer	Sung-joon Kir	
and Chairman	Surig-joon Kiii	
Co-Chief Executive Officer	Ki-cun Chun	

## OWNERSHIP STRUCTURE (as of 10.10.2024)

Symbol	009540
Listed on	Korea Exchange
Market Cap (KRWbn)	13,482

## Major shareholders (as of 10.10.2024)

HD Hyundai Co. Ltd.	35.05%
National Pension Service of Korea	6.80%
The Asan Foundation	0.98%
Asan Nanum Foundation	0.61%

## MAIN JOINT VENTURES AND ASSOCIATES

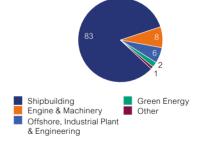
Name	%	Country
Hyundai Heavy Industries	78.02%	South Korea

## KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	11,076	11,442	12,740	15,073
Δ (%) [KRW]*	-1.84%	3.96%	11.67%	23.09%
Defence (%)**	≈ 5%	≈ 6%	≈ 4%	2%
Export (%)	70%	69%	74%	69%
Operating profit/loss	55	-1,023	-262	200
Operating margin	0.50%	-8.94%	-2.06%	1.33%
Net income***	-620	-686	-160	157
Order book	17,496	28,259	42,783	48,899
Employees	20,780	19,990	20,536	21,885

<sup>\*</sup>Variation based on revenue in local currency See €/KRW. p.9

## REVENUE BY BUSINESS SEGMENT (%)



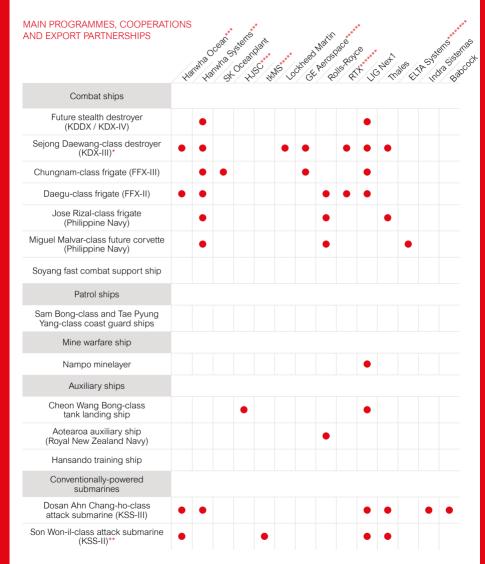
## REVENUE BY REGION (%)\*



<sup>\*</sup>Revenue distribution based on total sales excluding eliminations

<sup>\*\*</sup>Naval & Special ships division of Hyundai Heavy Industries only \*\*\*Net income attributable to shareholders

# KOREA SHIPBUILDING & OFFSHORE ENGINEERING (KSOE)



\*Based on U.S. Navy's Arleigh Burke-class destroyer \*\*Based on tkMS' Type 214 submarine \*\*Hanwha group \*\*\*\*HJ Shipbuilding & Construction \*\*\*\*Thyssenkrupp Marine Systems, thyssenkrupp group \*\*\*\*\*Formerly GE Aviation \*\*\*\*\*Formerly Raytheon Technologies \*\*\*\*Subsidiary of Israel Aerospace Industries

# KOREA SHIPBUILDING & OFFSHORE ENGINEERING (KSOE)

#### STRATEGIC HIGHLIGHTS

## Business trends

- ► KSOE revenues reached 21.296 trillion won (€15.1bn) in 2023, up 23.1% year-on-year in local currency. The Shipbuilding division recorded a 21.5% increase during the year. Hyundai Heavy Industries (HHI), the only KSOE shipyard involved in military shipbuilding, posted revenues of 11.958 trillion won (€8.5bn, up 31.9% year-on-year in local currency).
- In April 2024, HHI teamed up with the American software company Palantir to jointly develop unmanned surface vessels (USVs), first for reconnaissance missions and in the longer term for combat roles. HHI will produce USV hulls and supply autonomous navigation software from its subsidiary Avikus, while Palantir will provide artificial intelligence technologies. The two partners unveiled a first concept, called Tenebris, at the AI Expo in Washington in May 2024.
- ▶ In April 2024, HHI signed a letter of intent with the U.S. shipyard Philly Shipyard (acquired in June 2024 by the South Korean group Hanwha) for the local construction and maintenance of ships for the U.S. Navy, the U.S. Coast Guard and the U.S. Maritime Administration.

#### Home market

- HHI is a major supplier to the Republic of Korea Navy (ROKN), alternating or competing (depending on the programme) with its domestic peer Hanwha Ocean.
- In December 2023, the ROK Ministry of National Defense published its \$266bn (€246bn) military equipment procurement plan for the 2024-2028 period. However, this plan includes no budget line for the CVX aircraft carrier project, casting doubt on its prospects. HHI and Hanwha Ocean, assisted respectively by Babcock and Fincantieri, are the two contenders in this programme.
- In December 2023, HHI completed the basic design of the ROKN's new-generation stealth destroyer KDDX / KDX-IV. A contract for the detailed design of the ship is expected by the end of 2024. HHI and Hanwha Ocean are also competing on this programme.
- ▶ In April 2024, HHI handed over to the ROKN the first Dosan Ahn Chang-ho-class submarine it built from the KSS-III programme, named Shin Chae-ho (SS-086). The submarines are built alternately by HHI and Hanwha Ocean, which supplied the first two units.

## Export markets

- ► HHI has a marginal export presence. However, the shippard has a contract with the Philippine Navy to supply two Miguel Malvar-class corvettes and six HDP-2200+ offshore patrol boats. The contracts, awarded in 2021-2022, have a total value of around PHP 58bn, or €1bn.
- In April 2024, HHI signed a contract worth 640.6 billion won (€453m) with the Peruvian Navy to supply four ships (one 3,400 tonnes frigate, one 2,200 tonnes offshore patrol vessel and two 1,400 tonnes landing ships), which will be built locally by the Peruvian public shipyard SIMA. HHI will design the vessels and supply equipment and technical support services. Five frigates, four offshore patrol vessels and two landing ships could be ordered subsequently. This is the first contract won by HHI in South America.
- ► In June 2024, HHI launched the first Miguel Malvar-class corvette ordered by the Philippine Navy and laid the keel for the second unit, named Diego Silang, at the Ulsan shipyard in South Korea.

- Self-financed R&D expenditure amounted to 162 billion won (€115m) in 2023, representing 0.8% of revenues.
- ▶ In April 2024, HHI was awarded a contract by the ROKN to design an unmanned surface vehicle to be deployed from a combat ship (destroyer, frigate) as part of the Navy Sea Ghost concept. HHI will work in partnership with LIG Nex1, which developed the Sea Sword unmanned kit.



# L3HARRIS TECHNOLOGIES

6th-largest U.S. defence group and 10th-largest worldwide, operating in ISR and communication systems, which acquired rocket engine manufacturer Aeroiet Rocketdyne in 2023

## **BUSINESS AREAS**

Systems integrator/equipment supplier

- Aeronautical systems
- ▶ ISR and communication systems
- Propulsion systems for missiles and space systems
- Cybersecurity
- Space (payloads)
- Air traffic management

## **GOVERNANCE**

Chairman and CEO	C. E. Kubasil
President, Integrated Mission Systems	J. Rambeau

President, Aerojet Rocketdyne R. Niebergall

## KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	15,932	15,058	16,203	17,964
Δ (%) [\$]*	0.54%	-2.09%	-4.22%	13.81%
Defence (%)	82%	84%	82%	80%
Export (%)	20%	22%	23%	21%
Operating profit/loss	N/A	1,783	1,070	1,319
Operating margin	N/A	11.84%	6.61%	7.34%
Net income**	982	1,561	1,009	1,135
Order book	17,661	18,665	20,884	29,593
Employees	48,000	47,000	46,000	50,000

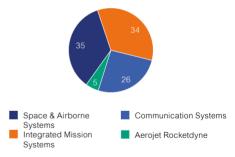
<sup>\*</sup> Variation based on revenue in local currency See €/\$. p.9

## OWNERSHIP STRUCTURE (as of 10.10.2024)

Symbol	LHX
Listed on	NYSE
Market Cap (\$m)	45,974

Major shareholders (as of 10.10.2024)	
Vanguard Fiduciary Trust Co.	12.00%
BlackRock Advisors LLC	7.76%
Capital Research & Management Co. (World Investors)	5.95%
T. Rowe Price International Ltd.	5.06%

## REVENUE BY BUSINESS SEGMENT (%)



## MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
Aviation Communication & Surveillance Systems (ACSS)	70%	United States
SAMI L3Harris Technologies	49%	Saudi Arabia
Harris Atlas Systems	N/A	UAE

#### REVENUE BY REGION (%)



<sup>\*\*</sup>Net income attributable to shareholders

MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	
Aeronautical systems	
AN/ALQ-214 IDECM F/A-18 countermeasure system	•
Advanced Integrated Defensive Electronic Warfare Suite (AIDEWS)	•
F/A-18 and F-35 avionics	• •
US Air Force's C-130 Avionics Modernization Program (AMP)	•
Integration of the EC-37B Compass Call* aircraft's mission system	• •
ISR and communication systems	
OA-1K Sky Warden** light armed ISR aircraft (weapon systems, sensors, etc.)	•
Wescam MX-Series family of surveillance and targeting systems	• •
AN/SPS-48G surveillance radar	
Submarine Universal Modular Mast (UMM)	• •
Tactical SATCOM terminals (Panther, Hawkeye, Cheetah)	•
Falcon IV family of tactical radios (AN/PRC-158, 163, 167 and 171)	
Enhanced Night Vision Google - Binocular (ENVG-B)	
Propulsion systems	
RS-25 (Space Launch System) and RL10 (Vulcan Centaur) cryogenic rocket engines	• •
Missiles propulsion systems (RIM-161 SM-3, RIM-174 SM-6, LGM-35A Sentinel, PAC-3, THAAD)	•
Space	
Payloads for GPS IIIF (navigation) and Tracking Layer (missile warning) satellites	•

<sup>\*</sup>Based on the Gulfstream G550 business jet (General Dynamics) \*Based on the Air Tractor AT-802 \*\*\*Formerly Huntington Ingalls Industries \*\*\*\*Formerly Raytheon Technologies

#### Business trends

- ▶ L3Harris Technologies revenues grew 13.8% in local currency in 2023, to \$19.4bn (€18.0bn). Growth was driven by the acquisitions, completed during the year, of Viasat's tactical data link business and Aerojet Rocketdyne. Participation in the U.S. Space Development Agency's Tracking Layer programme to build a constellation of missile warning satellites and sales of secure and tactical communications systems also contributed to business growth.
- In December 2023, the U.S. Government Accountability Office (GAO) recommended that the U.S. Special Operations Command (SOCOM) reduce its procurement target for light ISR OA-1K Sky Warden aircraft (supplied in partnership with Air Tractor). 75 units were to be ordered by 2028, but the GAO considered this number too high given the missions assigned to the aircraft (counter-terrorism, counter-insurgency, close air support, etc.). 16 aircraft have already been ordered and the first unit was delivered in August 2024.
- ▶ In June 2024, the Aerojet Rocketdyne division delivered the thousandth solid propulsion and altitude control systems for THADD interceptors to Lockheed Martin. The THADD air defence system is in service in the United States. Saudi Arabia and the United Arab Emirates.

#### Home market

- The U.S. market is crucial for the group's business (77% of revenues in 2023). The U.S. Department of Defense accounted for 76% of revenues (including Foreign Military Sales).
- ▶ In April 2024, L3Harris Technologies received a first \$256m (€237m) order from the U.S. Army for the production of ENVG-B binocular night vision systems as part of a 10-year, \$1bn (€925m) procurement programme.
- In June 2024, the group received an \$871m (€806m) order from the U.S. Army to produce M762A1 and M767A1 electronic time-delay rockets for the U.S. Armed Forces and allied countries.
- ▶ In August 2024, L3Harris Technologies, in partnership with BAE Systems, delivered to the U.S. Air Force a third EA-37B Compass Call electronic warfare aircraft, based on a modified Gulfstream G550 business jet (General Dynamics). A further 7 aircraft are still to be delivered.
- ► The U.S. Marine Corps ordered Falcon IV portable multi-channel radios from L3Harris Technologies for \$120m (€111m) in August 2024, bringing the total value earned by the group on this programme to more than \$600m (€555m).
- The group signed a \$587m (€543m) 5-year contract in September 2024 with the U.S. Navy to produce NGJ-LB (Next Generation Jammer Low Band) jamming pods for Boeing's EA-18G Growler electronic warfare aircraft.
- ▶ L3Harris Technologies won a \$182m (€168m) contract in September 2024 from the U.S. Army to supply ROVER 6S and TNR 2 video link systems.

#### Export markets

- ▶ 21% of the group's revenues came from exports in 2023, mainly from Australia, Canada and the UK.
- In May 2024, L3Harris Technologies signed an \$18m (€17m) contract with the UK Ministry of Defence to produce up to 50 T4 medium-sized explosive ordnance disposal robots, to be delivered from the end of 2024.
- L3Harris Technologies won two contracts in May and June 2024 for the Canadian future River-class destroyer programme. The group will supply the ships' integrated communications system and integrated platform management system.

#### Technology and Innovation

Self-financed R&D expenditure amounted to \$480m (€444m) in 2023, representing 2.5% of revenues.



# **LATITUDE**

French company founded in 2019, developing the Zephyr mini-launcher scheduled for maiden launch in 2025

## **BUSINESS AREAS**

Platform manufacturer

► Space transportation (small launcher)

# KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	N/A	N/A	N/A	N/A
Δ (%)	N/A	N/A	N/A	N/A
Defence (%)	N/A	N/A	N/A	N/A
Export (%)	N/A	N/A	N/A	N/A
Operating profit/loss	N/A	N/A	N/A	N/A
Operating margin	N/A	N/A	N/A	N/A
Net income	N/A	N/A	N/A	N/A
Order book	N/A	N/A	N/A	N/A
Employees	10	30	70	100

# **GOVERNANCE**

Chief Executive Officer	Stanislas Maximin
Vice-President	Vincent Baudoin
Chief Operating Officer	Kevin Monvoisin
Chief Technical Officer	Olivier Lebrethon

## **OWNERSHIP STRUCTURE**

Symbol	
Listed on	Unlisted company
Market Cap	

Major shareholders (as of 10.10.2024)

Founders and treasury stock	46%
Other shareholders*	54%

\*Including Blast Club, Bpifrance, Comat, Crédit Mutuel Innovation, Expansion, Groupe ADF, Kima Ventures, Nicomatic and UI Investissement

## REVENUE BY BUSINESS SEGMENT (%)



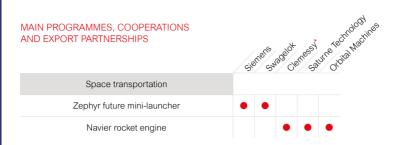
## MAIN JOINT VENTURES AND ASSOCIATES\*

Name	%	Country

\*No information available

## **REVENUE BY REGION (%)**





\*Eiffage group

#### Business trends

- Founded in 2019 under the name Prometheus Space Industries, the company became Venture Orbital Systems (VOS) in 2020 and then Latitude in June 2022. Based in Reims in northern France, it employs over a hundred people.
- Latitude is developing the two-stage Zephyr mini-launcher, measuring 19 metres in height and 1.5 metres in diameter. Propulsion is provided by Navier engines, developed in-house and 3D printed (seven for the first stage and one for the second stage). The initial version of Zephyr, whose maiden and first commercial flights are scheduled for 2025 and 2026 respectively, will be able to launch up to 100 kg of payload into low-Earth orbit. At the end of 2023, Latitude announced the design of a new version of the launcher with more powerful engines to double its payload capacity, scheduled for its maiden flight in 2028.
- After raising €10m in June 2022, Latitude raised a further €27m in January 2024 from current shareholders (Bpifrance, Crédit Mutuel Innovation, the Expansion fund and UI Investissement) and new investors (including the Blast Club and Kima Ventures funds) to continue the development of its mini-launcher (construction of the first model, tests, etc.). The company has secured almost €50m in financing since it was founded.
- In 2023, Latitude opened a test site at the Vatry airport (near Paris) and doubled the surface area of its Reims site, from 1,500 to 3,000 m², in order to expand its production capacity. The company plans to build between 5 and 10 launchers a year initially. After the first flight of Zephyr, Latitude plans to move to a larger site to produce up to 50 launchers a year and reduce its costs through mass production. The opening of a second plant, also in the Reims region, is planned to continue R&D and large-scale production activities.
- In April 2024, Latitude joined forces with French start-up Aldoria (formerly Share My Space), which specialises in space surveillance to avoid collisions with space debris. Aldoria will be involved in the first flights of Zephyr in 2025-2026, monitoring the launcher's ascent phase and the deorbiting of the second stage.

#### Home market

- In 2022, the French Space Agency (CNES) selected seven small launcher operators to use the former Diamant launch pad at the Guiana Space Centre (CSG) in Kourou, which is currently being refurbished, from 2025: France's Latitude and MaiaSpace, Germany's Hylmpulse Technologies, Isar Aerospace and Rocket Factory Augsburg, Spain's PLD Space and Italy's Avio. In March 2022, Latitude also signed an agreement with the SaxaVord launch site (Shetland Islands, Scotland).
- ▶ Latitude is one of four French operators of small space launchers selected in March 2024, along with MaiaSpace, HyPrSpace and Sirius, whose first flight will be purchased by the French Space Agency (CNES). Total funding of €400m is planned as part of the France 2030 plan. However, most of the funding will be conditional on successful launches, expected between 2026 and 2027. Latitude and HyPrSpace were competing in the mini-launchers segment, capable of placing a payload of 100 to 200 kg into orbit at an altitude of 400 km.
- ▶ In April 2024, Latitude won its first contract from a private operator. French company Prométhée Earth Intelligence, an operator of Earth observation nanosatellites, booked flights on Zephyr for the launch of four satellites in the Japetus constellation within the next two years.

- In 2023, Latitude carried out two fire tests on its Navier engine and developed a more powerful version of its rocket engine.
- In June 2024, Latitude received €15m in funding under the France 2030 plan for two development projects: the production of rocket engine turbopumps and the use of off-the-shelf civil components to reduce costs.



## LEIDOS

Among the leading providers of digital systems and services in the United States, major supplier to the DoD, major partner of DARPA and 16th-largest defence contractor

## **BUSINESS AREAS**

Digital services supplier and systems integrator

- Cybersecurity
- ► IT systems operation, maintenance and modernisation services
- Logistic support, aeronautical and training services
- Airborne platforms and unmanned marine systems

## **GOVERNANCE**

Symbol

Chairman and CEO	Tom Bell
President, Defense Systems Sector	Cindy Gruensfelder
President, National Security Sector	Roy Stevens

# OWNERSHIP STRUCTURE (as of 10.10.2024)

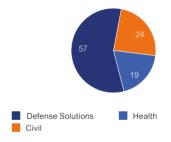
Listed on	NYSE
Market Cap (\$m)	22,167
Major shareholders (as of 10.10.2024)	
Vanguard Fiduciary Trust Co.	11.32%
BlackRock Advisors LLC	7.63%
State Street Corporation	4.26%
Boston Partners Global Investors, Inc.	2.96%

## KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	10,768	11,612	13,671	14,281
∆ (%) [\$]*	10.84%	11.71%	4.80%	7.24%
Defence (%)**	60%	58%	57%	57%
Export (%)	8%	8%	8%	9%
Operating profit/loss	874	974	1 033	574
Operating margin	8.12%	8.39%	7.56%	4.02%
Net income***	550	637	651	184
Order book	26,008	30,410	33,535	33,450
Employees	39,000	43,000	45,000	47,000

<sup>\*</sup>Variation based on revenue in local currency

## REVENUE BY BUSINESS SEGMENT (%)



## REVENUE BY REGION (%)

Name	%	Country		
Hanford Mission Integration Solutions	53%	United States	91	9
Cardno Tec-Leidos	N/A	United States		
Integrated ICBM Support Services (i2S2)	N/A	United States		
	'	II	United States	Export markets

LDOS

See €/\$, p.9

<sup>\*\*</sup>Defense Solutions division only

<sup>\*\*\*</sup>Net income attributable to shareholders

MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	SAC EUROPHER SERVINDESTEE WAS LES SCHIEDE PRINT PRINT
IT Systems operation, maintenance	2 401, 34, 042, 444, 442, 472, 478, 472, 470, 410,
and modernisation services  GSM-O II programme (DoD's communication and network modernisation)	
US Navy's NGEN-R SMIT programme	•
NASA End-User Services & Technologies (NEST) programme	
Cybersecurity	
Proven, Analytic-Centric Kill Chain Implementation and Transformation (PACKIT) cyber defense solution	
Logistic support services	
Logistics Commodities and Services Tranformation (LCST) programme (UK MoD)	• • • •
ISS Cargo Mission Contract (engineering and logistic support services)	
Airborne platforms	
Mayhem unmanned hypersonic aircraft project	• • •
Leidos Special Mission Aircraft (LSMA) programme	•
Unmanned marine systems	
Viperfish future UUV	•
Seahunter / Seahawk USVs	
Training	
Common Driver Trainer (CDT) virtual training system	
Aeronautical services	
Airborne surveillance of the Australian exclusive economic zone*	•

<sup>\*</sup>Subcontracting from the Australian Border Force \*\*Defense & Security

#### Business trends

- ▶ Leidos posted revenues of \$15.4bn (€14.3bn) in 2023, up 7.2% year-on-year in local currency, mainly driven by growth in the Health (+13.2%) and Civil (+5.8%) divisions. The Defense Solutions division also recorded an increase in revenues (+5.9%), thanks in particular to greater activity on certain programmes (including the U.S. Navy's NGEN-R SMIT programme) and the integration of Cobham Aviation Services Australia's Special Mission division, acquired at the end of 2022.
- At the beginning of 2024, the group introduced a new organisation in four divisions: National Security & Digital, Health & Civil. Commercial & International and Defense Systems.
- In summer 2024, Leidos and U.S. company Elroy Air carried out flight tests on an aerial resupply drone for the U.S. Marine Corps, as part of the MARV-EL (Medium Aerial Resupply Vehicle - Expeditionary Logistics) programme. The drone is based on Elroy Air's Chaparral unmanned cargo aircraft.

#### Home market

- Leidos is the U.S. government's leading provider of digital and telecom services according to Washington Technology's 2024 rankings, ahead of Lockheed Martin and Northrop Grumman.
- ► The group signed a \$476m (€439m) contract in July 2024 to continue providing engineering, maintenance and support services to NASA, in particular for sending cargo to the International Space Station (ISS) and supporting crews for the Artemis lunar exploration programme.
- ► The Defense Information Systems Agency (DISA) awarded a \$823m (€759m) contract to Leidos in July 2024 to manage and support the Department of Defense Network (DoDNet). The contract is part of the Defense Enclave Services (DES) programme, awarded to Leidos in 2022 to support the migration of certain U.S. Department of Defense entities to the DoDNet network.
- The group signed a \$738m (€681m) contract in June 2024 to provide engineering and IT support services to the U.S. Air Force (including cybersecurity solutions) for a potential period of 5.5 years. The group also signed a \$191m (€176m) contract in August 2024 to provide technical support to the U.S. Army, in particular for software updates and integration, for a period of 5 years.

#### Export markets

- Leidos generated 9% of its revenues from exports in 2023. In defence, Australia and the UK are the group's main international customers.
- In September 2024, Leidos Australia was selected by Lockheed Martin Australia to provide a range of IT and cybersecurity services in support of the Australian Defence Force's Joint Air Battle Management System under Project AIR6500, to build an advanced integrated air and missile defence capability.

- ► Self-financed R&D expenditure amounted to \$128m (€118m) in 2023, representing 0.8% of revenues.
- Leidos and its partners are working on the U.S. Air Force Research Laboratory's (AFRL) Project Mayhem to develop an unmanned hypersonic aircraft. Designed for both reconnaissance and strike missions, the drone is expected to reach speeds in excess of Mach 10 (12,250 km/h).
- The group, through its subsidiary Dynetics, was one of four operators selected in June 2024 to develop a prototype ETV (Enterprise Test Vehicle) for the U.S. Air Force, intended for subsystem (engines, sensors, communications suites, etc.) and weapon testing. The first flight demonstrations are scheduled for the end of the year.
- The U.S. Department of Defense awarded Leidos a \$276m (€255m) contract in August 2024 to research and develop critical minerals and materials for use in munitions, in particular to reduce dependence on foreign supplies.



# I FONARDO

Group with civil and military activities, leading Italian defence contractor and 14th-largest worldwide, operating in the U.S. market through Leonardo DRS and Leonardo US Aircraft

## **BUSINESS AREAS**

Platform manufacturer and systems integrator

- ▶ Military aircraft and unmanned aircraft systems
- Commercial and military helicopters
- ▶ Weapon systems and torpedoes
- ► Communication systems
- Defence electronics
- ▶ Space (see also Thales Alenia Space)

#### GOVERNANCE

Symbol

Chairman	Stefano Pontecorvo
CEO and General Manager	Roberto Cingolani
Co-General Manager	Lorenzo Mariani

## OWNERSHIP STRUCTURE (as of 10.10.2024)

Listed on	Bors	a Italiana
Market Cap (€m)		11,783
Major shareholders (as of 10.10.2024	-)	
Italian State		30.20%
Sachem Head Capital Management L	.P	1.68%
Orbis Investment Management Ltd.		1.43%
Norges Bank Investment Managemen	ıt	1.19%

#### MAIN JOINT VENTURES AND ASSOCIATES

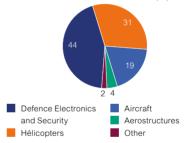
Nom	%	Country
Telespazio	67%	Italy
Orizzonte Sistemi Navali	49%	Italy
Thales Alenia Space	33%	France
NHIndustries	32%	France
ELT Group	31.33%	Italy
Avio	29.63%	Italy
MBDA	25%	France
Hensoldt	22.8%	Germany
Eurofighter Jagdflugzeug	21%	Germany

## KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	13,410	14,135	14,713	15,291
△ (%)	-2.71%	5.41%	4.09%	3.93%
Defence (%)	73%	83%	83%	75%
Export (%)	83%	83%	86%	82%
Operating profit/loss	517	911	961	1,085
Operating margin	3.86%	6.44%	6.53%	7.10%
Net income*	241	586	927	658
Order book	35,516	35,534	37,506	39,529
Employees	49,882	50,413	51,392	53,566

<sup>\*</sup>Net income attributable to shareholders

## REVENUE BY BUSINESS SEGMENT (%)\*

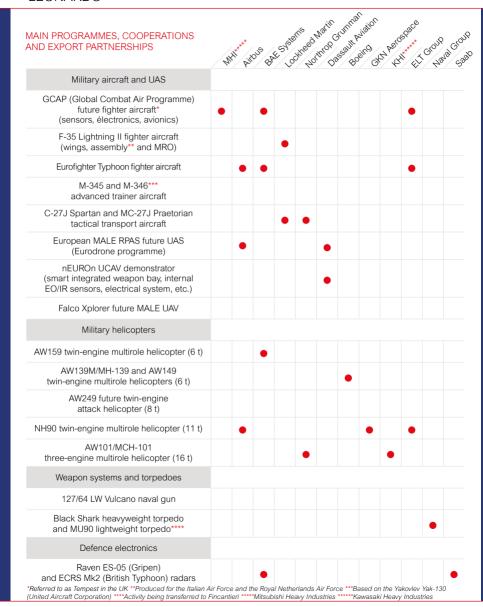


<sup>\*</sup>Excluding Space division (Telespazio and Thales Alenia Space)

#### REVENUE BY REGION (%)



LDO



#### Business trends

- ▶ Leonardo revenues reached €15.3bn in 2023, up 3.9% year-on-year. The Aircraft division was the only one to record a decline in revenues (-6.1% year-on-year), as the 2022 financial year benefited from the ramp-up of aircraft production for Kuwait. Revenues in the Helicopters division rose by 4.1%, thanks in particular to increased deliveries of military and civil helicopters (185 units in 2023, compared with 149 in 2022).
- Leonardo reached an agreement with Fincantieri in May 2024 to sell its Italian subsidiary WASS by early 2025, for around €400m. WASS produces torpedoes (A184, A244, Black Shark, MU90) and sonars (ATAS).
- ▶ In October 2024, Leonardo and Rheinmetall set up a 50-50 joint venture called Leonardo Rheinmetall Military Vehicles and based in Rome. This joint venture will be responsible for designing and producing armoured vehicles for Italy, with 60% local production.
- Leonardo is considering acquiring Iveco Defence Vehicles for approximately €750m. As the parent company of OTO Melara. Leonardo is associated with Iveco DV within the Iveco OTO Melara (CIO) consortium.

#### Home market

- Leonardo is one of the main suppliers to the Italian Armed Forces. The group is involved in the design and production of Italian military aircraft and helicopters and is a partner of Fincantieri in many naval defence programmes, in particular through their joint subsidiary Orizzonte Sistemi Navali. In 2023, Leonardo generated 18% of its turnover on its domestic market.
- ▶ In June 2024, the CIO consortium signed a contract with the Italian Secretariat General of Defence for the supply of 28 Centauro II 8x8 tank destroyers, bringing the total number of vehicles ordered to 150.
- In July 2024, the Italian Ministry of Defence announced its intention to order 24 Typhoon fighter aircraft over the next 11 years at a cost of €7.5bn. including services (support. training, etc.).
- In July 2024, the Italian Navy awarded a €1.6bn contract to Intermarine and Leonardo for the supply of five mine warfare vessels. Leonardo will be responsible for developing the ships' combat system and will receive €430m as part of this contract.

#### Export markets

- ▶ The group generated 82% of its revenues from exports in 2023, mainly to the United States and the United Kingdom (combined share of 37% of turnover), through its subsidiaries Leonardo DRS and Leonardo US Aircraft on the one hand and Leonardo UK on the other.
- The Tanzanian Ministry of Defence and National Service ordered two C-27J Spartan transport aircraft in humanitarian and search and rescue configuration from Leonardo in January 2024.
- In February 2024, Leonardo signed a multi-year framework agreement with Saudi Arabia's The Helicopter Company for the supply of 130 helicopters (AW109, AW139, AW169 and AW189K). An initial order for 20 AW139s has been notified to the two groups.
- In August 2024, Leonardo offered the AW149 for the UK Ministry of Defence's New Medium Helicopter programme, aiming at procuring 44 medium helicopters. The group is the only bidder since the withdrawal of Airbus and Sikorsky.

- ▶ Total R&D expenditure represented 14.4% of revenues in 2023, and self-financed R&D expenditure 3.8%.
- In March 2024, Leonardo presented the C2D/N EVO system, designed to equip all Italian Army vehicles (including Ariete C2 tanks and VBM Freccia infantry fighting vehicles) to standardise land command and control in a single device.



## LIG NEX1

South Korean diversified defence group (missiles, radars, avionics, electronic warfare and communication systems, etc.), and 58th-largest defence contractor worldwide

#### BUSINESS AREAS

Systems integrator/equipement supplier

- Missiles systems and guided ammunition
- Radar and electro-optic systems
- Avionics and electronic warfare systems
- C4I systems
- Unmanned systems

#### **GOVERNANCE**

Chief Executive Officer

Ik-hyun Shin

## KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	1,189	1,346	1,635	1,634
∆ (%) [KRW]*	10.16%	13.87%	21.87%	3.95%
Defence (%)	100%	100%	100%	100%
Export (%)	N/A	5%	18%	16%
Operating profit/loss	47	72	132	132
Operating margin	3.98%	5.33%	8.07%	8.07%
Net income	43	78	91	124
Order book	5,467	6,170	9,125	13,666
Employees	3,186	3,270	3,780	4,284

<sup>\*</sup>Variation based on revenue in local currency See €/KRW, p.9

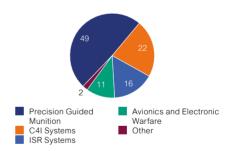
## OWNERSHIP STRUCTURE (as of 10.10.2024)

Symbol	A079550
Listed on	Korea Stock Exchange
Market Cap (KRWbn)	5,280

#### Major shareholders (as of 10.10.2024)

LIG Corp.	42.00%
GIC Pte Ltd. (Investment Management)	12.62%
National Pension Service of Korea	9.67%
Artisan Partners LP	5.02%

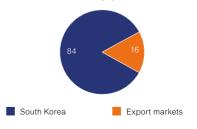
# REVENUE BY BUSINESS SEGMENT (%)



## MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
Ghost Robotics	60%	United States

## REVENUE BY REGION (%)



## MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS

LIG NEX1	
MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	BD John Joed Rent John John John Joed Rent John John Joed Rent John John John John John John John John
Missiles systems and guided ammunition	
LAMD (low-altitude missile defense system) and L-SAM (Long-range Surface-to-Air Missile) future missiles	•
M-SAM missile (Mid-range Surface-to-Air Missile or Cheongung) Block-I/II	• •
Hyunmoo cruise missiles	•
Hyungung (Raybolt) anti-tank missile	• •
SAAM surface-to-air missile	• •
Haesong (C-Star or Sea Star) anti-ship missile	•
Bigung (Poniard) guided rocket	•
Blue Shark lightweight torpedo and Tiger Shark heavyweight torpedo	•
ISR systems	
3D Long Range Radar (LRR)	
Sonar systems (KDX-III destroyers and KDDX future destroyers, KSS-III submarines)	•
Avionics and electronic warfare systems	
Avionics (KF-21, T/FA-50, LAH, KUH-1 Surion)	•
ALQ-200 airborne EW system	•
C4I systems	
Military satellite communication systems	
Unmanned systems	
KUS-FS (Korean Unmanned System–Flight Strategic) MALE UAV	• • •
Sea Sword unmanned surface vehicles	

<sup>\*</sup>Agency for Defense Development \*\*Through Hanwha Systems, Hanwha Aerospace and Hanwha Ocean \*\*\*Korean Air Aerospace Division

#### Business trends

- ▶ LIG Nex1 revenues reached 2.309 trillion won (€1.6bn) in 2023, up 4% year-on-year in local currency. The C4I Systems, ISR Systems and Avionics and Electronic Warfare divisions recorded solid growth.
- In May 2024, LIG Nex1 announced an investment of 200 billion won (€142m) in its Gumi site in South Korea over the 2025-2027 period, after having invested 110 billion won (€78m) between 2022 and 2025. The group aims to increase its production capacity for missiles, quided munitions and unmanned marine vehicles.
- In July 2024, LIG Nex1 completed the acquisition of a 60% stake in Ghost Robotics, a Philadelphia-based American company specialising in the production of quadruped ground robots, for \$240m (€222m).

#### Home market

- As one of South Korea's main defence groups, LIG Nex1 benefits from a leading position in its main business segments.
- ▶ LIG Nex1 signed a 850 billion won (€602m) contract with the South Korean Defense Acquisition Program Administration (DAPA) in December 2023 for the supply of new-generation TMMR portable military radios (Tactical Multiband Multirole Radio). The group is also responsible for upgrading the Link-11 communications system on South Korea's KSS-II submarines to the Link-22 version, under a contract worth 24 billion won (€17m) running until 2028.
- In early 2024, the DAPA announced the launch of production of the KUS-FS (Korean Unmanned System-Flight Strategic) MALE UAV, developed by the South Korean agency ADD and Korean Air Aerospace Division. LIG Nex1 is participating in this programme by supplying various components (SAR radar, anti-jamming, communication and ground control systems, etc.).
- ► In March 2024, the DAPA awarded LIG Nex1 a contract to develop a new naval surface-to-air missile, referred to as the Ship-to-Air Missile-II and designed to equip South Korea's future KDDX destroyers. Valued at 331 billion won (€228m), the contract calls for work to be completed in 2030, with local components accounting for more than 90% of the total
- In June 2024, the group was awarded a 144 billion won (€97m) contract by the DAPA to supply Hyungung anti-tank missiles to the ROK Army until 2027. LIG Nex1 also signed a contract worth 84 billion won (€57m) to provide logistical support and MRO services for the Blue Shark light torpedo, in service with the ROK Navy, until 2029.

#### Export markets

- Aiming to strengthen its international presence, LIG Nex1 selected nine countries offering significant business prospects in the military sector as its main target markets in the Middle East (United Arab Emirates, Saudi Arabia), Asia (India, Vietnam, Indonesia, Philippines) and South America (Peru, Colombia, Brazil).
- In February 2024, LIG Nex1 signed a cooperation agreement with its domestic peer Hyundai Rotem to promote exports of military equipment to the Middle East. In November 2024, the group also signed a partnership with British group Babcock to develop its MRO export business.
- ▶ LIG Nex1 signed a contract worth 3.7 trillion won (€2.5bn) in September 2024 to supply Cheongung II surface-to-air missiles to Iraq. These missiles were recently sold to the United Arab Emirates and Saudi Arabia.

- In August 2024, LIG Nex1 joined forces with Palantir to use the American company's data analysis and artificial intelligence technologies to support its R&D efforts in various fields (unmanned marine vehicles, space and electronic warfare).
- The group was selected in September 2024 to design two 12-metre unmanned surface vehicles for the ROK Navy by 2027. The USVs are intended for reconnaissance missions.



## LOCKHEED MARTIN

World's leading defence contractor, prime contractor for the F-35 fighter aircraft and largest supplier to the U.S. Department of Defense

## **BUSINESS AREAS**

Platform manufacturer and systems integrator

- Military aircraft, helicopters and UAVs
- Missiles and weapon systems
- Naval platforms and systems
- ▶ Defence electronics
- Cybersecurity
- Space (satellites, launchers)

#### **GOVERNANCE**

Symbol

Chairman and CEO	James D. Taicle
Chief Operating Officer	Frank A. St. Johr
President, Aeronautics	Gregory M. Ulme

## KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	57,266	56,673	62,663	62,508
Δ (%) [\$]*	9.34%	2.52%	-1.58%	2.41%
Defence (%)	96%	96%	96%	96%
Export (%)	25%	28%	26%	26%
Operating profit/loss	7,569	7,712	7,928	7,870
Operating margin	13.22%	13.61%	12.65%	12.59%
Net income	5,983	5,338	5,443	6,401
Order book	119,911	119,466	140,579	145,310
Employees	114,000	114,000	116,000	122,000

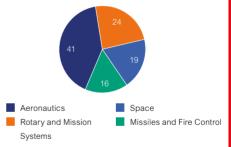
<sup>\*</sup>Variation based on revenue in local currency See €/\$, p.9

## OWNERSHIP STRUCTURE (as of 10.10.2024)

Listed on	NYSE
Market Cap (\$m)	144,379
Major shareholders (as of 10.10.2024)	
State Street Corporation	15.11%
Vanguard Fiduciary Trust Co.	8.99%

BlackRock Advisors LLC 6.22%
Charles Schwab IM, Inc. 2.86%

## REVENUE BY BUSINESS SEGMENT (%)



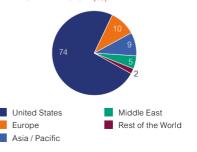
## MAIN JOINT VENTURES AND ASSOCIATES

United Launch Alliance

Name	%	Country
MEADS International	58%	United States
AWE	51%	United Kingdom
Longbow	50%	United States
Raytheon-Lockheed Martin Javelin JV	50%	United States
Tata Lockheed Martin Aerostructures	50%	India

50%

#### **REVENUE BY REGION (%)**



United States

LMT

MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	SA A	, <sup>7</sup> 0	Stitrop Of	F SASIG	orango orango	ĮĮ,	L Agros	Sac <sub>o</sub>	JIS POY	s re	sing fin	jes Sarijeri
Military aircraft												
F-35 Lightning II fighter aircraft		•	•	•	•		•	•	•			
F-16 Fighting Falcon fighter aircraft	•					•	•					
C-130J Super Hercules tactical transport aircraft								•	•			
CH-53K King Stallion three-engine heavy-lift transport helicopter						•	•					
Black Hawk (UH-60/S-70A) and Sea Hawk (SH-60/S-70B) twin-engine multirole helicopters		•				•						
VH-92A Patriot twin-engine transport helicopter						•						
Missiles and weapon systems												
Hellfire and Javelin anti-tank missiles		•					•					
AGM-158 Joint Air-to-Surface Standoff Missile (JASSM)			•									
UGM-133 Trident II Submarine-Launched Ballistic Missile (SLBM)												
PAC-3 and PAC-3 MSE interceptors							•		•	•		
THAAD missile defence system			•				•		•			
M142 HIMARS and M270 MLRS rocket launchers												•
Naval platforms and systems												
River-class future destroyer (Canadian Surface Combatant programme)* (design)			•			•	•	•	•			
Multi-Mission Surface Combatant (MMSC) future frigate** (design)								•			•	
Aegis combat system			•		•						•	
Space												
Vulcan Centaur launcher		•								•		

\*Based on BAE Systems' Type 26 frigate \*\*Based on Freedom-class LCS frigate \*\*\*Tata Advanced Systems Ltd \*\*\*\*Mitsubishi Heavy Industries \*\*\*\*Formerly GE Aviation \*\*\*\*\*Formerly Raytheon Technologies

#### Business trends

- ▶ Lockheed Martin revenues reached \$67.6bn (€62.5bn) in 2023, up 2.4% year-on-year in local currency. Three of the group's divisions recorded an increase in revenues: Space (+9.3%), Aeronautics (+1.8%, with the deliveries of 98 F-35 Lightning II fighter aircraft, 5 F-16 Fighting Falcon fighter aircraft and 21 C-130J Super Hercules tactical transport aircraft) and Rotary and Mission Systems (+0.6%, with only 63 military helicopters delivered in 2023, compared with 95 in 2022).
- The new Vulcan Centaur heavy launcher from United Launch Alliance (ULA, a joint venture between Boeing and Lockheed Martin) successfully carried out its maiden flight in January 2024. It will be able to place a 15.3 tonne payload into geostationary transfer orbit.
- In August 2024, Lockheed Martin announced the signing of a definitive agreement to acquire satellite manufacturer Terran Orbital for \$450m (€416m). Terran Orbital is notably involved in the U.S. Space Development Agency's Transport Layer Tranche 2 Gamma satellite data transport programme, in which Lockheed Martin also takes part.

#### Home market

- ► The group is highly dependent on the U.S. market (74% of its revenue in 2023). The U.S. Department of Defense, its largest customer, accounted for 64% of sales, excluding Foreign Military Sales.
- ▶ Lockheed Martin signed a \$219m (€203m) contract in March 2024 with the U.S. Army to produce Precision Strike Missile (PrSM) tactical ballistic missiles, compatible with the M142 HIMARS and M270A2 MLRS rocket launchers.
- ► The group signed a \$483m (€447m) contract in April 2024 with the U.S. Army to produce AGM-114 Hellfire and AGM-179 JAGM airborne anti-tank missiles for the U.S. Army, the U.S. Navy and allied countries.
- In April 2024, the U.S. Missile Defense Agency selected Lockheed Martin as prime contractor and Aerojet Rocketdyne (part of L3Harris Technologies) to lead its Next Generation Interceptor (NGI) programme. Designed to counter ballistic missile threats, the programme has a budget of around \$18bn (€16.7bn) and is expected to reach initial operational capability in 2028.
- ▶ Lockheed Martin was awarded a \$451m (€417m) contract in May 2024 to upgrade M270 multiple launch rocket systems (MLRS) for the U.S. Army and allied nations.
- ▶ In May 2024, the U.S. Army awarded a \$756m (€699m) contract to Lockheed Martin to supply equipment and systems for Long Range Hypersonic Weapon (LRHW) ground-to-ground hypersonic missile batteries.
- ► In August 2024, the Sikorsky subsidiary handed over to the U.S. Marine Corps the 23rd and last VH-92A Patriot helicopter, dedicated to transporting the President of the United States.

#### Export markets

- The Czech Republic and Greece signed Letters of Offer and Acceptance (LOAs) with the United States for the acquisition of Lockheed Martin's F-35 Lightning II fighter aircraft, in January 2024 for 24 units and in July 2024 for 20 units respectively.
- ► Sikorsky was awarded a \$251m (€232m) contract by the U.S. Army in July 2024 to supply 10 UH-60M Black Hawk multirole helicopters (8 for Croatia and 2 for Jordan) under FMS procedures by 2027.
- ▶ In September 2024, the U.S. Department of Defense awarded Lockheed Martin a \$752m (€696m) contract to produce AGM-158B JASSM-ER cruise missiles for four export customers (Finland, the Netherlands, Poland and Japan).

#### Technology and Innovation

► Self-financed R&D expenditure amounted to \$1.5bn (€1.4bn) in 2023, representing 2.2% of revenues.



## LOFT ORBITAL

French-American company founded in 2017, whose business model relies on the sale of services (integration of payloads on third-party satellites, launch management and in-orbit operations)

## **BUSINESS AREAS**

Provider of space infrastructure and services

- Payload integration (on third-party satellites)
- Software solutions
- Management of satellite launch and in-orbit operations

#### **GOVERNANCE**

Co-Founder and CEO	Pierre-Damien Vaujour
Co-Founder and COO	Alex Greenberg
General Manager, France	Emmanuelle Meric
Chief Technology Officer	Pieter van Duiin

## KEY FIGURES (Fiscal year ended: December 31st)

2020	2021	2022	2023
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	70	150	> 200
	N/A N/A N/A N/A N/A N/A	N/A	N/A         N/A         N/A           N/A         N/A         N/A

#### OWNERSHIP STRUCTURE

Symbol Listed on Market Cap	Unlisted company
Major shareholders (as of 1)	0.10.2024)

Major shareholders (as of 10.10.2024)

Founders and other shareholders\* 100%

\*Including BlackRock, Bpifrance, Foundation Capital, Uncork Capital and Ubiquity Venture

## REVENUE BY BUSINESS SEGMENT (%)



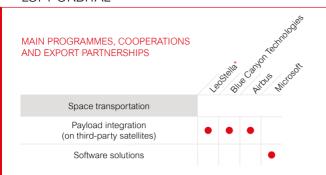
## MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
Orbitworks	< 50%	United Arab Emirates

## REVENUE BY REGION (%)



# LOFT ORBITAL



\*U.S. company BlackSky, which acquired Thales Alenia Space's stake in their joint venture LeoStella in November 2024.

#### Business trends

- Founded in the United States in 2017 by a French-American team, Loft Orbital (also known as Loft) offers the entire management of space missions for its customers. It purchases standardised satellite platforms from third-party operators, including LeoStella, Blue Canyon Technologies and Airbus. Loft Orbital has developed a payload adapter, called the Hub, and the Cockpit software for operating payloads. The company also prebooks places on launchers and manages launch and in-orbit operations.
- The customers' payloads can be integrated into a satellite dedicated to their mission, carrying other payloads (rideshare) or forming part of a constellation. Customers can also access Loft Orbital resources (satellites and payloads) using their own software or the Cockpit software.
- Since its creation, Loft Orbital has raised three rounds of financing: \$3.2m (€2.8m) in November 2017, \$13m (€12m) in November 2019 and \$140m (€125m) in December 2021, notably from BlackRock and French public sector investment bank Boifrance.

#### Home market

- In the United States, the company operates in California and Colorado. The Loft Federal subsidiary, created in early 2023, is dedicated to government and defence operators in the U.S. market. Loft Orbital's customers include the U.S. Department of Defense and NASA.
- Loft Orbital owns and operates the YAM (Yet Another Mission) satellites. The company has launched payloads for the UAE government on YAM-2 (launched in June 2021), for the U.S. Space Development Agency on YAM-3 (launched in June 2020) and for NASA on YAM-5 (launched in January 2023). All the satellites, including YAM-6 and YAM-7 launched in 2024, were placed in orbit by a Falcon 9 launcher (SpaceX).
- In August 2020, Honeywell awarded Loft Orbital a contract for the Canadian Space Agency's QEYSSat (Quantum Encryption and Science Satellite mission) encrypted communications satellite project. The launch of the YAM-4 satellite, originally scheduled for 2022, is now expected in the second half of 2025.
- Awarded a \$176m (€167m) contract by the U.S. Space Development Agency for the NExT (National Defense Space Architecture Experimental Testbed) programme, Ball Aerospace (then a subsidiary of Ball Corporation) chose Loft Federal in April 2023 to supply and operate the 10 satellites and manage launch and in-orbit operations. For this contract, Loft Orbital ordered 15 additional satellites from Airbus.
- ▶ Loft Federal is one of 15 operators selected by NASA in March 2024 to provide launch and payload (scientific instruments, etc.) integration services for research missions in space. The contract is worth a total of \$45m (€41m) over 5 years.

#### Export markets

- ▶ Based in Toulouse, the group's French subsidiary generated revenues of €15.2m in 2022 and has more than 120 employees. Loft Orbital was selected for the French Tech Next 40/120 start-up support programme (classes of 2022 and 2023).
- ▶ In January 2022, the Canadian company EarthDaily Analytics (EDA) notified Loft Orbital of a \$150m (€142m) contract to build, launch and operate a constellation of 10 Earth observation satellites scheduled for launch in 2024-2025. Loft Orbital also signed an agreement with Airbus for the procurement of 15 satellites derived from the Arrow platform (designed for the OneWeb satellite constellation), which will be used for the EDA contract.
- Loft Orbital and UAE-based Marlan Space joined forces in August 2024 to create a joint venture in the United Arab Emirates, named Orbitworks, with initial capital of over \$100m (€90m). Majority-owned by the Emirati company, Orbitworks will be involved in satellite construction and the supply of artificial intelligence solutions for the space industry.



# MAIASPACE

ArianeGroup subsidiary set up in 2022 to develop a reusable small launcher, scheduled for commercial operation from 2026 onwards

## **BUSINESS AREAS**

Platform manufacturer

 Space transportation (small launcher and services)

## **GOVERNANCE**

Chief Executive Officer	Yohann Leroy
Deputy CEO	Jérôme Vila
Chief Technology Officer	Isabelle Quinquis

## KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	N/A	N/A	N/A	N/A
Δ (%) [\$]*	N/A	N/A	N/A	N/A
Defence (%)	N/A	N/A	N/A	N/A
Export (%)	N/A	N/A	N/A	N/A
Operating profit/loss	N/A	N/A	-3	-21
Operating margin	N/A	N/A	N/A	N/A
Net income	N/A	N/A	-3	-20
Order book	N/A	N/A	N/A	N/A
Employees	N/A	N/A	N/A	115

## **OWNERSHIP STRUCTURE**

Symbol	
Listed on	Unlisted company
Market Cap	

Major shareholders (as of 10.10.2024)

ArianeGroup 100%

## REVENUE BY BUSINESS SEGMENT (%)



## MAIN JOINT VENTURES AND ASSOCIATES\*

Name % Country

\*No information available

## REVENUE BY REGION (%)

N/A

# MAIASPACE



#### Business trends

- Created in April 2022, MaiaSpace is developing a reusable mini-launcher, involving the vertical recovery of the first stage on a barge at sea, and propelled by more eco-responsible propellant (liquid oxygen and bio-methane). With the speed, agility and risk-taking culture of a start-up, MaiaSpace is capitalising on the expertise of the European space sector, in particular its parent company ArianeGroup (from which Maiaspace is buying the Prometheus engine on commercial terms). Commercial operation of the launcher is scheduled to begin in 2026.
- ► The company, which employs more than 200 people, has a production and test site in Vernon (in northern France), a design office in La Défense (near Paris) and facilities in Kourou (French Guiana). It has secured €125m in financing from its shareholders Airbus and Safran (who own ArianeGroup in equal shares).
- MaiaSpace markets its own launch services. The company plans to drastically reduce costs, thanks in particular to rapid development processes and disruptive technologies. The aim is to carry out one or two launches per month by the end of the 2020s, for both commercial and institutional customers.

#### Home market

- MaiaSpace is one of small launchers operators selected in March 2024 by the French Space Agency (CNES) to benefit from a launch services demonstration contract as part of the France 2030 plan. Unlike a traditional launch service contract, the majority of the funds will be paid out on the success of the launches, for which MaiaSpace must demonstrate its ability to deploy 800 kg of payloads in a 600 km sun-synchronous orbit by 2027.
- In September 2024, the French Space Agency (CNES) selected MaiaSpace to operate from the launch pad previously used by Soyuz rockets at the Guiana Space Centre in Kourou. One of the selection criteria was the ability to launch a payload of at least 1.5 tonnes into low-Earth orbit by 2027. MaiaSpace announced investments of several tens of millions of euros to adapt the launch pad and existing facilities to its operational requirements and to develop a local biomethane production sector.

- MaiaSpace's mini-launcher is 50 metres high and 3.5 metres in diameter, with two stages powered by four Prometheus engines (three for the main stage and one for the upper stage). It is being developed in two versions: one reusable (thanks to the recovery of the first stage) and the other expendable, capable of carrying 500 kg and 1.5 tonnes of payloads respectively into sun-synchronous orbit. MaiaSpace is also developing an additional kick-stage, named Colibri, which can be optionally integrated into the launcher's fairing to carry an additional tonne of payload into low-Earth orbit. Ultimately, Colibri will also enable MaiaSpace to position itself in the space mobility market (in-orbit services, active removal of space debris, etc.).
- By the end of 2024, MaiaSpace had designed, produced and tested several prototypes of most of the launcher's subsystems. Stage separation tests and the first firing of the upper stage are scheduled for 2025.



# MBDA

European leader in missile systems (MDCN naval cruise missile, AKERON MP anti-tank missile, METEOR air-to-air missile, EXOCET anti-ship missile), 30th defence contractor worldwide\* \*SIPRI rankings (2023 data)

#### BUSINESS AREAS

Missile manufacturer

- Air dominance
- ▶ Battlefield engagement
- Ground based air defence
- Maritime superiority

## **GOVERNANCE**

Chief Executive Officer	Éric Béranger
Executive Group Director Programmes and CEO of MBDA France	Stéphane Reb
Executive Group	Dhiliana Dathawart

Philippe Bethouart

# KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	3,592	4,234	4,210	4,451
Δ (%)	-3.00%	17.87%	-0.57%	5.72%
Defence (%)	100%	100%	100%	100%
Export (%)	N/A	N/A	N/A	N/A
Operating profit/loss	N/A	N/A	N/A	N/A
Operating margin	N/A	N/A	N/A	N/A
Net income*	122	610	702	449
Order book	16,600	17,800	22,300	28,000
Employees	> 12,000	12,520	14,000	15,000

<sup>\*</sup>Total comprehensive income

## OWNERSHIP STRUCTURE

**Director Operations** 

Symbol					
Listed on	Unlisted group				
Market Cap					
Major shareholders (as of 10.10.2	2024)				
Airbus	37.5%				
BAE Systems	37.5%				
Leonardo	25%				

## MAIN JOINT VENTURES AND ASSOCIATES REVENUE BY REGION (%)

Name	%	Country
TAURUS Systems	67%	Germany
Eurosam	66.6%	France
PARSYS	50%	Germany
RAM-System	50%	Germany
Roxel	50%	France
L&T MBDA Missile Systems	49%	India
SMMS	49%	Saudi Arabia
Inmize	40%	Spain
CILAS	31.5%	France

## REVENUE BY BUSINESS SEGMENT (%)



N/A

MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	THE SHE OF HE PRO SOLETAN DEEL OF THE SEELES
Long-range and deep strike	
SCALP EG / STORM SHADOW air-launched cruise missiles	• • •
TAURUS air-launched cruise missile	•
MDCN naval cruise missile	• • • •
EXOCET AM / MM / SM anti-ship missiles and mobile coastal defence systems	• • •
MARTE, MARTE ER and TESEO Italian anti-ship missiles	• • •
Tactical strike	
ANL / Sea Venom lightweight anti-ship missile	• • • •
BRIMSTONE and SPEAR Family air-to-ground missiles	•
Battlefield engagement	
AKERON MP / LP anti-tank and air-land missiles	• • •
PARS 3 and ENFORCER anti-tank missiles	•
Maritime protection / Armed Forces protection	
Sea Ceptor, Land Ceptor, CAMM and CAMM-ER air defence systems	• • •
ASTER and SAMP/T NG air defence systems	• • • •
VL MICA / VL MICA NG air defence systems	• • •
MISTRAL (MANPADS, SIMBAD and SIMBAD-RC) air defence systems	• • •
SKYWARDEN anti-drone system	
Air dominance	
METEOR beyond-visual-range air-to-air missile	• • • •
MICA / MICA-NG (EM, IR) medium-range air-to-air missiles	• • •
ASRAAM short-range air-to-air missile	• • •
SKYWARDEN anti-drone system *Joint venture between MBDA and Safran	

## Business trends

- MBDA revenues reached €4,451m in 2023, up 5.7% year-on-year. Growth was mainly driven by sales of air defence missiles. Order intake reached €9.9bn, thanks in particular to two contracts for the supply of CAMM short-range radar-guided missiles and iLauncher systems to Poland, and for the production by GIE Eurosam (a joint venture between MBDA and Thales) of nearly 700 Aster surface-to-air missiles for France and Italy. The order book stood at €28bn at the end of the year, representing more than 6 years of revenues.
- In March 2024, as part of its Act in Support of Ammunition Production (ASAP) programme, the European Commission proposed to finance the acceleration of production rates for MBDA's Enforcer portable land combat missiles, which went into series production at the end of 2023.

## Home markets (France, Germany, United Kingdom, Italy, Spain)

- In January 2024, Germany, Spain, the Netherlands and Romania ordered up to 1,000 Patriot PAC-2 (GEM-T) interceptor missiles for \$5.6bn (€5.2bn). Production will be carried out in Germany by COMLOG, a joint venture between MBDA Deutschland and Raytheon (part of RTX).
- ► In January 2024, MBDA also won three contracts with a combined value of around £400m (€460m) to enhance the Sea Viper air defence system used on the Royal Navy's Type 45 destroyers. Two contracts (Sea Viper Evolution) are for defence systems against anti-ship ballistic missiles and the other one for in-service support.
- In May 2024, the group signed a contract with OCCAr to develop a new fire control system for the Italian Armed Forces' Grifo and MAADS (Medium Advanced Air Defence System) air defence systems, based on the CAMM-ER missile.
- ▶ The Bundeswehr awarded MBDA a contract in July 2024 for the supply of Brimstone 3 air-to-ground missiles to arm its Typhoon fighter aircraft. A final assembly line and service centre for these missiles will be set up in Schrobenhausen (Germany).
- France adopted the MICA VL ground-to-air defence system, whose first mission was to protect the Paris 2024 Olympic Games.

#### Export markets

- ▶ In 2024, the group produced the 4,000th EXOCET anti-ship missile.
- Sweden ordered CAMM air defence systems in November 2023 to equip the Royal Swedish Navy's five Visbyclass corvettes. The missiles will be deployed from MBDA's Sea Ceptor naval air defence system.
- The group won a contract in January 2024 to equip the Polish Navy's three future Miecznik-class frigates with the Sea Ceptor naval air defence system.
- In February 2024, MBDA signed two agreements with the Greek companies Miltech and Altus to cooperate on projects to develop systems based on the Akeron MP missile, which will equip Altus' Atlas 8 Heavylifter tactical UAS.
- In June 2024, Belgium, Cyprus, Estonia, Hungary and France signed a framework agreement for the joint acquisition of more than 1,500 Mistral ground-to-air missiles from MBDA.

- ▶ In April 2024, the group took part in a successful test firing of an MdCN naval cruise missile by a French Navy submarine (SSN) and FREMM frigate, with simultaneous arrival on the same target.
- The first evaluation firing of the upgraded medium-range strategic air-to-ground missile (ASMPA-R, in French) and the first development firing of the new Aster B1NT missile were successfully carried out, in May and October 2024 respectively.



# MITSUBISHI HEAVY INDUSTRIES (MHI)

Industrial diversified conglomerate, Japan's leading defence contractor (co-production of the Taigei submarines, sublicensed assembly of the F-35), and 39th-largest worldwide\*

\*SIPRI rankings (2023 data)

#### **BUSINESS AREAS**

Platform manufacturer and systems integrator

- Shipbuilding and industrial machinery
- Energy-related products
- Commercial aircraft
- Defence (military aircraft, armoured fighting vehicles, surface ships, submarines, missiles, air defence systems, etc.)
- Space (launchers and space vehicles)

### **GOVERNANCE**

Symbol

Listed on

Chairman	Shunichi Miyanaga
Chief Executive Officer	Seiji Izumisawa
Chief Technology Officer	Eisaku Ito

# KEY FIGURES (Fiscal year ended: March 31st)

€ millions	2020-21	2021-22	2022-23	2023-24
Revenue	29,899	29,574	29,828	29,694
Δ (%) [JPY]*	-8.45%	4.33%	8.87%	10.81%
Defence (%)**	14%	13%	11%	13%
Export (%)	47%	51%	57%	57%
Operating profit/loss	437	1,228	1,372	1,801
Operating margin	1.46%	4.15%	4.60%	6.07%
Net income***	328	870	926	1,416
Order book	39,613	40,604	41,855	51,395
Employees	79,974	77,991	76,859	77,697

<sup>\*</sup>Variation based on revenue in local currency

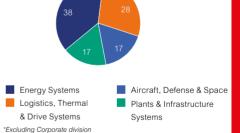
7011

Tokyo Stock Exchange

## OWNERSHIP STRUCTURE (as of 10.10.2024)

Market Cap (JPYbn)	7,456
Major shareholders (as of 10.10.2024)	
Meiji Yasuda Life Insurance Co.	2.37%
MUFG Bank Pension Fund	1.45%
Employee Stock Ownership Plan	1.33%
Mitsubishi UFJ Asset Management Co.	0.96%

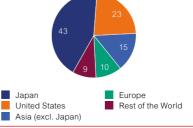
## REVENUE BY BUSINESS SEGMENT (%)\*



### MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
Japan Aircraft Industrial Enhancement	< 50%	Japan

## REVENUE BY REGION (%)



See €/JPY, p.9

<sup>\*\*</sup>Integrated Defense & Space Systems division only

<sup>\*\*</sup>Net income attributable to shareholders

MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	8AL S	Asterns Ni	itsubishi Italian	Cotoda	the Sapr	hartin An Steel	A Jac	San Asir	ine Unite	ed Free JAT	A NEC
Military aircraft											
GCAP (Global Combat Air Programme) future fighter aircraft	•	•	•								
F-35 Lightning II fighter aircraft*		•		•							
UH/SH-60 transport helicopter*				•							
Armoured fighting vehicles											
Type 10 main battle tank					•	•					
8x8 Type 16 MCV II tank destroyer					•	•					
Surface ships											
Mogami-class frigate (30FFM)											
Future Aegis System Equipped Vessel (ASEV)				•			•				
Conventionally-powered submarines											
Taigei-class attack submarine								•			
Soryu-class attack submarine								•			
Missiles and air defence systems											
Type 12, Type 17, Type 23 and ASM-3 anti-ship missiles											
AAM-5B air-to-air missile		•				•					•
Patriot air defence system*				•					•		
Mk41 vertical launch system*				•							
Space											
H3 launcher										•	
HTV-X future transfer vehicle										•	

<sup>&</sup>quot;Sublicensed production "Acquisition Technology and Logistics Agency (Japan) ""Kawasaki Heavy Industries ""Formerly Raytheon Technologies ""Japan Aerospace Exploration Agency

#### Business trends

- Mitsubishi Heavy Industries (MHI) revenues reached 4,657 billion yen (€29.7bn) in 2023-2024 (fiscal year ended March 31st), up 10.8% year-on-year in local currency. All divisions reported higher revenues, particularly Aircraft, Defense & Space (+27.8%), both in civil activities (Commercial Aviation segment, +28.1%), in the wake of the recovery in production rates in civil aeronautics, and in military activities (Integrated Defense & Space Systems segment, +27.7%).
- The British, Italian and Japanese governments officially signed a treaty in Tokyo in December 2023 for the development of the future 6th-generation GCAP (Global Combat Air Programme) fighter aircraft, whose design was presented by BAE Systems, Leonardo and Mitsubishi Heavy Industries at the Farnborough Air Show in July 2024. Other groups involved in the programme include MBDA, Rolls-Royce, Avio Aero, ELT Group. Mitsubishi Electric and IHI Corporation.
- Following the failure of its maiden flight in March 2023, the H3 space launcher, developed by MHI and the Japan Aerospace Exploration Agency (JAXA), successfully completed its next three launches for civil satellites in 2024. The launcher will be used to place Japanese IGS (Information Gathering Satellite) reconnaissance satellites into orbit from 2026.

#### Home market

- ► In December 2023, the group secured a contract worth 66.5 billion yen (€438m) from the Japanese Ministry of Defense for the supply of six SH-60L anti-submarine and anti-surface warfare helicopters. This version is an evolution developed by MHI of the SH-60K, which it assembles under licence from Lockheed Martin.
- In December 2023, the Japanese Ministry of Defense awarded MHI orders for 10 Type 10 main battle tanks and 32 Type 16 MCV 8x8 tank destroyers, worth 16.8 billion yen (€111m) and 32.2 billion yen (€212m) respectively.
- ► The second Taigei-class conventionally-powered attack submarine built by MHI, named Jingei (SS-515), entered service with the Japan Maritime Self-Defense Force (JMSDF) in March 2024. The group launched its third submarine (SS-517 Chogei) in October 2024, with delivery scheduled for March 2026.
- The fifth and sixth Mogami-class 30FFM frigates, built by MHI and named Yahagi and Agano, entered service with the JMSDF in May and June 2024. The next two units (Niyodo and Yubetsu) were launched in September and November 2023 respectively.
- ▶ In September 2024, the Japanese Ministry of Defense announced an order for two ASEV missile destroyers (equipped with Lockheed Martin's J7.B Aegis combat system), to be built respectively by MHI for 139.7 billion yen (€919m) and by Japan Marine United, and to be delivered in 2027-2028.

#### Export markets

- Export sales accounted for 57% of total revenues in 2023-2024, but mostly concerned civil activities. The Aircraft, Defense & Space division generated 27% of its revenues from exports over the fiscal year.
- ▶ In May 2024, the Japanese government finalised an agreement with its Philippine counterpart for MHI to supply five 97-metre vessels to the Philippine Coast Guard for \$425m (€393m). These vessels will be similar to the Teresa Magbanua and Melchora Aquino handed over by MHI to the Philippine Coast Guard in 2022.
- ► The goup was awarded a contract worth around 3 billion yen (€20m) by the Japanese Ministry of Defense in July 2024 to supply the United States with interceptor missiles for the Patriot air defence system.

#### Technology and Innovation

► Self-financed R&D expenditure amounted to 178.3 billion yen (€1.1bn) in 2023-2024, representing 3.8% of revenues



# MTU AFRO ENGINES

Aircraft engine manufacturer specialised in the production of aeronautical propulsion parts and subsystems and a major player in aeronautical maintenance

# BUSINESS AREAS

Engine manufacturer and equipment supplier

- Aircraft propulsion parts and subsystems
- Equipment and components
- Engine and gas turbines MRO

# **GOVERNANCE**

Symbol

Listed on

Chairman of the Supervisory Board	Gordon Riske
Chief Executive Officer	Lars Wagner
Chief Program Officer	Michael Schreyögg

# OWNERSHIP STRUCTURE (as of 10.10.2024)

Market Cap (€m)	15,335
Major shareholders (as of 10.10.2024)	
BlackRock Investment Management (UK) Ltd.	8.61%
Capital Research & Management Co. (World Investors)	4.80%
BlackRock Fund Advisors	3.60%
DWS Investment GmbH	3.13%

# MAIN JOINT VENTURES AND ASSOCIATES REVENUE BY REGION (%)

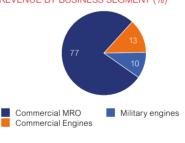
Name	%	Country
EUMET	50%	Germany
EURA	50%	France
Turbo Union	39.98%	Germany
MTU Turbomeca Rolls-Royce	33.33%	Germany
EuroJet Turbo	33%	Germany
EuroProp International	28%	Germany
MTU Turbomeca Rolls-Royce ITP	25%	Germany

# KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	3,977	4,188	5,330	5,363
Δ (%)	-14.07%	5.31%	27.27%	0.62%
Defence (%)*	12%	12%	9%	10%
Export (%)	85%	85%	86%	87%
Operating profit/loss	262	355	508	-161
Operating margin	6.59%	8.48%	9.53%	-3.00%
Net income**	139	222	331	-102
Order book	18,608	22,237	22,273	24,393
Employees	10,313	10,508	11,273	12,170

<sup>\*</sup>Military engines division only

#### REVENUE BY BUSINESS SEGMENT (%)





MTX

**XETRA** 

<sup>\*\*</sup>Net income attributable to shareholders

# Sales (19 heig Solfe being for being go white of the factors MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS Fighter aircraft engine parts NEFE (Next European Fighter Engine, FCAS programme) EJ200 (Eurofighter Typhoon) F414 (F/A-18E/F, EA-18G, JAS-39 Gripen E/F, Tejas Mk II, KF-21) F110 (F-16C/D, F-16E/F, F-15, F-15EX) Transport aircraft engine parts TP400-D6 (A400M) PW2000 (C-17) V2500 (C-390) Helicopter turbine parts T408 (CH-53K) MTR390-E (Tiger) Gas turbine parts LM6000 LM2500 series MRO and spare parts Larzac 04 engine (Alpha Jet) CF6-50C2 engine (KC-10) RB199 engine (Tornado) T64 turbine (CH-53G)

<sup>\*</sup>Subsidiary of GE Aerospace \*\*Formerly GE Aviation \*\*\*RTX group (formerly Raytheon Technologies)
\*\*\*Japanese Aero Engine Corporation, consortium between IHI Corporation, Kawasaki Heavy Industries and Mitsubishi Heavy Industries

#### Business trends

- ► MTU Aero Engines revenues remained virtually stable in 2023 (+0.6%) at €5,363m. Revenues in the Commercial Engines division (-46.7%) and the group's operating performance (operating loss of €161m) were heavily penalised by a charge of nearly €1bn linked to problems encountered on the Pratt & Whitney GTF (Geared Turbofan) or PW1100G-JM civil engine (A320neo), for which MTU Aero Engines supplies components. The Commercial MRO division recorded strong growth (+16.8%).
- Sales in the Military Engines division, whose main source of revenue is the EJ200 engine for the Typhoon fighter aircraft (within the EuroJet Turbo consortium), rose 8.5% year-on-year. The share of military activities remained quite stable (10% of the group's total revenue).
- In June 2024, MTU Aero Engines and Safran set up a 50/50 joint venture called EURA (EUropean Military Rotorcraft Engine Alliance) to develop a European propulsion system for future heavy military helicopters, due to enter service by 2040. Designed to deliver enhanced performance and lower costs, this engine is intended for the ENGRT (European Next Generation Rotorcraft Technologies) helicopter project.

#### Home market

- MTU Aero Engines generated 12.5% of its turnover in Germany in 2023, a share that has decreased by 1.8 percentage point year-on-year.
- As a major partner of the German Air Force, the group is notably responsible for the maintenance of the EJ200 (Typhoon) and RB199 (Tornado) turbojet engines and of the MTR390 turboshaft engine (Tiger helicopter). MTU Aero Engines also ambitions to be selected for the maintenance of the F135 turbojet engine powering the F-35 Lightning II fighter aircraft due to be delivered to the German Armed Forces from 2026. In June 2024, Germany announced its intention to procure a further 20 Typhoon and 8 F-35 fighter aircraft (38 Typhoons and 35 F-35s were ordered in 2020 and 2022 respectively).
- MTU Aero Engines is involved in the development of the Next European Fighter Engine (NEFE) for the future NGF European fighter aircraft, in partnership with Safran within the EUMET (European Military Engine Team) 50-50 joint venture. The two groups have since been joined by ITP Aero and the industrial load for the development of the NEFE engine will be shared equally between Germany, France and Spain. Phase 1B of the FCAS programme (which covers the development of a flying demonstrator by 2029) was launched in April 2023 for a three-year period.
- In April 2024, OCCAr awarded EuroProp International (EPI, a joint venture 28% owned by MTU Aero Engines) the Engine Support Step 2 (ESS2) contract to continue the technical support and maintenance of the A400M transport aircraft TP400-D6 turboprop engine for 5 years.

#### Export markets

- ► Export sales rose by 2.7% in 2023, to €4,692m, and accounted for 87.5% of the group's total revenue.
- MTU Aero Engines benefits from orders for Typhoon fighter aircraft announced by Spain (25 units planned as part of the Halcon II programme launched in 2023) and Italy (acquisition of 24 aircraft announced in July 2024). The group produces around 30% of the Typhoon's EJ200 turbojet engine.
- During the Farnborough International Airshow 2024 (United Kingdom), the Netherlands and Austria jointly ordered nine C-390 transport aircraft (Embraer), to be powered by the V2500 turbojet engine.

#### Technology and Innovation

Total R&D expenditure amounted to €306m in 2023 (5.7% of revenues), of which almost 20% (or €58m) were devoted to military engines. Almost three-quarters of R&D expenditure is self-financed (€223m).



# NAMMO

Ammunition provider equally controlled by the Norwegian State (50%) and Finnish defence company Patria (50%), and 91th-largest defence contractor worldwide

### **BUSINESS AREAS**

Ammunition provider, systems integrator/ equipment supplier

- ► Ammunition (all calibre)
- Weapon systems (shoulder fired systems, warheads and fuzes)
- Explosives and pyrotechnics (hand grenades, initiation systems)
- Propulsion systems (solid rocket motors and boosters for tactical missiles, hybrid rockets)
- Demilitarisation and services (conventional ammunition)

#### **GOVERNANCE**

Chairman	Esa Rautalinko

Chief Executive Officer Morten Brandtzæg
President, Aerospace

Propulsion Stein Erik Nodeland

# KEY FIGURES (Fiscal year ended: December 31st) € millions | 2020 | 2021 | 2022 | 2023

€ millions	2020	2021	2022	2023
Revenue	563	687	738	804
Δ (%) [NOK]*	18.98%	15.61%	6.79%	23.34%
Defence (%)	≈ 80%	79%	77%	81%
Export (%)**	76%	69%	70%	73%
Operating profit/loss	53	66	73	92
Operating margin	9.34%	9.67%	9.88%	11.47%
Net income***	39	45	50	53
Order book	876	1,028	1,410	2,259
Employees	2,523	2,648	2,679	2,925

<sup>\*</sup>Variation based on revenue in local currency See €INOK, p.9

# **OWNERSHIP STRUCTURE**

Symbol	
Listed on	Unlisted group
Market Cap	

#### Major shareholders (as of 10.10.2024)

Norwegian State	50%
Patria	50%

# REVENUE BY BUSINESS SEGMENT (%)



#### MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
Sintef Raufoss Manufacturing	14%	Norway
Nordic Additive Manufacturing	12%	Norway
Komm-In	8%	Norway
Raufoss Industripark Holding	2%	Norway
ARGE DiNa 155mm	N/A	Germany



<sup>\*\*</sup>Revenue excluding Norway / Sweden / Finland
\*\*\*Net income attributable to shareholders

AIN PROGRAMMES, COOPERATIONS ND EXPORT PARTNERSHIPS	Saab	2GL 8G	seind Gen	aral Dyrio	Ariane Gr	JUP JUP &	stin Tech	idles Oil	Syl Defer	indept
Ammunition										
Small calibre ammunition (4.6 mm - 12.7 mm)										
Medium calibre ammunition (20 mm - 57 mm)			•							
Large calibre ammunition (120 mm and 155 mm)		•	•	•						
Mortar rounds (81 mm and 120 mm)										
Weapon systems										
Shoulder-fired systems (M72 LAW, M141 BDM and Mk 153 SMAW)	•	)		•						
Warheads (M282) and fuzes (D652, Jupiter, Mercury, Venus)										
Explosives and pyrotechnics										
Hand grenades (fragmentation and smoke grenades)										
Hystrix grenade launch system										
Initiation systems										
Propulsion systems										
Solid propellant rocket motors for missiles (AIM-120 AMRAAM, RIM-162 ESSM, IRIS-T/IRIS-T SLM)				•			•	•	•	
Auxiliary boost rocket motors (Exocet MM40, NSM)									•	•
A6 DR_SR separation rocket motors (Ariane 6 launcher)				•						
Hybrid rocket motors	•				•					
Altair air-launched system (demonstrator)						•				
Demilitarisation and services										
Demilitarisation and thermal treatment										•

#### Business trends

- Nammo revenues reached NOK 9,191m (€804m) in 2023, up 23.3% year-on-year in local currency. All divisions reported higher revenues, particularly in military and commercial ammunition and portable rocket launchers.
- The group's order book stood at NOK 25.4bn (€2.3bn) at the end of 2023, its highest level ever (almost 3 years of revenue) and up 71.2% year-on-year in local currency. Growth was mainly driven by the signing of several ammunition contracts, as many countries mean to replenish their stocks following Russia's invasion of Ukraine.
- In May 2024, the group and Raytheon (part of RTX) invested to expand production capacity for missile solid propulsion systems (AIM-9 Sidewinder, AIM-120 AMRAAM and RIM-162 ESSM missiles) at the Nammo plant in Perry (Florida) by 2027.
- ► Under the Act in Support of Ammunition Production (ASAP) programme, Nammo will receive €54.7m in 2024-2025 from the European Union and Norway to increase its 155mm artillery ammunition production capacity in Finland, Norway and Sweden, in order to replenish inventories in European countries and continue deliveries to Ukraine.

### Home markets (Norway, Sweden, Finland)

- The merger of three Nordic defence companies, Nammo continues to have a strong presence in its domestic markets (Norway, Sweden, Finland), where it generated 27% of its sales in 2023.
- In January 2023, Nammo signed a contract with the Norwegian Defence Logistics Organization (FLO) for the supply of artillery ammunition to the Norwegian Army for a value of NOK 2.6bn (€228m).
- In March 2024, the Swedish Defence Materiel Administration (FMV) placed an order with Nammo and Norma Precision for small-calibre ammunition to be produced by 2025, worth SEK 2.8bn (€244m). The contract includes options to extend deliveries until 2030.
- ► The group signed an agreement with the Norwegian Defence Logistics Organization (FLO) in July 2024 to produce 155mm calibre artillery ammunition, 120mm calibre tank ammunition and AIM-120 AMRAAM missile engines for the Norwegian Armed Forces, allied countries and Ukraine, for a total of NOK 1 bn (€88m).

#### Export markets

- Nammo generated almost three quarters of its sales from exports in 2023. Europe (excluding Norway, Sweden and Finland) is the group's largest international market with 36% of its sales during that year.
- ▶ General Dynamics Ordnance and Tactical Systems and Nammo were awarded a five-year, \$489m (€457m) contract by the U.S. Army in September 2023 to produce M119A2 propellant charges for 155mm howitzers.
- In July 2024, Germany's Federal Office of Bundeswehr Equipment (BAAINBw) ordered 155mm calibre artillery ammunition from the ARGE DiNa 155mm consortium (made up of Diehl Defence and Nammo). The contract, which value was undisclosed, is the largest ever won by Nammo. The ammunition is destined for Germany and allied countries.

- Nammo aims to spend 10% of its annual revenues on R&D activities, which include long-range ammunition, medium-calibre ammunition (30 and 40 mm) and ammunition for the F-35 Lightning II.
- ▶ In October 2023, Boeing and Nammo conducted tests at Yuma Proving Ground (Arizona) of their future Ramjet 155 long-range guided artillery munition, using an L/58 gun from BAE Systems' prototype Extended Range Cannon Artillery (ERCA) system.



# NAVAL GROUP

Leading French and European military shipbuilding company with a solid export activity in first-class frigates and submarines, ranked 27th-largest defence contractor

# **BUSINESS AREAS**

Platform manufacturer and systems integrator

- Surface ships
- Submarines (conventionally and nuclear-powered)
- Autonomous systems (USVs. UUVs)
- Underwater weapons
- Naval combat and platform systems and equipment
- Maintenance, modernisation and related services for naval bases
- Civil nuclear energy

#### **GOVERNANCE**

Chairman	and	CEO

Executive VP. Surface Ships

**Executive VP. Submarines** 

Executive VP Services

KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020**	2021	2022	2023
Revenue	3,320	4,053	4,353	4,257
Δ (%)	-10.56%	22.08%	7.40%	-2.21%
Defence (%)	≈ 95%	≈ 95%	≈ 95%	≈ 95%
Export (%)	30%	27%	37%	30%
Operating profit/loss	86	294	427	296
Operating margin	2.59%	7.25%	9.81%	6.95%
Net income*	62	197	339	261
Order book	15,153	14,069	15,277	14,363
Employees	15,464	16,028	16,029	16,325

<sup>\*</sup>Net income attributable to shareholders \*\*Figures restated

Vincent Martinot-Lagarde Laurent Espinasse

Éric Balufin

### OWNERSHIP STRUCTURE

Symbol	
Listed on	Unlisted group
Market Cap	

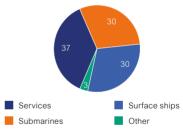
# Major shareholders (as of 31.12.2023)

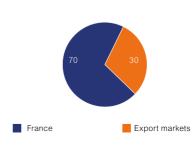
French State	62.25%
Thales	35.00%
FCPE Actionnariat Naval Group	1.74%
Self-owned	0.99%

# MAIN JOINT VENTURES AND ASSOCIATES

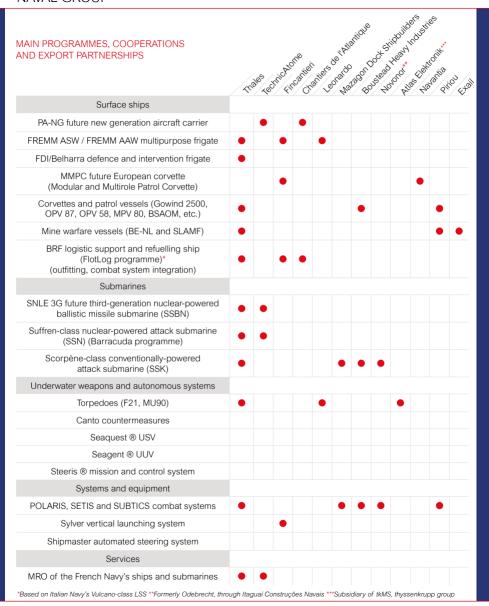
Name	%	Country
MO Porte-Avions	65%	France
Naviris	50%	Italy
Kership	45%	France
Itaguaí Construções Navais	41%	Brazil
Boustead DCNS Naval Corporation	40%	Malaysia
TechnicAtome	20.32%	France
Chantiers de l'Atlantique	12%	France

# REVENUE BY BUSINESS SEGMENT (%)





Pierre Éric Pommellet



#### Business trends

- Naval Group revenues fell by 2.2% in 2023, to €4,257m, mainly due to the cancellation of the Australian Future Submarine (AFS) programme in 2022. In 2023, the group delivered the Duguay-Trouin SSN to the French Navy, the first Gowind corvette (Bani Yas) to the United Arab Emirates and a fifth submarine (Vagir) to the Indian Navy. It also carried out maintenance on the French aircraft carrier Charles de Gaulle.
- In January 2024, Naval Group and Framatome completed the acquisition of Jeumont Electric from the Altawest group. Naval Group will own 35% of Jeumont Electric, which specialises in the manufacture and maintenance of motors and electrical equipment for the nuclear energy and naval defence sectors.

#### Home market

- Naval Group is the prime contractor for the French Navy's main construction and modernisation programmes: the future new generation aircraft carrier (PA-NG), FREMM, FDI and Horizon frigates, the future third-generation nuclear-powered ballistic missile submarine (SNLE 3G in French), Suffren-class SSNs, etc.
- ► The steel cutting of the first third-generation French SSBN (SNLE 3G) took place at the group's shipyard in Cherbourg (in northwestern France) in March 2024.
- In April 2024, the French defence procurement agency (DGA) and the French Alternative Energies and Atomic Energy Commission (CEA) awarded a €600m contract to Naval Group, Chantiers de l'Atlantique and TechnicAtome to start building nuclear reactors for the French future aircraft carrier (PA-NG).
- ▶ In August 2024, the second BRF logistic support and refuelling ship in the FlotLog programme, christened Jacques Stosskopf, was launched by Chantiers de l'Atlantique in Saint-Nazaire (in western France).
- The second and third Suffren-class SSNs (Duguay-Trouin and Tourville) entered service in the French Navy in April 2024 and November 2024 respectively.

#### Export markets

- ► The second of the four Scorpène-class submarines for the Brazilian Navy (Humaitá) entered service in January 2024. The third unit (Tonelero) was launched at the Itaguaí naval base in March 2024.
- In March 2024, Indonesia placed an order with Naval Group for two Scorpène Evolved submarines equipped with lithium-ion batteries. The submarines will be built in Indonesia by the PT PAL shipyard.
- Naval Group laid the keel of the third and last FDI frigate for the Greek Navy, named Formion, at the Lorient shipyard (in western France) in April 2024.
- ▶ The second and last Gowind corvette for the United Arab Emirates (Al Emarat) entered service in June 2024.
- ▶ In July 2024, Kership (a joint venture between Naval Group and Piriou) launched the third of the twelve mine warfare vessels in the Belgian-Dutch programme at the Concarneau shipyard (in western France).
- Naval Group, in association with Royal IHC of the Netherlands, signed a contract in September 2024 with the Royal Netherlands Navy to replace the Walrus-class submarine fleet with four conventionally-powered Barracuda submarines. The programme has a budget of €5.6bn.
- The Indian Navy's sixth and last Kalvari-class submarine (Vagsheer), also based on the Scorpène class, is undergoing sea trials and is due for delivery at the end of 2024. India may soon acquire three more Scorpène submarines, to be built locally by Mazagon Dock Shipbuilders.

- ► The group's self-financed R&D expenditure amounted to €105m in 2023, representing 2.5% of revenues.
- In December 2023, the French defence procurement agency (DGA) awarded Naval Group a contract to design, build and test an unmanned combat underwater vehicle (UCUV) demonstrator.
- In 2024, Naval Group marketed a complete range of USVs (Seaquest) and UUVs (Seagent), with their control and mission systems (Steeris) and dedicated implementation systems (Sealken).



# NAVANTIA

Leading Spanish defence contractor, 100% state-owned, mainly operating in shipbuilding (military and civil), and 74th-largest defence contractor worldwide

# **BUSINESS AREAS**

Platform manufacturer and systems integrator

- Military shipbuilding (landing helicopter dock, frigates, corvettes, patrol vessels, submarines)
- ► Commercial shipbuilding
- Naval systems and equipment
- Propulsion systems
- MRO and modernisation services
- Green energy

## **GOVERNANCE**

Chairman and CEO	
Chief Operating Officer	

Chief Technology and Strategy Officer R. Domínguez García-Baquero

G. Mateo-Guerrero Alcazar

D. Martínez Pérez de Rojas

#### KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021**	2022	2023
Revenue	1,089	1,333	1,342	1,434
Δ (%)	-10.22%	22.41%	0.68%	6.86%
Defence (%)	80%	75%	79%	74%
Export (%)	62%	51%	52%	42%
Operating profit/loss	-156	-105	-98	-63
Operating margin	-14.33%	-7.88%	-7.30%	-4.39%
Net income*	-145	-83	-97	-122
Order book	7,816	7,053	7,408	8,214
Employees	3,869	4,305	4,547	4,939

<sup>\*</sup>Net income attributable to shareholders \*\*Figures restated

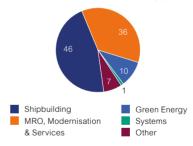
# **OWNERSHIP STRUCTURE**

Symbol	
Listed on	Unlisted group
Market Cap	

Major shareholders (as of 10.10.2024)

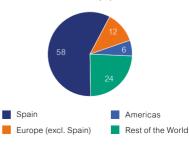
SEPI (Spanish State) 100%

# REVENUE BY BUSINESS SEGMENT (%)



# MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
SAES Capital	51%	Spain
Sociber	50%	Chile
SAMI Navantia Naval Industries	49%	Saudi Arabia
Inmize Capital	20%	Spain



# MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS

Surface ships	
Juan Carlos I/Canberra/Anadolu-class landing helicopter dock (LHD)	
Hobart-class air warfare destroyer	
Bonifaz-class future multimission frigate (F-110)	• • • •
MMPC future European corvette (Modular and Multirole Patrol Corvette)	• •
Avante-class family of corvettes and patrol boats	•
Future underwater intervention vessel Poseidón (BAM-IS)	
LCM-1E amphibious landing craft	
Cantabria/Supply-class replenishment oiler	•
Submarine	
Isaac Peral-class conventionally-powered attack submarine (S-80 Plus)	• • •
Systems and equipment	
SCOMBA naval combat system* (Juan Carlos I LHD, F-110 frigate, BAM patrol vessel, S-80 Plus submarine)	•
DORNA fire control system	
Propulsion systems	
MTU series 396, 956, 1163 and 4000 marine engines (sublicensed production)	
MRO and modernisation services	
MRO for Spanish F-100 and Norwegian F-310 frigates and Australian Hobart-class destroyers	

<sup>\*</sup>Based on Lockheed Martin's Aegis system \*\*Saudi Arabian Military Industries \*\*\*Formerly Raytheon Technologies \*\*\*\*Formerly GE Aviation \*\*\*\*\*MTU Friedrichshafen, Rolls-Royce group

#### Business trends

- Navantia revenues increased 6.9% in 2023, to €1,434m. Shipbuilding, the group's main division, recorded a 12.2% drop in sales, but this decline was offset by better performance in the other divisions, particularly MRO, Modernisation & Services (+12.0%) and Green Energy (+81.2%). However, despite the launching of a restructuring plan in 2017, Navantia still recorded losses of €122m in 2023 (a loss ratio of -8.5%), due in particular to an estimated cost overrun of between €1.5bn and €1.8bn on the Spanish Navy's Isaac Peral-class submarine programme.
- In November 2023, the group teamed up with the Indian shippard Larsen & Toubro to offer a design derived from its Juan Carlos I landing helicopter dock (LHD) for the Indian Navy's programme to procure four landing platform docks (LPD).
- ► In March 2024, Navantia and Lockheed Martin renewed their partnership in combat systems for surface ships and submarines for a further three years. Lockheed Martin is helping Navantia to develop its SCOMBA and CATIZ combat systems, based on the U.S. group's Aegis system.

#### Home market

- ► The group remains heavily dependent on orders from the Spanish Navy, whith two programmes running until the end of the decade (five Bonifaz-class frigates and four Isaac Peral-class submarines). Its domestic revenues increased 29.1% in 2023 and accounted for 58% of total sales.
- The first Isaac Peral-class S-80 Plus submarine (S-81), built by Navantia, was handed over to the Spanish Navy after sea trials. The other three units should be delivered between 2025 and 2027.
- The Spanish Ministry of Defence awarded Navantia a contract worth €159m in December 2023 for the construction of two coastal hydrographic vessels to succeed the Antares ship. With a length of 47 metres and a displacement of 900 tonnes, these vessels will be built at the San Fernando shipyard (Cadiz).
- The group cut the first steel for the Spanish Navy's second F-110 frigate (F-112, christened Roger de Lauria) at the Ferrol shipyard in December 2023. The ship is scheduled to enter service in 2026.

### Export markets

- Export sales decreased 13.8% in 2023 and accounted for 42% of the group's revenue. This share fell by 20 percentage points compared with 2020, mainly as a result of the delivery that year of the third and last Hobart-class destroyer to the Royal Australian Navy.
- In March 2024, the group handed over to Saudi Arabia the fifth and last Al Jubail-class corvette (based on the Avante 2200 family) ordered in 2018, named Unayzah. Three additional corvettes were ordered in October 2024.
- Navantia laid the keel for an Avante 1800 family offshore patrol vessel for the Royal Moroccan Navy at the San Fernando shipyard (Cadiz) in September 2024. The value of the contract for this vessel is estimated at between €130m and €150m.

- ▶ The group's total R&D expenditure amounted to €81m in 2023, representing 5.6% of revenues.
- In May 2024, Navantia launched its 12-metre-long, 3.8-metre-wide Poniente unmanned surface vehicle, a self-financed project, in the Bay of Cadiz to test its navigation system.
- In May 2024, the group announced its participation in six projects funded to the tune of €520m by the European Defence Fund, including OPTIMAS (prime contractor, laser satellite communications system), E=MCM (led by Naval Group, mine countermeasures), SEACURE (led by Thales, anti-submarine warfare) and E-CUAS (led by Leonardo, anti-UAS warfare).



# NORTHROP GRUMMAN

Aerospace and defence company with a diversified defence portfolio (mainly aeronautics and space), 4th-largest defence contractor worldwide

### **BUSINESS AREAS**

Platform manufacturer, systems integrator/ equipment supplier

- Military aircraft and UAVs
- ▶ Missiles, weapon systems and ammunition
- ▶ Defence electronics and C4ISR systems
- ▶ IT and cybersecurity services
- ► Space (equipment, payloads)
- ▶ Modernisation and logistic services

#### **GOVERNANCE**

Chairwoman and CEO	Kathy J. Warden
Chief Operating Officer	Matthew Bromberg
President, Aeronautics	

Systems

\*Variation
Thomas H. Jones See €/

# OWNERSHIP STRUCTURE (as of 10.10.2024)

Cumbal	NOC
Symbol	NOC
Listed on	NYSE
Market Cap (\$m)	77,084

# Major shareholders (as of 10.10.2024)

State Street Corporation	9.59%
Vanguard Fiduciary Trust Co.	8.22%
BlackRock Advisors LLC	6.14%
Capital Research & Management Co. (International Investors)	5.46%

#### MAIN JOINT VENTURES AND ASSOCIATES

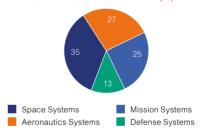
Name	%	Country
Deep Space Transport	50%	United States
Longbow	50%	United States

# KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	32,223	30,150	34,760	36,346
∆ (%) [\$]*	8.74%	-3.08%	2.62%	7.34%
Defence (%)	85%	88%	89%	90%
Export (%)	14%	14%	13%	12%
Operating profit/loss	3,560	4,777	3,420	2,347
Operating margin	11.05%	15.84%	9.84%	6.46%
Net income	2,792	5,921	4,650	1,902
Order book	65,989	67,119	73,799	76,226
Employees	97,000	88,000	95,000	101,000

<sup>\*</sup>Variation based on revenue in local currency See €/\$, p.9

#### REVENUE BY BUSINESS SEGMENT (%)





MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	bosing	, Aerospace	The 3thatis	lectudodies Returdodies Returdodies	L Sistems Act	icetace Willy Scy
Military aircraft						
B-21 Raider future strategic bomber	•	•		•		
B-2 Spirit strategic bomber	• •	•				
E-2C/D Hawkeye surveillance aircraft		• •	• •	•		
F/A-18E/F Super Hornet (fuselage, avionics, etc.) and F-35 Lightning II (fuselage, radar, etc.) fighter aircraft	•		•			
RQ-4 Global Hawk and MQ-4C Triton HALE unmanned aircraft systems		• •	•	•		
Missiles and weapon systems						
LGM-35A Sentinel future intercontinental ballistic missile		•	• •		•	
Glide Phase Interceptor (GPI) future hypersonic missiles interceptor			• •			
AGM-88E AARGM and AGM-88G AARGM-ER air-to-surface anti-radiation missiles						•
Bushmaster cannons (M242, M230, Mk44)	•		•	•	•	•
Defence electronics and C4ISR systems						
Integrated Air and Missile Defense Battle Command System (IBCS) command and control (C2) system	•		•			•
Electronic warfare suite (F-16 Fighting Falcon, EA-18G Growler, etc.)	•		•			
AN/AAQ-28(V) Litening targeting pod	•		•	•		
Space						
Minotaur, Pegasus XL and Antares launchers					•	
Cygnus automated cargo spacecraft						
Rocket boosters for the SLS and Vulcan Centaur launchers	•		•			
Next-Generation Overhead Persistent Infrared Polar (OPIR-Polar) payload				•		
*Formerly GE Aviation **Formerly Raytheon Technologies	. 1	. 1	. '	. '	. 1	

#### Business trends

- Northrop Grumman revenues grew 7.3% in local currency to €39.3bn (€36.3bn) in 2023. Growth was mainly driven by the Space division (+13.8%), thanks to progress on several programmes including the LGM-35A Sentinel future intercontinental ballistic missile, Next Gen OPIR-Polar hypersonic missile warning satellites and Tracking Layer Tranche 1 anti-missile warning satellites. Revenues in the Defense Systems division also grew (+6.1%), thanks in particular to increased production of ammunition and propulsion systems for Lockheed Martin's GMLRS guided rockets.
- ► In January 2024, Northrop Grumman entered into a partnership with Mitsubishi Electric to develop a networked solution to improve the interoperability of the Japanese Self-Defense Forces' air and missile defence systems.
- ▶ In February 2024, the group completed the first engine segment for the Boeing SLS Block 2 super-heavy launcher booster, which will provide the launcher with an additional 5 tonnes of capacity. This version of the launcher will be used from the Artemis IX missions (lunar landing).

#### Home market

- The U.S. is the group's main market (88% of revenues in 2023). Northrop Grumman is one of the main manufacturers of surveillance aircraft (E-2C/D Hawkeye) and UAS (MQ-4C Triton). It also supplies fuselage parts for Boeing and Lockheed Martin fighter aircraft.
- In January 2024, the U.S. Air Force awarded Northrop Grumman a contract to begin production of the future B-21 Raider strategic bomber. Three prototypes had been completed by September 2024 and were undergoing flight and ground tests.
- ▶ In April 2024, the group signed a \$167m (€154m) contract with the U.S. Marine Corps for the supply, by February 2029, of four G/ATOR radar systems dedicated to the detection, identification and tracking of remotely piloted vehicles, cruise missiles and mortar rounds.
- In May 2024, the U.S. Missile Defense Agency selected Northrop Grumman, which was competing with Raytheon (part of RTX), to develop the future Glide Phase Interceptor (GPI). Designed to counter hypersonic missiles fired from ships, the missile should be operational in the 2030s and will be developed in partnership with the Japanese Ministry of Defense for the propulsion part.
- In June 2024, Northrop Grumman delivered to the U.S. Army the final components of the first production unit of its C2 IBCS system (Integrated Air and Missile Defense Battle Command System), including the Integrated Fire Control Network.

#### **Export markets**

- The group generated 12% of its revenues from exports in 2023, a share that has decreased by 2 percentage points since 2020.
- The U.S. government authorised the sale of the group's AGM-88G AARGM-ER anti-radiation missiles to several countries: to the Netherlands for \$700m (€648m) and to Poland for \$1.28bn (€1.18bn) in April 2024, and to Australia for \$405m (€375m) in September 2024.
- The first MQ-4C Triton HALE UAS entered service with the Royal Australian Air Force in July 2024. A further three UAS are due to be delivered in the coming months.

- ► The group's self-funded R&D expenditure reached \$1.2bn (€1.1bn) in 2023, representing 3.1% of revenues.
- In April 2024, Northrop Grumman completed the assembly of a prototype unmanned underwater vehicle (UUV), the Manta Ray extra-large glider. The UUV is configured to autonomously carry out long-duration, long-range missions as part of a research programme led by DARPA (an agency of the U.S. DoD).



# NVL GROUP (FORMERLY LÜRSSEN DEFENCE)

Group created in 2021 that bundles the military shipbuilding activities of Lürssen's former Defence division, key supplier of warships and patrol boats to the German Navy

# **BUSINESS AREAS**

Platform manufacturer and systems integrator

- Military shipbuilding (offshore patrol vessels, frigates, corvettes, mine-hunting vessels, etc.)
- Repair, refit and modernisation
- Training services
- Maritime infrastructures.

### **GOVERNANCE**

Chief Executive Officer

Tim Wagner

# KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	N/A	N/A	N/A	N/A
△ (%)	N/A	N/A	N/A	N/A
Defence (%)	N/A	N/A	N/A	N/A
Export (%)	N/A	N/A	N/A	N/A
Operating profit/loss	N/A	N/A	N/A	N/A
Operating margin	N/A	N/A	N/A	N/A
Net income	N/A	N/A	N/A	N/A
Order book	N/A	N/A	N/A	N/A
Employees	N/A	N/A	N/A	N/A

### **OWNERSHIP STRUCTURE**

Sy	m	bol	

Listed on Unlisted group

Market Cap

Major shareholders (as of 10.10.2024)

Lürssen family 100%

# REVENUE BY BUSINESS SEGMENT (%)



### MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
AMSEG	N/A	Australia
Muara Maritime Services	N/A	Brunei



# NVL GROUP (FORMERLY LÜRSSEN DEFENCE)

MAIN PROGRAMMES, COOPERA AND EXPORT PARTNERSHIPS	TIONS	a Statica	schrologies schrologies sinnedil	ME STREET	nt Colorin e	* Agelinesel Phil	Ward hard best of the control of the
Combat ships							
F126 Niedersachsen-class future multi-purpose frigate	•	•	•	•			
F125 Baden-Württemberg-class heavy frigate		•	•				
K130 Braunschweig-class corvette*	•	•	•	•			
Patrol ships							
Hrabri-class future multi-purpose offshore patrol vessel (design)	•	•		•			
Arafura-class future offshore patrol vessel (design) (SEA 1180 programme)	•	•					• •
Darussalam-class offshore patrol vessel		•					
ljtihad-class patrol boat		•					
Mine warfare ships							
MJ 332 Frankenthal-class mine-hunting vessel		•			•		
MHV 54 Alanya-class mine-hunting vessel**					• •		
Auxiliairy ships							
Type 424 AGI-class future surveillance and reconnaissance vessel							
Type 707-class future replenishment tanker						•	
Repair, refit and modernisation							
Full service support for the entire Royal Brunei Navy's fleet						•	

<sup>\*</sup>Based on tkMS' MEKO 100 ship, which can be used as a frigate, corvette or offshore patrol vessel
\*\*Turkish derivative of the MJ 332 Frankenthal-class

<sup>\*\*\*</sup>thyssenkrupp Marine Systems, thyssenkrupp group
\*\*\*\*CMN Naval group

# NVL GROUP (FORMERLY LÜRSSEN DEFENCE)

#### STRATEGIC HIGHLIGHTS

#### Business trends

- In 2021, the former Lürssen Group split its military and civil activities into two independent entities. Naval Vessels Lürssen Group (NVL Group) now combines all defence activities (formerly included in the Lürssen Defence division), while the construction of luxury yachts continues under the Lürssen brand.
- As part of its creation, NVL Group took over the shipbuilding and maintenance/upgrading activities of naval vessels at four shipyards in Germany: Blohm+Voss (Hamburg) and Peene-Werft (Wolgast) for new construction, and Neue Jadewerft (Wilhelmshaven) and Norderwerft (Hamburg) for services. Operations in Australia, Bulgaria and Brunei are also affected.
- In June 2024, NVL Group inaugurated a site in Cuxhaven (Lower Saxony, Germany) to strengthen its technical and logistical support services for naval vessels. In September 2024, the group also announced the modernisation of its Lemwerder site (Lower Saxony) by the end of 2025, at a cost of more than €25m. The new buildings will house more than 400 people, including design, purchasing and quality departments.

#### Home market

- NVL Group is a subcontractor to Dutch shipbuilder Damen for the construction of F126 Niedersachsenclass future multi-purpose frigates for the German Navy, at a cost of more than 68bn for six ships. Damen is designing the ships, which will be built in Germany by two NVL Group shipyards, Blohm+Voss and Peene-Werft, and German Naval Yards Kiel. The keel of the first frigate was laid in June 2024, with delivery of the ship scheduled from 2028 onwards.
- Alongside tkMS and German Naval Yards Kiel, the group is also part of the ARGE K130 consortium, which is in charge of building five new K130 Braunschweig-class corvettes for the German Navy. These five ships are currently under construction and are scheduled for delivery from 2025 onwards.
- NVL Group was selected in 2021 to supply the German Navy with three Type 424 AGI (Auxiliary, General Intelligence) surveillance and reconnaissance vessels, due to enter service between 2029 and 2031 (contract estimated at €3.3bn), and two Type 707 refuelling tankers (cargo capacity of 12,000 m³ of fuel), built under subcontract by Meyer Werft and due for delivery from 2025 onwards. The keel of the second ship was laid in April 2024.
- NVL Group signed a contract in July 2023 with Germany's Federal Office of Bundeswehr Equipment (BAAINBw) for the construction of three SIGINT and reconnaissance ships. Destined for the German Navy, they will replace the three Type 423 ships (Oste class), in service since the late 1980s. Delivery of the mothership is scheduled for 2029.
- In September 2024, NVL Group and tkMS joined forces to build the German Navy's future F127 frigates, should the MEKO A-400 AMD frigate design proposed by tkMS be selected. Up to six ships could be ordered, with the first unit expected to enter service in 2034.

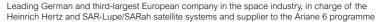
### Export markets

- ▶ In the summer of 2023, MTG Dolphin Shipyard, a subcontractor of NVL Group, launched the first MMPV 90 corvette for the Bulgarian Navy and laid the keel for the second unit. The ships (ordered at the end of 2020) are scheduled for delivery in 2025 and 2026.
- ► The group is in the process of selling its subsidiary Luerssen Australia to its local partner Civrnec, with completion of the deal expected by the end of 2024. The two operators are to build six Arafura-class offshore patrol vessels as part of Australia's SEA 1180 programme. The first unit began sea trials in August 2024.

## Technology and Innovation

In September 2024, NVL Group presented a concept for a multi-mission ship (142 metres long, 14,000 tonnes displacement) to replace the German Navy's six Type 404 (Elbe class) supply ships, which entered service in 1993-1994. Partners on this project, referred to as NTV 130, include Danish company SH Defence.





# **BUSINESS AREAS**

Platform manufacturer, systems integrator/ equipment supplier

- Space systems (development and production of satellites and payloads)
- Production of structures, components and propulsion systems

#### **GOVERNANCE**

Chairman of the Supervisory Board	Robert Wethman
Chief Executive Officer	Marco R. Fuchs
Head of Business Development and Strategy	Markus Moeller

# OWNERSHIP STRUCTURE (as of 10.10.2024)\*

Symbol	OHB
Listed on	XETRA
Market Cap (€m)	882
Major shareholders (as of 27.08.2024)*	
Fuchs family	65.4%
Orchid Lux HoldCo (KKR)	28.6%
Free float	5.7%
Treasury shares	0.3%

<sup>\*</sup>The shareholders plan to delist the group.

# MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
MT Aerospace Holding	70%	Germany
COSMOS Space Systems	66.7%	Germany
Rocket Factory Augsburg*	64.6%	Germany
Antares	42%	Italy
Arianespace Participation	5.8%	France

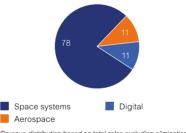
<sup>\*</sup>Share as of 30.06.2024

# KEY FIGURES (Fiscal year ended: December 31st)

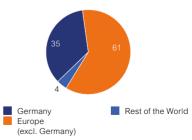
€ millions	2020	2021	2022	2023
Revenue	901	917	1,001	1,183
△ (%)	-12.52%	1.78%	9.16%	18.18%
Defence (%)	N/A	N/A	N/A	N/A
Export (%)	62%	67%	64%	65%
Operating profit/loss	42	47	63	125
Operating margin	4.66%	5.13%	6.29%	10.57%
Net income*	21	27	32	71
Order book	2,632	2,121	1,875	1,749
Employees	3,029	2,962	3,025	3,292

<sup>\*</sup>Net income attributable to shareholders

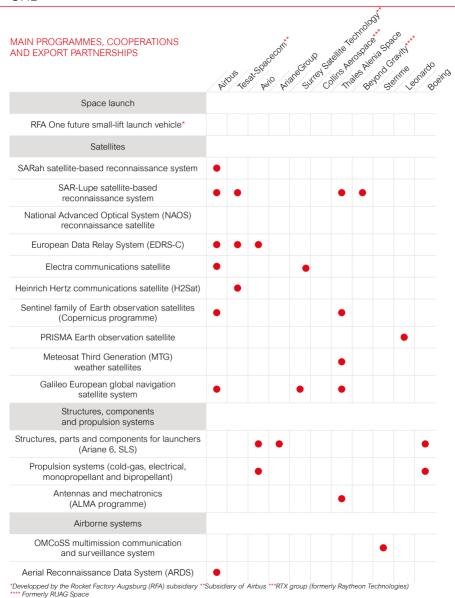
# REVENUE BY BUSINESS SEGMENT (%)\*



<sup>\*</sup>Revenue distribution based on total sales excluding eliminations



<sup>\*</sup> Distribution based on sales by geographical areas. The difference between sales by geographical areas and revenue reached €135m in 2023.



#### Business trends

- ▶ OHB revenues increased by 18.2% in 2023, to nearly €1.2bn. Growth in the Space Systems division was driven by the Galileo (34 satellites supplied by OHB for a total of approximately €1.3bn), SAR-Lupe / SARah and Meteosat Third Generation (MTG) satellites programmes. The Aerospace division also recorded an increase in sales, thanks in particular to the ramp-up of the Ariane 6 programme (which maiden flight was successfully carried out in July 2024), as did the Digital division, thanks to the development of services (satellite and ground segment operation, data analysis, etc.).
- The group is pursuing its OHB 2025 strategic plan. The financial targets to be achieved by 2025 include revenues of €1.5bn, an operating margin of around 8% (compared with an annual average of 5.9% between 2017 and 2023) and free cash flow exceeding net profit.
- In August 2024, the U.S.-based investment firm KKR received regulatory approvals for the acquisition of OHB's outstanding shares and acquired approximately 29% of all OHB shares. Following completion of the takeover offer, the Fuchs family (which remains the majority shareholder) and KKR hold a combined stake of around 94% in the group, which they plan to delist.

#### Home market

- OHB is a key supplier to the European Space Agency (ESA), its largest customer, and to Germany (SAR-Lupe / SARah, Heinrich Hertz, EnMAP satellite programmes, etc.). The group also supplies around 10% of the structures and components of the Ariane 6 launcher. In the first quarter of 2024, its MT Aerospace subsidiary signed a contract with ArianeGroup to produce launchers for Ariane 6 flights 16 to 42.
- In January 2024, the European Space Agency (ESA) awarded OHB System two contracts, worth €6m each and lasting two and a half years, to supervise the development phase of the new generation of Sentinel-2 Earth observation satellites for the European Copernicus programme (improved image resolution, reduction of the revisit period from 5 to 3 days, etc.). The subsidiary is also working on the new generation of Sentinel-3 satellites.
- A consortium led by OHB System was selected in January 2024 by the European Commission's Directorate-General for Defence Industry and Space (DG DEFIS) to conduct a study on an Earth observation service that could include the development of new satellite reconnaissance capabilities at European level. The contract is worth €2.4m for one year.
- In August 2024, a static-fire test of the RFA One mini-launcher (developed by the Rocket Factory Augsburg subsidiary) from the SaxaVord Spaceport in Scotland ended with the destruction of the first stage after one of the nine Helix engines caught fire.

#### Export markets

- ▶ The group is participating in two ESA satellite positioning missions, launched in March 2024, to strengthen the Galileo constellation. The Genesis scientific satellite programme, which is scheduled for launch in 2028, was awarded to a consortium led by OHB Italia under a €76.6m contract. OHB System will also develop and assemble four satellites and associated payloads for one of the two LEO-PNT (Low Earth Orbit Positioning Navigation and Timing) orbital demonstrators, as a subcontractor for the Spanish company GMV and at an estimated cost of €38m.
- ▶ In March 2024, ESA relaunched the ExoMars space mission, which was suspended in March 2022 following the end of cooperation with Russia, and is now planning to launch a European rover at the end of 2028. OHB is participating in this project, led by Thales Alenia Space, by supplying the Carrier Module.

# Technology and Innovation

► The group's total R&D expenditure reached €20.1bn in 2023, representing 1.7% of revenues.



# OTOKAR

Industrial group with civil and military activities, one of Turkey's leading producers of armoured vehicles and weapon systems

#### BUSINESS AREAS

Platform manufacturer and systems integrator

- Tracked armoured vehicles
- Wheeld armoured vehicles
- Turrets and remote controlled weapon stations
- Unmanned ground vehicles
- Special vehicles (anti-riot coaches. prisoner transport coaches, etc.)
- Buses and coaches

#### GOVERNANCE

Chairman	Yıldırım Ali Koç
Chief Executive Officer	Ibrahim Aykut Özüner
General Manager,	Ugur Sedef Vehbi

General Manager, Military Vehicles

# KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022***	2023
Revenue	361	429	1,024	1,057
Δ (%) [TRY] *	73.30%	55.01%	N/A	52.86%
Defence (%)**	47%	45%	29%	23%
Export (%)	76%	73%	72%	73%
Operating profit/loss	79	103	74	97
Operating margin	21.88%	23.92%	7.19%	9.15%
Net income	77	99	116	76
Order book	264	142	107	247
Employees	2,258	2,286	2,942	3,580

<sup>\*</sup>Variation based on revenue in local currency See €/TRY, p.9

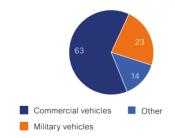
# OWNERSHIP STRUCTURE (as of 10.10.2024)

Symbol	OTKAR
Listed on	Borsa Istanbul
Market Cap (TRYm)	56,400

#### Major shareholders (as of 10.10.2024)

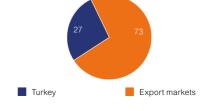
Koç Holding	44.68%
Ünver Holding	24.81%

# REVENUE BY BUSINESS SEGMENT (%)



# MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
Al Jasoor Heavy Vehicles Industry	49%	United Arab Emirates



<sup>\*\*</sup>Military vehicles division only

<sup>\*\*\*</sup>Figures restated

# MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS

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	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Tracked armoured vehicles	
Tulpar heavy infantry fighting vehicle (28 to 45 t)	• • •
Tulpar S / Safa light amphibious infantry fighting vehicle (17 t)	•
Wheeled armoured vehicles	
6x6 and 8x8 Arma and Arma II vehicles	
6x6 and 8x8 Rabdan vehicles*	• • •
4x4 Cobra and Cobra II multimission vehicles	• •
4x4 Akrep II infantry mobility vehicle	•
4x4 Cobra II MRAP, Kaya II and Ural personnel carriers	•
4x4 ISV public security missions vehicle	
Weapon systems	
Mızrak 30 and Mızrak-S 30 turrets (30 mm calibre)	•
Basok manual turret (7.6 mm calibre)	
Keskin and Üçok remote controlled weapon stations (7.62 mm, 12.7 mm and 14.5 mm calibres)	
Unmanned ground vehicle	
Alpar future multimission unmanned ground vehicle (15 t)	

<sup>\*</sup>Based on 6x6 and 8x8 Arma vehicles

<sup>\*\*</sup>Subsidiary of Leonardo
\*\*\*Through Al Jasoor Heavy Vehicles Industry

<sup>\*\*\*\*</sup>Formerly Raytheon Technologies

#### Business trends

- Otokar revenues reached TRY 27.2bn (€ 1,057m) in 2023, up 52.9% year-on-year in local currency, but up only 3.3% in euros, due to the sharp depreciation of the Turkish lira during the year.
- Growth was driven by higher deliveries of civil vehicles, including city buses and coaches (3,655 units in 2023 compared with 2,479 in 2022), light trucks (996 compared with 776), and military vehicles (305 compared with 214). As a result, the Military vehicles division only accounted for 23% of total sales in 2023, down 6 percentage points year-on-year.

#### Home market

- Otokar generated 27% of its revenues in Turkey in 2023, mainly through sales of civil vehicles. This share was only 3% for the Military vehicles division.
- Otokar suffered two major setbacks with the Turkish Armed Forces in recent years, losing out to two other Turkish groups. The Ministry of National Defense awarded BMC the contract to mass-produce the future Altay main battle tank, which was designed by Otokar in partnership with Hyundai Rotem. The Pars wheeled armoured vehicle supplied by FNSS was also chosen over Otokar's Arma to equip the Turkish Army.
- ▶ The group hopes to receive an order for its Tulpar heavy tracked armoured infantry fighting vehicle. This programme has been suspended by the Turkish Armed Forces pending progress on the Altay main battle tank programme, for which BMC is developing the diesel engine.

#### Export markets

- Export sales accounted for 73% of the group's revenues in 2023, and 97% in the Military vehicles division. Deliveries identified in the military sector during the year include a batch of Cobra II 4x4 multimission wheeled armoured vehicles (up to 50 units) to Bangladesh, 20 Cobra II vehicles and 15 Ural 4x4 wheeled armoured personnel carriers to Ecuador.
- The group was awarded a €130m contract by the Estonian Defence Forces in October 2023 for the supply of an unspecified number of 6x6 Arma armoured personnel carriers, including maintenance and training services. Deliveries are scheduled for 2024-2025.
- ► In December 2023, Otokar won a \$136m (€126m) tender from the Royal Moroccan Army for the supply of 200 Cobra II 4x4 wheeled multimission armoured vehicles to be delivered between December 2024 and the end of 2025, as well as spare parts, maintenance equipment and training services.
- ▶ Otokar won a tender worth RON 4.26bn (€861m) from the Romanian Ministry of National Defence in October 2024 for the supply of 1,059 Cobra II 4x4 wheeled armoured vehicles in nine variants. 278 vehicles will be produced by the group in Turkey and the other 781 in Romania, probably by Rheinmetall Automecanica. Otokar was the only contender to submit a bid.

- ► Self-financed R&D expenditure amounted to TRY 740m (€29m) in 2023, representing 2.7% of revenues.
- At the World Defense Show held in Riyadh (Saudi Arabia) in February 2024, Otokar and Leonardo presented a version of Otokar's Tulpar heavy tracked armoured infantry fighting vehicle armed with a Hitfact MkII turret fitted with a 120 mm calibre mortar from OTO Melara (a Leonardo subsidiary).



# PATRIA

Group majority-owned by the Finnish State (50.1%), mainly involved in the production of wheeled armoured vehicles and weapons systems, and 90th-largest defence contractor

#### **BUSINESS AREAS**

Platform manufacturer and systems integrator

- Wheeled armoured vehicles
- ▶ Weapon systems (remote controlled weapon stations, mortar systems)
- Aeronautics (assembly, aerostructures, unmanned aerial systems)
- ▶ ISR and communication systems
- ► Training, MRO and logistics support
- ► Ammunition (see also Nammo)

#### **GOVERNANCE**

Chairman	Panu Routila
Chief Executive Officer	Esa Rautalinko
Chief Program Officer, F-35	Petri Hepola

# **OWNERSHIP STRUCTURE**

Symbol	
Listed on	Unlisted group
Market Cap	

Major shareholders (as of 10.10.2024)

Finnish State	50.1%
Kongsherg Defence & Aerospace	49.9%

# MAIN JOINT VENTURES AND ASSOCIATES REVENUE BY REGION (%)

Name	%	Country
Defence Partnership Latvia	70%	Latvia
Millog	61.8%	Finland
Senop	61.8%	Finland
Milworks	60%	Estonia
Nammo	50%	Norway
Kongsberg Aviation Maintenance Services	49.9%	Norway

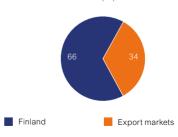
# KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	534	548	627	734
Δ (%)	5.24%	2.55%	14.50%	17.01%
Defence (%)	93%	92%	90%	90%
Export (%)	25%	28%	31%	34%
Operating profit/loss	40	61	54	69
Operating margin	7.55%	11.17%	8.58%	9.39%
Net income*	27	45	38	50
Order book	1,508	1,550	1,751	1,943
Employees	2,939	3,097	3,311	3,385

<sup>\*</sup>Net income attributable to shareholders

# REVENUE BY BUSINESS SEGMENT (%)





MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	ACT Chee Jing Distoring Bell Tring Copy of the State of t	arin porado pipus
Wheeled armoured vehicles		
8x8 AMV and AMV <sup>XP</sup> armoured vehicles		•
6x6 armoured vehicle (Common Armoured Vehicle System programme)		
Weapon systems		
NEMO turreted remote-controlled 120 mm mortar system	• •	
Advanced MOrtar System (AMOS) turreted 120 mm mortar system	•	
Aeronautics		
F-35 Lightning II fighter aircraft (forward fuselage and F135 turbofan assembly, aerostructures)	• •	
Composite components (A400M, NH90, Erieye radar)		• •
ISR and communication systems		
Night vision and targeting systems		
Sonac DTS anti-submarine warfare sonar	•	
Compact Airborne Networking Data Link (CANDL)		
Training, MRO and logistics support		
Military pilot training		
MRO for aircraft (F/A-18C/D, G 115 E, Hawk Mk51/66, C295M) and helicopters (NH90, AB412, AW101, AW169)	• •	•
Aircraft engine MRO (F100, F135, F404, RTM322)	•	
Military vehicles MRO (XA-185, AMV, CV90, Bv 206)	•	

\*Subsidiary of DMD Group \*\*RTX group (formerly Raytheon Technologies)

#### Business trends

- Patria revenues increased 17% to €734m in 2023. Growth was mainly driven by two armoured vehicles programmes: the 6x6 CAVS (Common Armoured Vehicle System) vehicles, ordered by Finland, Latvia and Sweden, and the 8x8 AMV<sup>xp</sup> vehicles, ordered by Slovakia and Japan. The group also benefited from its numerous contracts in services (Finnish CV9030FIN armoured infantry fighting vehicles and K9 self-propelled howitzers maintenance, Finnish G 115E training aircraft modification, Swedish NH90 helicopters retrofit, etc.).
- As part of the HX Fighter programme for the procurement of 64 F-35 Lightning II fighter aircraft by the Finnish Defence Forces, Patria signed two agreements in 2023-2024 with Lockheed Martin for the assembly of 400 forward fuselage sections and the production of 400 sets of landing gear doors for the aircraft intended for Finland and other international customers. The group also signed an agreement with Pratt & Whitney (part of RTX) in June 2024 for the assembly of the aircraft F135 turbojet engine for the 2025-2030 period.
- ▶ In May 2024, the Defence Partnership Latvia subsidiary inaugurated a new manufacturing facility in Valmiera (Latvia), to produce the 6x6 armoured vehicles under the CAVS programme for the Latvian National Armed Forces (200 units to be produced by 2029). The first vehicle produced on site was delivered in August 2024.
- The group acquired Nordic Drones, a Finnish manufacturer of drone systems designed for professional use (aerial photography, mapping, inspection, control tasks, etc.) in June 2024 and an open source data collection product and business from Finnish company WithSecure in September 2024.

#### Home market

- With almost two-thirds of its sales generated in Finland in 2023, Patria remains highly dependent on its domestic market.
- ► The Finnish Defence Forces ordered 41 6x6 armoured vehicles from the CAVS programme in January 2024 and a further 29 units in September 2024, bringing the total number of vehicles being procured to 161.
- ► The group signed a contract with the Finnish Defence Forces Logistics Command (PVLOGL) under the procurement programme for four Pohjanmaa-class corvettes (built by Rauma Marine Constructions). Patria will provide engineering and support services until the end of 2025, with an option until 2029.

#### Export markets

- The group's export markets mainly include European countries (Norway, Sweden, Estonia, Latvia, Poland, Belgium and the Netherlands), the United Arab Emirates and Japan.
- The Swedish Defence Materiel Administration (FMV) awarded Patria a €470m contract in March 2024 for the production of 321 6x6 armoured vehicles under the CAVS programme, to be delivered from 2025. Several of these vehicles will be equipped with Kongsberg's PROTECTOR remote weapon station.
- Patria was awarded a contract by the Norwegian Armed Forces in September 2024 to provide the modification design for 18 Bell 412HP/SP helicopters. The group will act as a subcontractor for Kongsberg Aviation Maintenance Services, which will upgrade the helicopters, in particular with new communication and navigation systems.
- In November 2024, Latvia ordered 56 additional 6x6 armoured vehicles from the CAVS programme in command post version, to be delivered by 2029.

- ► The group's self-financed R&D expenditure amounted to €14m in 2023, representing 1.9% of revenues.
- The Senop subsidiary signed a letter of intent with the Finnish Defence Forces in May 2024 to develop three night vision systems: new-generation goggles based on M20 technology, tactical thermal binoculars and a fire control system for military vehicles.



# POLSKA GRUPA ZBROJENIOWA (PGZ)

Holding company encompassing more than 50 Polish companies operating in various fields of the defence industry, and 62nd-largest defence contractor worldwide

# **BUSINESS AREAS**

Platform manufacturer and systems integrator

- Land platforms and systems (armoured vehicles and artillery systems)
- ▶ Missiles, weapon systems and ammunition
- Unmanned aircraft systems (UAS)
- Military shipbuilding
- ▶ Defence electronics
- MRO and modernisation services
- Energy and offshore

#### **GOVERNANCE**

President
of the Supervisory Board
President
of the Management Board
Vice President

Artur Kołosowski

Krzysztof Trofiniak Tomasz Siemiatkowski

# KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	1,448	1,392	1,783	2,257
Δ (%) [PLN]*	8.78%	-1.21%	31.47%	22.68%
Defence (%)	N/A	73%	74%	72%
Export (%)	11%	11%	18%	16%
Operating profit/loss	N/A	121	134	N/A
Operating margin	N/A	8.67%	7.50%	N/A
Net income	36	96	93	131
Order book	N/A	N/A	N/A	N/A
Employees	N/A	17,810	18,270	> 20,000

<sup>\*</sup>Variation based on revenue in local currency See €IPLN, p.9

# of the Supervisory Board OWNERSHIP STRUCTURE

Symbol	
Listed on	Unlisted group
Market Cap	

# Major shareholders (as of 10.10.2024)

Polish Ministry of State Assets	57.45%
Polish Defence Holding	22.01%
Polish Agency for industrial development	20.54%

# REVENUE BY BUSINESS SEGMENT (%)



# MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
Mesko	93.3%	Poland
Huta Stalowa Wola	86.09%	Poland
Jelcz	86.09%	Poland
Zaklady Mechaniczne Bumar - Labedy	85.69%	Poland
Cenzin	72.7%	Poland



MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	Tolico treinfeigi perceptes. Totales transfer treinfeige transference treinfeige trei
Land platforms and systems	
Borsuk future infantry fighting vehicle	
KTO Rosomak 8x8 wheeled armoured vehicle (under Patria licence)	•
Krab 155 mm self-propelled tracked howitzer*	• •
Rak 120 mm self-propelled mortar system	•
Missiles and weapon systems	
Spike-LR anti-tank missile (under Rafael licence)	•
Grom-M/Piorun man-portable air defence system	
Wisla air defence system** (including PAC-3 MSE interceptors)	• • •
Unmanned aircraft systems	
PGZ-19RA Orlik future tactical UAV	
Military shipbuilding	
Miecznik-class future coastal defence frigate***	•
Kormoran II-class mine warfare vessel (électronics and weapon systems)	•
Defence electronics	
TRS-15 Odra 3D surveillance radar	
MRO and modernisation services	
Armoured vehicles MRO and modernisation (Leopard 2A4/2A5, T-72, BWP-1 Puma, Tumak-4)	•
Aircraft (MiG-29, F-16, C-130) and turbofan engine (F100) MRO and modernisation	• •
NSM (Naval Strike Missile) Coastal Defence System MRO	

<sup>\*</sup>Based on Hanwha Aerospace's K9 Thunder (Hanwha group) \*\*Based on Raytheon's Patriot system (RTX group) \*\*\*Based on Babcock's Type 31 frigate \*\*\*Hanwha group \*\*\*\*Formerly Raytheon Technologies

#### Business trends

- PGZ revenues reached PLN 10.25bn (€2,257m) in 2023, 72% of which from defence activities. Growth was driven by exports, in particular deliveries to Ukraine and the Baltic states of arms and Piorun man-portable air defence systems respectively. By 2033, PGZ aims to achieve sales of around PLN 25.5bn (€5.6bn), thanks in particular to the expected rise in Polish military spending (4% of GDP in 2024).
- ▶ In January 2024, the WZ Motoryzacyjne subsidiary opened a maintenance centre in Poznan for the 400 M1A2 Abrams main battle tanks (General Dynamics) currently being procured by the Polish Land Forces. This centre will also be able to maintain tanks from allied countries.

#### Home market

- PGZ remains highly dependent on its domestic market (more than 80% of revenues). The group is a key partner for foreign players wishing to enter the Polish defence market.
- ► In December 2023, the PGZ-AMUNICJA consortium signed a PLN 11bn (€2.4bn) contract with the Polish Armament Agency for the supply of 155mm artillery ammunition until 2029.
- ► The Polish Armament Agency notified a contract worth PLN 3.1bn (€683m) in December 2023 to the PGZ-NAREW consortium for the supply by 2035 of 24 P-18PL AESA radar systems to be integrated into the Narew and Wisla air defence systems.
- In December 2023, the Polish Armament Agency signed a framework agreement worth around PLN 10bn (€2.2bn) with the Huta Stalowa Wola subsidiary for the acquisition of 152 additional Krab 155mm self-propelled tracked howitzers.
- ► In January 2024, the PGZ Stocznia Wojenna subsidiary laid the keel of the first of the three future Miecznikclass frigates, christened Wicher, at its Gdynia shipyard. The ship is due to enter service in 2029.
- ► The PGZ-PILICA+ consortium signed a contract worth PLN 1.4bn (€308m) in July 2024 with the Polish Armament Agency for the supply of ammunition vehicles for the transport and reloading of missiles, repair workshops mounted on chassis from the Jelcz subsidiary and spare parts for the Pilica+ short-range air defence system, to be delivered by 2029.
- ▶ In July 2024, the Polish Land Forces ordered 58 KTO Rosomak 8x8 wheeled armoured vehicles in the standard version (7.8 metres long) for PLN 2.6bn (€572m), to be delivered in 2026-2027. These vehicles will be equipped with the ZSSW-30 remotely controlled turret from the Huta Stalowa Wola subsidiary, armed with a 30 mm cannon, a 7.62 mm coaxial machine gun and two Spike-LR anti-tank guided missile launchers. 174 vehicles in the Rosomak-L version (8.4 metres long) should also be ordered by the end of 2024.
- The Huta Stalowa Wola subsidiary won a contract worth an estimated €1.1bn in August 2024 to produce 48 M903 launchers for the Wisla medium-range air defence system, for delivery in 2027-2029.

# Export markets

- The group generated 16% of its revenues from exports in 2023, in particular following several arms deliveries to Ukraine (including Krab 155 mm self-propelled howitzers). South America, the Middle East and South East Asia are also target markets for the group.
- In January 2024, the Mesko subsidiary won a contract to supply Georgia with Piorun very short-range manportable surface-to-air missiles to replace Mesko's Grom systems, acquired in 2007.

#### Technology and Innovation

 PGZ is involved in the development of two future armoured vehicles: the NKTO armoured personnel carrier (through the Rosomak subsidiary) and the CBWP heavy tracked vehicle (through the Huta Stalowa Wola subsidiary), some of which are equipped with the ZSSW-30 remotely controlled turret.

# RHFINMFTALL

German industrial conglomerate, Germany's leading defence group, one of Europe's leading players in land systems, and 20th-largest defence contractor.

#### BUSINESS AREAS

Platform manufacturer, systems integrator/ equipment supplier

- Military vehicles (tracked and wheeled armoured vehicles, military trucks, etc.)
- Cannons, turrets and weapon systems
- Ammunition
- Defence electronics
- Simulation and training solutions
- Aeronautics (assembly, MRO)
- Equipment for the automotive industry

## **GOVERNANCE**

Chairman of the Supervisory Board	Ulrich Grille
Chief Executive Officer	Armin Pannerge

Chief Financial Officer

Dagmar Steinert

# OWNERSHIP STRUCTURE (as of 10.10.2024)

Symbol	RHM
Listed on	Börse Frankfurt
Market Cap (€m)	20,952

#### Major shareholders (as of 10.10.2024)

Capital Research & Management Co. (World Investors)	4.99%
Fidelity Management & Research Co.	2.99%
Wellington Management Co. LLP	2.96%

#### MAIN JOINT VENTURES AND ASSOCIATES

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Name	%	Country
ARTEC	64%	Germany
Rheinmetall BAE Systems Land	55%	United Kingdom
Rheinmetall MAN Military Vehicles	51%	Germany
Rheinmetall Ukrainian Defense Industry	51%	Ukraine
Projekt System & Management	50%	Germany
EuroSpike	40%	Germany

# KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020***	2021	2022	2023
Revenue	5,405	5,658	6,410	7,176
△ (%)	N/A	4.68%	13.29%	11.95%
Defence (%)	70%	67%	68%	71%
Export (%)	64%	66%	71%	76%
Operating profit/loss	398	608	738	897
Operating margin	7.36%	10.75%	11.51%	12.50%
Net income*	-27	291	474	535
Order book**	12,942	13,930	15,089	21,977
Employees	23,268	23,945	25,486	28,054

<sup>\*</sup>Net income attributable to shareholders

# REVENUE BY BUSINESS SEGMENT (%)\*





<sup>\*</sup>Excluding Other division





<sup>\*\*</sup>Defence activities only

<sup>\*\*\*</sup>Figures restated

MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	3 	ermany NAD MAY	roct		- ****	Jeten's	Marrics Anarrics	
Maria	12 12 12 12 12 12 12 12 12 12 12 12 12 1	NAT S	JD851 ZT	LETTON CO	JD8CC BAK	Celle 1	heigu bilg	us Leonard
Military vehicles								
Main Ground Combat System (MGCS) future French-German main battle tank	• •							
Panther KF51 future main battle tank*	•							•
Lynx KF31/KF41 tracked armoured infantry fighting vehicle		•	•	•				•
Puma tracked armoured infantry fighting vehicle	•							
8x8 Boxer armoured infantry fighting vehicle	•	•		•	•			
4x4 Caracal light armoured vehicle for Special Forces								
HX and TG-MIL high mobility logistic vehicles		• •						
Cannons and turret systems								
L52 155 mm cannon (PzH 2000 self-propelled howitzer)	•							
L44 and L55 120 mm cannons (Leopard 2 and M1 Abrams tanks)	•					•		
Lance 2.0 and Lance RC turret systems								
Skyshield / MANTIS and Skyranger air defence systems								
Ammunition								
Large calibre (120 mm and 155 mm) and medium calibre (20 mm, 25 mm, 27 mm and 30 mm) ammunition								•
HERO family of loitering munitions						•		
Futur soldier systems								
Gladius 2.0 and IdZ-ES systems								
Simulation and training solutions								
Flight simulators (Typhoon, A400M, NH90, Tiger, etc.)					•		•	•

\*Based on KNDS Germany's Leopard 2A4 \*\*Formerly Raytheon Technologies \*\*\*SC Group

#### Business trends

- ▶ Rheinmetall revenues reached €7,176m in 2023, up 12% year-on-year. Of the three divisions encompassing the group's defence activities (71% of total sales in 2023), Weapon & Ammunition recorded the strongest growth (+30.1%), thanks to a sharp increase in ammunition deliveries to NATO countries in Eastern Europe and Ukraine. Revenues in the Vehicle Systems and Electronic Solutions divisions grew by 14.5% and 8.2% respectively year-on-year.
- ▶ In 2024, the group acquired a 72.5% stake in the Romanian producer of military and civilian trucks and trailers Automecanica Medias (now Rheinmetall Automecanica) and the American producer of powertrains, suspensions, tracks and armouring systems Loc Performance.
- In April 2024, France and Germany officially launched phase 1A of the MGCS future main battle tank project (development of a demonstrator and testing of technological building blocks). In particular, Rheinmetall will be responsible, alongside KNDS France, for the programme's second pillar (turret and gun) within a future joint venture to be formed between Rheinmetall, KNDS Germany and KNDS France.
- ▶ In October 2024, Rheinmetall and Leonardo set up a 50-50 joint venture called Leonardo Rheinmetall Military Vehicles and based in Rome. This joint venture will be responsible for designing and producing armoured vehicles for Italy, with 60% local production, based on Rheinmetall's Panther KF51 main battle tank and Lynx tracked armoured infantry fighting vehicle. Italy intends to invest €23bn in these two programmes.

#### Home market

- Germany is an important market for Rheinmetall, accounting for 24% of total sales in 2023, and 27% for defence activities.
- In January 2024, the Bundeswehr launched its LVS NNbS short- and very-short-range air defence system programme. The ARGE NNbS consortium, formed by Rheinmetall, Diehl Defence and Hensoldt, is tasked with developing two versions of the system by 2028, one armed with a 30 mm Skyranger 30 turreted gun and the other with IRIS-T SLS missiles.
- ► The Bundeswehr awarded Rheinmetall a €2.7bn contract in March 2024 to produce 123 armoured ammunition carriers based on the Australian Army's Boxer CRV.
- In June 2024, Germany's Federal Office of Bundeswehr Equipment (BAAINBw) signed a €8.5bn framework agreement with Rheinmetall for the production of 155 mm calibre artillery ammunition.
- In July 2024, the group signed a framework contract worth €3.5bn with the Bundeswehr to supply up to 6,500 logistics trucks.

#### Export markets

- ▶ Rheinmetall has a strong international presence (76% of total sales and 73% of military sales in 2023).
- In March 2024, Rheinmetall won a contract from the Japanese Ministry of Defense to produce Mission Master SP autonomous vehicles for a range of missions, including freight transport and surveillance, or equipped with remote weapon stations.
- ▶ In March 2024, the Rheinmetall MAN Military Vehicles subsidiary signed a €71m contract with BAE Systems Bofors to supply 48 HX chassis with armoured cabs for the Archer 155 mm self-propelled howitzers ordered by Sweden.

### Technology and Innovation

The group's total R&D expenditure amounted to €374m in 2023 (5.2% of revenues), of which €187m from defence activities (2.6%).



# ROLLS-ROYCE

Aerospace and marine propulsion manufacturer, one of the world's top three producers of engines for civil and military aircraft, and the world's 23rd-largest defence company

# **BUSINESS AREAS**

### Engine manufacturer

- Aeronautics propulsion systems
- Naval propulsion systems (gas turbines, nuclear reactors, diesel engines)
- Distributed generation systems
- MRO and logistic support

#### **GOVERNANCE**

Symbol

Chairwoman	Anita Frew
Chief Executive Officer	Tufan Erginbilgic
President, Defence	Adam Riddle

# OWNERSHIP STRUCTURE (as of 10.10.2024)

Listed on	LSE
Market Cap (£m)	45,076
Major shareholders (as of 10.10.2024)	
Causania Canital Massassant I I C	4.040/

Causeway Capital Management LLC	4.94%
Harris Associates LP	4.94%
Massachusetts Financial Services Co.	4.89%
The Vanguard Group, Inc.	3.56%

# MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
LHTEC	50%	United States
TAEC Ucak Motor Sanayi	49%	Turkey
EuroJet Turbo	33%	Germany
EuroProp International	28%	Germany
MTU Turbomeca Rolls-Royce ITP	25%	Germany
Airtanker Services	23.5%	United Kingdom

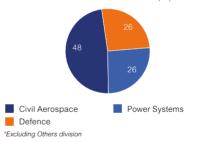
# KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020****	2021	2022	2023
Revenue*	12,843	12,729	14,878	17,711
Δ (%) [£]**	-26.02%	-4.23%	15.93%	21.42%
Defence (%)***	29%	31%	29%	26%
Export (%)	90%	87%	88%	86%
Operating profit/loss*	-2,256	481	764	1,828
Operating margin*	-17.57%	3.78%	5.14%	10.32%
Net income****	-3,562	140	-1,488	2,772
Order book	58,843	60,238	67,869	78,826
Employees	43,700	40,000	41,800	41,400

<sup>\*</sup>Excluding investments and equity affiliates

RR

# REVENUE BY BUSINESS SEGMENT (%)\*





<sup>\*\*</sup>Variation based on revenue in local currency See €/£, p.9

<sup>\*\*\*\*</sup>Defence division only \*\*\*\*Net income attributable to shareholders

\*\*\*\*Hindustan Aeronautics Ltd

MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	Satran	MURE	Sil Agrand	s white	HOLE LA	iandardaer	HI CORDOR	ation Syst
Aircraft engines								
Engine for the GCAP future fighter aircraft*		•					• •	
EJ200 (Eurofighter Typhoon)	•	•		•				
LiftSystem (F-35B Lightning II)			•					
Adour (Jaguar, Hawk / T45)	•						•	•
TP400-D6 (A400M)	•							
AE2100 (C-130)					•			
AE3007 (Embraer ERJ / Legacy)					•			
Trent 700 (A330 MRTT)				•				
Hypersonic propulsion systems project						•	•	
Helicopter engines								
MTR390-E (Tiger)	• •			•				
CTS800 (Lynx / Super Lynx, AW159 Wildcat, T129 ATAK)					•			
AE1107 (V-22 Osprey)					•			
M250 (OH-58, AH-6)					•			
UAV propulsion systems								
Orpheus future engine								
AE3007 (RQ-4 Global Hawk, MQ-4C Triton)								
Naval and submarine propulsion systems								
MT30 gas turbine (Queen Elizabeth-class aircraft carriers, Type 26 and Daegu-class frigates)							•	
PWR2 (Vanguard SSBN, Astute SSN) and PWR3 (Dreadnought SSBN) nuclear reactors							•	
MTU Series 4000 / 8000 diesel engines								

#### Business trends

- ▶ Rolls-Royce revenues grew 21.4% in local currency to £15.4bn (€17.7bn) in 2023. The Civil Aerospace division (+29.2%) benefited from increased engine deliveries (458 units compared with 355 in 2022) and higher demand for maintenance services. Growth in the Defence division (+11.4%) was driven by the fighter aircraft segment, with the GCAP programme in the UK and the ramp-up of the F130 programme in the U.S. (future engine for the B-52 bomber), and submarine activities. The Power Systems division also recorded an increase in revenues (+18.6%).
- As part of its new financial objectives presented at the end of 2023, Rolls-Royce plans in particular to reach an operating margin of 13% to 15% by 2027 (14% to 16% for the Defence division) and to carry out a disposal programme of £1bn to £1.5bn over the next five years. In August 2024, the group completed the sale of its engines rated at less than 480 kW (part of the Power Systems division) to the German engine manufacturer Deutz.
- As the sole supplier of nuclear reactors for the future AUKUS submarines (acquired by Australia as part of a partnership with the United Kingdom and the United States), Rolls-Royce is continuing preparatory work to double capacity at its Raynesway site (Derby, England). This expansion, partly financed by Australia, should lead to the creation of a thousand jobs. In March 2024, the group also announced the opening of offices in Glasgow and Cardiff, designed to accommodate 200 people.

#### Home market

- Rolls-Royce generated only 14% of its revenues in its domestic market in 2023. However, the group is the leader in the naval engines and turbines segment in the UK, and has a monopoly position in submarine nuclear propulsion.
- Rolls-Royce is also responsible for developing the engines for the future GCAP (Global Combat Air Programme, known as Tempest in the UK) fighter aircraft, as part of the programme led by the UK, Italy and Japan. The group is working on an engine demonstrator with Italy's Avio Aero and Japan's IHI Corporation.
- In August 2024, Rolls-Royce signed a contract with BAE Systems for the supply of five Mission Bay Handling Systems (MBHS) for the second batch of the Royal Navy's Type 26 frigates (City-class). The MBHS systems already equip the three frigates of the first batch and are produced in Canada.

#### Export markets

- ► The U.S., which accounted for 28% of revenues in 2023, remains the group's largest market. Rolls-Royce is a major supplier of propulsion systems for military aircraft and ships to the U.S. Department of Defense.
- ▶ In May 2024, the group was chosen to supply the propulsion system, based on the MT30 turbine, for the Japanese destroyers in the ASEV (Aegis System Equipped Vessel) programme, in partnership with Kawasaki Heavy Industries. Two ships are currently under construction and are due to enter service by 2029.
- Rolls-Royce Deutschland and Spanish engine manufacturer ITP Aero teamed up in June 2024 to develop a propulsion system for large remote carriers (Wingman Engine).
- In June 2024, MTU Friedrichshafen was building the propulsion systems for the Polish Navy's first Miecznikclass frigate in Germany (four engines and four on-board generators per ship). The class will be made of three frigates, scheduled to enter service from 2030.

- ► Self-financed R&D expenditure amounted to £836m (€961m) in 2023, representing 5.4% of revenues.
- At the Eurosatory exhibition held in June 2024 near Paris, Rolls-Royce presented propulsion concepts for future military vehicles, including a hybrid version and a system with a power output of over 1,100 kW that can be used on tanks weighing up to 70 tonnes.



# RTX (FORMERLY RAYTHEON TECHNOLOGIES)

Aerospace and defence company, among the world leaders in missiles, aeronautical equipment and engines, and the world's 3rd-largest defence contractor

#### **BUSINESS AREAS**

Missile and engine manufacturer, systems integrator/equipment supplier

- Missiles and shells
- Integrated defence systems (radar, air defence systems)
- C5ISR systems
- Commercial and military aircraft propulsion systems
- Commercial and military aerostructures and aircraft equipment
- Space systems

#### **GOVERNANCE**

Chairman	Gregory J. Hayes
Chief Executive Officer	Christopher T. Calid

President, Raytheon Philip Jasper

# OWNERSHIP STRUCTURE (as of 10.10.2024)

Symbol	RTX
Listed on	NYSE
Market Cap (\$m)	163,540

#### Major shareholders (as of 10.10.2024)

Vanguard Fiduciary Trust Co.	8.71%
State Street Corporation	8.66%
Capital Research & Management Co. (Global Investors)	6.88%
BlackRock Advisors LLC	6.21%

#### MAIN JOINT VENTURES AND ASSOCIATES

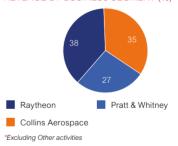
Name	%	Country
Collins Elbit Vision Systems	50%	United States
COMLOG	50%	Germany
Range Generation Next	50%	United States
Raytheon-Lockheed Martin Javelin JV	50%	United States
TRS AMDC2	50%	France

#### KEY FIGURES (Fiscal year ended: December 31st)

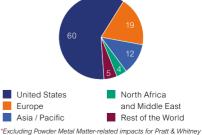
€ millions	2020****	2021	2022	2023
Revenue	49,551	54,428	63,698	63,756
Δ (%) [\$]*	N/A	13.79%	4.17%	2.75%
Defence (%)	61%	65%	59%	59%
Export (%)**	39%	38%	39%	40%
Operating profit/loss	-1,654	4,342	5,227	3,294
Operating margin	-3.34%	7.98%	8.21%	5.17%
Net income***	-3,081	3,266	4,935	2,956
Order book	122,346	137,688	164,011	177,376
Employees	181,000	174,000	182,000	185,000

<sup>\*</sup>Variation based on revenue in local currency

# REVENUE BY BUSINESS SEGMENT (%)\*



# REVENUE BY REGION (%)\*



See €/\$, p.9

<sup>\*\*</sup>Excluding Powder Metal Matter-related impacts for Pratt & Whitney
\*\*Net income attributable to shareholders

<sup>\*\*\*\*12</sup> months data of former UTC activities and 9 months data (April to December) of former Raytheon activities

# RTX (FORMERLY RAYTHEON TECHNOLOGIES)

MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	1. 26 1. 26
Missiles and shells (Raytheon)	
AGM-181 LRSO future nuclear ballistic missile (Long-Range Stand-Off Weapon programme)	
Tomahawk cruise missile	
AIM-9 Sidewinder family of air-to-air missiles	• •
AIM-120 AMRAAM air-to-air missile	• • •
NSM/JSM anti-ship missiles	•
FMG-148 Javelin anti-tank missile	•
BGM-71 TOW anti-tank missile	•
Excalibur M982 advanced precision guided artillery shell	•
Integrated defence systems (Raytheon)	
AN/SPY-6 AESA naval radar (Aegis)	• •
AN/TPY-2 early warning radar (THAAD)	•
Patriot air defence system (integrator)	•
David's Sling long-range air defence system and Stunner interceptor	•
Military aircraft propulsion systems (Pratt & Whitney)	
F135 turbofan engine (F-35)	•
F100 turbofan engine (F-15, F-16, X-47B)	•
PT6A turboprop engine (EMB 314, T-6, PC-21, HeronTP)	
Aircraft systems (Collins Aerospace)	
Landing gears (F-15, F-16, F-35, C-17, AH-64)	
Propeller systems* (A400M, C-130)	
*Produced by its French Ratier-Figeac subsidiary **Mitsubishi Heavy	Industries

# RTX (FORMERLY RAYTHEON TECHNOLOGIES)

#### STRATEGIC HIGHLIGHTS

#### Business trends

- RTX revenues reached \$68.9bn (€63.8bn) in 2023, 59% of which from defence activities, mainly through its Raytheon division. The group is the world's third-largest defence company by revenues, behind Lockheed Martin and AVIC, and the fourth-largest aerospace company (civil and military) through its Collins Aerospace and Pratt & Whitney divisons, behind Boeing, Airbus and AVIC.
- ▶ Raytheon invested \$115m (€106m) in April 2024 to expand its Redstone (Alabama) plant by 2,400m², in particular to increase its production capacity for RIM-161 SM-3 and RIM-174 SM-6 missiles and to support its development activities for future missiles.
- The group launched the sale of Collins Aerospace's activities in actuation and flight control systems for civil and military aircraft and helicopters to Safran for \$1.8bn (€1.7bn). The deal could be completed in the second half of 2024, pending approval by the antitrust authorities.

#### Home market

- RTX generated 60% of its revenue from the U.S. market in 2023. The group is a preferred partner of the U.S. Department of Defense, alongside Lockheed Martin and Boeing.
- ▶ In February 2024, Collins Elbit Vision Systems (CEVS), a joint venture with Elbit Systems, delivered its 3,000th F-35 Gen III Helmet Mounted Display System (HMDS) for pilots of the F-35 Lightning II fighter aircraft (Lockheed Martin).
- In March 2024, Raytheon's RIM-174 SM-6 Block IA missile successfully completed an intermediate-range ballistic missile sea intercept test in its final seconds of flight after being fired from the U.S. Navy destroyer Preble (DDG-88).
- Under a contract notified in 2022, Raytheon received \$677m (€626m) in June 2024 from the U.S. Navy for the supply of AN/SPY-6(V) air and missile defence radars, designed to be integrated on various ships (Arleigh Burke-class destroyers, San Antonio-class landing platform docks, etc.).

#### Export markets

- Export sales accounted for 40% of total revenues in 2023 and mostly concerned civil activities. In the military sector, the group is benefiting from international demand for Patriot and NASAMS air defence systems (the NASAMS system was developed in partnership with Kongsberg).
- Pratt & Whitney was awarded a \$66m (€61m) contract in January 2024 to maintain the F100 turbojet engines powering the Royal Saudi Air Force's Boeing F-15SA Strike Eagle fighter aircraft until 2025.
- ▶ Raytheon signed a \$344m (€318m) contract in April 2024 with the U.S. Navy to develop new versions of the RIM-66 SM-2 and RIM-174 SM-6 surface-to-air missiles (Block IIICU and Block IU respectively), mainly for allied countries (Canada, South Korea, Japan and Australia).
- ▶ Germany awarded two contracts worth a combined total of \$2.4bn (€2.2bn) to Raytheon in March and July 2024 for the supply of eight additional Patriot 3+ air defence systems (i.e. a total of 64 launchers), radars and control stations.
- In August 2024, the NATO Support and Procurement Agency (NSPA) awarded a \$478m (€442m) contract to Raytheon for the supply of Patriot PAC-2 (GEM-T) interceptor missiles to Germany, which aims to replenish its inventory after handing over several missiles to Ukraine.

#### Technology and Innovation

- Self-financed R&D expenditure amounted to \$2.8bn (€2.6bn) in 2023, representing 4.1% of revenues.
- ▶ In July 2024, Raytheon and the UK Ministry of Defence carried out a first firing of the HELWS (High-Energy Laser Weapon System) anti-drone laser weapon mounted on a Wolfhound armoured vehicle as part of the LDEW (Laser Directed Energy Weapon) programme.



# SAAR

Group mainly operating in the defence sector (Gripen fighter aircraft, A26 submarine), leading supplier to the Swedish Armed Forces and 29th-largest defence contractor

#### BUSINESS AREAS

Platform manufacturer and systems integrator

- Military aircraft and UAVs
- Naval platforms and systems
- Missiles and weapon systems
- ▶ Defence electronics
- ▶ Information security and system integration
- Simulation solutions

#### **GOVERNANCE**

Chairman	Marcus Wallenberg
Chief Executive Officer	Micael Johanssor

Head of Aeronautics

Symbol

Self-owned

Lars Tossman

SAAR B

1 95%

# OWNERSHIP STRUCTURE (as of 10.10.2024)

Listed on	Nasdaq S	Stockholm
Market Cap (SEKm)		113,149
Major shareholders (as of 10.10	).2024)	
Investor AB (Investment Compa	ny)	30.70%
Wallenberg Investments AB		8.87%
Swedbank Robur Fonder AB		5.08%

# MAIN JOINT VENTURES AND ASSOCIATES

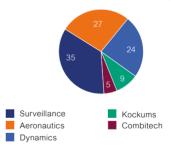
Name	%	Country
UMS Skeldar	49.8%	Switzerland
TAURUS Systems	33%	Germany

# KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	3,266	3,859	3,952	4,496
Δ (%) [SEK]*	-0.01%	10.51%	7.28%	22.86%
Defence (%)	88%	90%	89%	90%
Export (%)	64%	62%	58%	58%
Operating profit/loss	121	285	308	372
Operating margin	3.71%	7.38%	7.79%	8.28%
Net income**	99	190	206	295
Order book	9,948	10,261	11,480	13,826
Employees	18,073	18,153	19,002	21,479

<sup>\*</sup>Variation based on revenue in local currency See €/SEK, p.9

# REVENUE BY BUSINESS SEGMENT (%)\*



<sup>\*</sup>Revenue distribution based on total sales excluding Corporate division

# **REVENUE BY REGION (%)**



<sup>\*\*</sup>Net income attributable to shareholders

3. Resocrative rednical heliture Segul Androus, Edono. The Control of the Co Dight Defence or things of things pay MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS Serop Military aircraft JAS 39 Gripen E/F fighter aircraft T-7A Red Hawk trainer aircraft (aft fuselage) 340 Erieye AEW&C and 2000 Erieye AEW&C surveillance aircraft GlobalEve surveillance aircraft (radar) Skeldar V-200 VTOL UAV nEUROn UCAV demonstrator (landing gear doors, main fuselage, avionics, etc.) Naval platforms and systems Blekinge-class future conventionally-powered attack submarine (A26) Luleå-class future corvette Missiles and weapon systems RBS 15 Mk3 anti-ship missile IRIS-T short-range air-to-air missile METEOR beyond visual range air-to-air missile TAURUS KEPD 350 cruise missile AT4. Carl-Gustaf M4 and NLAW man-portable shoulder-fired systems RBS 70 NG very short-range air defence system Defence electronics Giraffe and Sea Giraffe family of radars (75, AMB, 1X, 4A, 8A) IDAS (Integrated Defensive Aids System) BOL advanced countermeasure dispenser

\*Subsidiary of Patria \*\*Through UMS Skeldar

#### Business trends

- ▶ Saab revenues reached SEK 51.6bn (€4,496m) in 2023, up 22.9% year-on-year in local currency. Growth was driven by increased deliveries, in particular of JAS 39 Gripen fighter aircraft (delivery of the first Gripen E aircraft to the Swedish Air Force) and surface ships (delivery of the Artemis SIGINT surveillance ship to the Swedish Navy). With the exception of the predominantly civil Combitech division, defence activities accounted for more than 85% of sales in all divisions (90% for the group as a whole in 2023).
- ▶ In March 2024, Saab launched the construction of a production facility for Carl-Gustaf M4 portable rocket launchers in Jhajjar, India. The plant will produce rocket launchers for the Indian Armed Forces and components for customers around the world.
- Damen and Saab joined forces in March 2024 to sell the C71 Expeditionary submarine, derived from Saab's A26, to export markets. The submarine will be offered to the Royal Canadian Navy, which seeks to procure twelve submarines.

#### Home market

- Saab generated 42% of its revenues in Sweden in 2023. The group is the preferred supplier of the Swedish Defence Materiel Administration (FMV), particularly for combat aircraft and naval defence, and is to deliver sixty JAS 39 Gripen E aircraft and two Blekinge-class (A26) submarines.
- In May 2024, the group awarded a subcontract to Babcock to participate in the design of the Swedish Navy's future Luleå-class corvette. These ships, to be built in Sweden by Saab Kockums, will have air defence capabilities. They will also be offered for export.
- Saab signed a SEK 2.6bn (€227m) contract in June 2024 with FMV for the supply of a third GlobalEye airborne early warning and control (AEW&C) aircraft, to be delivered by 2029.
- In June 2024, the group also received an order worth around SEK 400m (€35m) from FMV for the construction of ten CB90 NG combat ships, to be delivered from 2024.

#### Export markets

- ▶ Saab's export sales amounted to SEK 30.0bn (€2.6bn) in 2023, representing 58% of total sales.
- Saab signed a contract worth around \$190m (€176m) in January 2024 with the United Arab Emirates Air Force to support the fleet of five GlobalEye airborne early warning and control (AEW&C) aircraft supplied by the group until 2026.
- In February 2024, the Canadian Armed Forces awarded Saab a contract worth CAD 227m (€155m) for the supply of RBS 70 NG short-range air defence systems, transport vehicles and training services from 2024.
- ► The group was awarded a contract worth SEK 12.9bn (€1.1bn) in March 2024 by the Polish Ministry of National Defence for the supply of Carl-Gustaf M4 portable rocket launchers, ammunition and training equipment, to be delivered until 2027.
- In August 2024, the U.S. Army selected Saab to supply AT4CS TW (Confined Space Tandem Warhead) portable rocket launchers. Orders for up to \$494m (€457m) can be placed over a 5-year period.
- The Royal Thai Air Force selected Saab's JAS 39 Gripen E/F fighter aircraft in August 2024 to replace its fleet of F-16 Fighting Falcon A/B aircraft (Lockheed Martin). Between 12 and 14 aircraft could be ordered following approval by the Royal Thai government.

#### Technology and Innovation

Saab's total R&D expenditure amounted to SEK 8.9bn (€775m) in 2023, representing 17.2% of revenues. Self-financed R&D expenditure accounted for 4.0% of group revenues.



# SAFRAN

Leading global aerospace engine and equipment manufacturer (civil and military aircraft and helicopters) and 30th-largest defence company worldwide

#### **BUSINESS AREAS**

Engine manufacturer, systems integrator/ equipment supplier

- Aircraft and helicopter engines, satellite and missile propulsion systems
- Aircraft systems and equipment
- Optronics, avionics, navigation systems, defence electronics and critical software
- Security systems
- Unmanned aircraft systems

# **GOVERNANCE**

Chairman	Ross McInnes
Chief Executive Officer	Olivier Andriès
Président, Safran Aircraft Engines	Jean-Paul Alary

Président, Safran Electronics & Defense

Franck Saudo

# OWNERSHIP STRUCTURE (as of 10.10.2024)

Symbol	SAF
Listed on	Euronext Paris
Market Cap (€m)	86,008

# Major shareholders (as of 10.10.2024)

French State	11.23%
Employees	6.13%
TCI Fund Management Ltd.	5.20%
Self-owned	3 21%

#### MAIN JOINT VENTURES AND ASSOCIATES

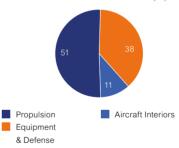
Name	%	Country
ArianeGroup	50%	France
EURA	50%	France
Lynred	50%	France
Roxel	50%	France
Aubert & Duval	33.33%	France
CILAS	31.5%	France
EuroProp International	28%	Germany

# KEY FIGURES\* (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	16,498	15,257	19,035	23,199
∆ (%)	-33.04%	-7.52%	24.76%	21.88%
Defence (%)	25%	28%	21%	17%
Export (%)	77%	78%	79%	81%
Operating profit/loss	1,220	1,400	1,958	2,655
Operating margin	7.39%	9.18%	10.29%	11.44%
Net income**	844	760	1,178	2,028
Order book	N/A	N/A	N/A	N/A
Employees	78,892	76,765	83,276	91,984

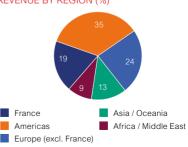
<sup>\*</sup>Figures adjusted

# REVENUE BY BUSINESS SEGMENT (%)\*



\*Excluding Holding & other activities

#### REVENUE BY REGION (%)



<sup>\*\*</sup>Net income attributable to shareholders

MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	R reto pe	oftigings	arys Hersoldt	ades Talls to	ince cap i
Aircraft engines					
Work on motorisation as part of the NGWS programme (Next Generation Weapon System)	• •				
M88 afterburning turbofan engine (Rafale)					
TP400 turboprop engine (A400M)	• • •				
RTM322 turboshaft family (NH90, AW101, Apache AH Mk 1)					
Ardiden turboshaft family (Druhv, LCH, LUH, Ka-62, AC352)					•
MTR390-2C (Tiger HAP, ARH, UHT) and MTR390-E (Tiger HAD) turboshaft engines	• • •				
Arrano 1A turboshaft engine (H160M)					
Space propulsion systems					
Plasma propulsion (PPS 1350-G, PPS 1350-E, PPS 5000, PPS X00)					
Missile propulsion systems					
TR 40 (EXOCET, NSM), TR 60-30 (Apache, STORM SHADOW / SCALP EG, RBS-15) and TR 50 (MDCN / SCALP Naval) turbojet engines		•		•	•
Weapon systems and missile systems					
Missile seekers (AKERON MP and LP, MICA IR, Mistral)		•			
AASM / Hammer family of guided bombs		•			
Navigation and optronics systems					
Geonyx M inertial navigation system for armoured vehicles				•	
Series 30 MOA and Series 30 MOV optronic masts for submarines					•
Euroflir 610 gyrostabilised electro-optical system			• •		
Unmanned aircraft systems					
Patroller tactical UAV		•			

\*Subsidiary of Stemme \*\*Hindustan Aeronautics Ltd

#### Business trends

- Safran adjusted revenues reached €23.2bn in 2023, up 21.9% year-on-year. Growth was mainly driven by civil activities, which benefited from strong demand for short and medium-haul aircraft, in the wake of the upturn in air traffic. On the other hand, defence activities were affected by the drop in M88 turbofan engine deliveries for Dassault Aviation's Rafale fighter aircraft (42 units delivered in 2023, compared with 51 in 2022).
- In February 2024, Safran announced the creation of a foundry site in Rennes (in western France), Safran Turbine Airfoils. Scheduled to be operational in 2027, the plant will be dedicated to the production of turbine blades for Safran's M88 military engines and CFM International's LEAP civil engines (a joint venture with GE Aerospace focused on commercial aircraft engines).
- In September 2024, the group completed the acquisition of French start-up Preligens for €220m. A European leader in its field, Preligens develops algorithms capable of automatically detecting, identifying and classifying military objects (aircraft, helicopters, armoured vehicles, ships, etc.) from satellite images, and offers software for the continuous surveillance of strategic sites and theatres of operations. Based in Paris, Preligens generated revenue of €28m in 2023 and employs 220 people in six countries. The company will be renamed Safran.Al.
- Safran is in the process of acquiring the activities of Collins Aerospace (part of RTX) in the production and maintenance of actuation and flight control systems for civil and military aircraft and helicopters, for \$1.8bn (€1.7bn). This business employs around 3,700 people at seven sites in Europe (in France, Italy and the UK) and one in Indonesia, and generates annual revenues of around \$1.5bn (€1.4bn). The deal could be completed in the second half of 2024, pending approval by the antitrust authorities.

#### Home market

- Safran indirectly benefits from several orders placed since 2020 as part of various French defence programmes, including 54 Rafale fighter aircraft for the French Air Force, 7 Falcon 2000 LXS Albatros aircraft for the French Navy, 18 NH90 helicopters for the French Special Forces, and 356 Griffon VBMR and 88 Jaguar EBRC vehicles for the French Army.
- In February 2024, the French defence procurement agency (DGA) awarded Safran and KNDS France a contract to develop and integrate new sights for the Leclerc main battle tank by 2035 (digital video, latest-generation optronic sensors and new electronics).
- In April 2024, the French Ministry of Armed Forces announced an order for around 500 AASM guided bombs to replenish the inventories held by the French Air Force and Navy. France pledged to transfer 600 AASM bombs to Ukraine in 2024.

#### Export markets

- ▶ Safran generated 81% of its revenue from exports in 2023, in particular through CFM International.
- In March 2024, Safran signed a service contract (supply of spare parts, repair and overhaul operations, technical support, etc.) with the Qatar Armed Forces for the M88 engines powering Qatar's fleet of 36 Rafale aircraft.
- ► The group won two turboshaft engine maintenance contracts in 2024: in the UK in April for the RTM322 engines powering 55 AW101 Merlin helicopters, and in Germany in July for 124 Arriel 2E engines powering H145M helicopters.

# Technology and Innovation

- The group's self-financed R&D expenditure amounted to €1.2bn in 2023, representing 5.2% of revenues.
- In March 2024, the group carried out qualification tests on a modified variant of its NGDS (New Generation Dagaie System) decoy-launching system, adapted to be compatible with standard NATO 130 mm calibre ammunition.



# SOPRA STERIA

French digital services company, among the top 5 players in Europe and the top 3 players in the French cybersecurity market

# **BUSINESS AREAS**

Digital services supplier and systems integrator

- Cybersecurity
- ▶ Digital transformation
- ▶ Information systems integration
- ▶ Development of technology-specific solutions
- ▶ IT and cloud infrastructure management

# **GOVERNANCE**

Manager

Symbol

Listed on

Chairman	Pierre Pasquier
Chief Executive Officer	Cyril Malargé
Deputy CEO	Laurent Giovachini
Defense Global Account	Benoît Chatelain

# OWNERSHIP STRUCTURE (as of 10.10.2024)

Market Cap (€m)	3,787
Major shareholders (as of 31.10.2024)	
Free float	70.2%
Sopra GMT	19.6%
Employees	6.2%
Founders and Management	2.6%
Treasury shares	1.4%

# MAIN JOINT VENTURES AND ASSOCIATES\*

Name	%	Country
Axway Software	32%	France

<sup>\*</sup>As of 31.12.2023

#### KEY FIGURES (Fiscal year ended: December 31st)

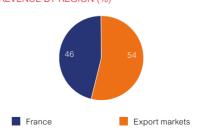
€ millions	2020	2021	2022	2023
Revenue*	4,263	4,683	5,101	5,805
∆ (%)	-3.86%	9.85%	8.93%	13.80%
Defence (%)**	16%	16%	20%	25%
Export (%)	52%	53%	53%	54%
Operating profit/loss	202	303	361	330
Operating margin	4.74%	6.47%	7.08%	5.68%
Net income***	107	188	248	184
Order book	N/A	N/A	N/A	N/A
Employees	45,960	47,437	49,690	55,833

<sup>\*</sup>Excluding Cybersecurity activities

# REVENUE BY BUSINESS SEGMENT (%)



# REVENUE BY REGION (%)



SOP

**Euronext Paris** 

<sup>\*\*</sup>Aeronautics, Space, Defence & Security activities

<sup>\*\*\*</sup>Net income attributable to shareholders

MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	AirDUS A	ios cadari	ni Awali	thales safts
Cyber Defence Systems and Intelligence				
Defensive computer warfare software	• •		•	
Metropolitan intelligence information system	•			
Sovereign security monitoring software suite				
Command systems				
Joint software for digital operations command, intelligence and logistics	• •	• •	•	
Simulation and numerical modelling software				
Physical simulation and testing software				
Support for the experiments of the Technico-Operational Laboratory				
Support for experimentation and development of laboratory software tools for OICS*				
Support systems				
Pay information system for military and civilian personnel				
Unified support calling platform				
Logistics systems and MRO				
Software for aeronautical maintenance		•		
Information system for land systems MRO activities				
Information systems for health product supply, commissioning logistics management and oil logistics management				
Artificial Intelligence and Big Data				
Artemis programme (Architecture for processing and massive exploitation of multi-source information)	• •	•	•	
Confiance.ai programme	•		•	•

<sup>\*</sup>Operational Information and Communication Systems

#### Business trends

- Sopra Steria revenues reached €5,805m in 2023, up 13.8% year-on-year (+6.6% at constant scope of consolidation and exchange rates). The Aeronautics, Space, Defence & Security vertical market accounted for 25% of revenue
- In November 2023, Sopra Steria acquired the 25% stake in SSCL (Shared Services Connected Ltd) held by the UK Cabinet Office for £82m (€94m). SSCL is now a wholly-owned subsidiary.
- In June 2024, Sopra Steria and the French Alternative Energies and Atomic Energy Commission (CEA) announced their partnership to develop technologies (advanced electronics, artificial intelligence, combat cloud, secure communications, etc.), first in the defence sector and in the longer term in the space, aeronautics and nuclear sectors.
- Sopra Steria completed the sale of most of Sopra Banking Software's activities in September 2024. The group intends to refocus its activities and investments on digital services and solutions, in particular for its strategic markets including defence and security, aeronautics and space.

#### Home market

- ▶ France is the group's largest market (46% of revenues in 2023).
- Sopra Steria has been working since February 2021 with the French defence procurement agency (DGA) and the French Aerospace Maintenance Agency (DMAé, Direction de la Maintenance Aéronautique) to implement a new single information system for aerospace MRO and in-service support, called Brasidas. This system aims to improve the availability of aircraft, helicopters and UAVs in service with the French Armed Forces by gathering all the information on maintenance activities of the various aircraft fleets in a single digital tool.
- Sopra Steria is one of the 13 French industrial and academic players involved in the Confiance.ai programme since July 2021. Led by the SystemX technological research institute and with a €45m budget over the 2021-2024 period, this programme aims to ensure the reliability of artificial intelligence algorithms used in critical industrial applications in various sectors (defence, aerospace, automotive, energy, maritime, etc.).
- Sopra Steria, through its subsidiary CS Group, is involved alongside Thales in the DGA's PARADE programme for the deployment of protection systems for military sites, major events (such as the Rugby World Cup in 2023 or the Paris 2024 Olympic and Paralympic Games) and civilian infrastructures against micro and mini-UAVs weighing between 100 g and 25 kg.
- Sopra Steria signed a multi-year contract with Airbus in January 2024 to help the aeronautics group modernise its methods and tools in its main engineering areas (airframe, flight physics, engines, systems, flight and propulsion testing) and countries (Germany, Spain, France, Poland, United Kingdom, Canada and India).

#### Export markets

- ▶ Sopra Steria generated 54% of its revenues from exports in 2023.
- ▶ The group has a strong presence in the United Kingdom, where it was awarded a £300m (€340m) seven-year contract by the Ministry of Defence, through its subsidiary Shared Services Connected Ltd (SSCL), to integrate a new management information system designed to improve the British Armed Forces' access to administrative, payroll, pension and human resources services. In addition, SSCL operates cloud services to better structure data and offer new services based on artificial intelligence.

# Technology and Innovation

► The group's self-financed R&D expenditure amounted to €122m in 2023, representing 2.1% of revenues.



# ST ENGINEERING

Group resulting from the consolidation of Singapore's defence industry, majority-owned by the Singaporean State through the Temasek fund, and 47-th largest defence contractor worldwide

#### **BUSINESS AREAS**

Platform manufacturer and systems integrator

- Commercial and military aircraft
- Naval platforms and systems (surface ships, USVs and AUVs)
- ► Land platforms and systems (armoured vehicles, artillery systems and ammunition)
- Defence electronics
- Cybersecurity
- Space (satellites)
- MRO and modernisation services

# **GOVERNANCE**

Symbol

Chairman	Teo Ming Kian
Chief Executive Officer	Vincent Chong
President, Defence & Public Security	Ravinder Singh

# OWNERSHIP STRUCTURE (as of 10.10.2024)

Listed on	SGX
Market Cap (SGDm)	14,582
Major shareholders (as of 10.10.2024)	
Temasek Holdings Pte Ltd.	49.79%
Temasek Capital Pte Ltd.	0.91%
MFS International (UK) Ltd.	0.64%
MFS International Singapore Pte Ltd.	0.42%

# MAIN JOINT VENTURES AND ASSOCIATES

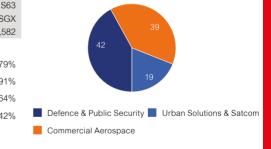
Name	%	Country
Elbe Flugzeugwerke (EFW)	55%	Germany
Proteus Advanced Systems	50%	Singapore

# KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	4,548	4,841	6,227	6,957
∆ (%) [SGD]*	-9.02%	7.47%	17.44%	11.80%
Defence (%)	36%	38%	33%	30%
Export (%)**	46%	42%	50%	51%
Operating profit/loss	379	424	507	630
Operating margin	8.33%	8.76%	8.14%	9.06%
Net income***	332	359	369	404
Order book	9,494	12,631	16,084	18,780
Employees	23,103	22,405	23,420	25,734

<sup>\*</sup>Variation based on revenue in local currency See €/SGD, p.9

# REVENUE BY BUSINESS SEGMENT (%)



# REVENUE BY REGION (%)



<sup>\*\*</sup>Revenue excluding Asia

<sup>\*\*\*</sup>Net income attributable to shareholders

and centeral Dinamics ures against Group Saga Culti, Coll to the for Whater the chart of MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS Military aircraft Skyblade and USTAR families of UAVs MRO and modernisation (F-16 fighter aircraft, C-130 transport aircraft) Naval platforms and systems Future Multi-Role Combat Vessel (MRCV)\* Independence-class patrol boat Super Swift family of fast patrol boats Jupiter, Venus and Swift 18 USVs Mercury AUV Blue Spear anti-ship missile Land platforms and systems Hunter tracked armoured fighting vehicle Bronco high mobility tracked armoured carrier 8x8 Terrex family of wheeled armoured vehicles 4x4 Belrex family of wheeled armoured vehicle\*\* Pegasus lightweight towed howitzer 40mm ammunition Defence electronics Vehicular Integrated Communication System (VICS) Space TeLEOS-1 and TeLEOS-2 Farth observation satellites

<sup>\*</sup>Based on Swedish corvettes and Danish frigates \*Based on Paramount Group's Marauder \*\*Odense Maritime Technology
\*\*\*Singapore government agencies \*\*\*Subsidiary of Leonardo \*\*\*\*Israel Aerospace Industries, through Proteus Advanced Systems

#### Business trends

- ► ST Engineering revenues increased 11.8% in local currency to SGD 10.1bn (€6,957m) in 2023. Two divisions reported higher sales: Commercial Aerospace (+30.6%) and Urban Solutions & SATCOM (mainly civiloriented, but also including the group's space activities, +9.7%). On the other hand, revenues in the Defence & Public Security division (encompassing most of the group's defence activities, as well as public security and civil shipbuilding activities) slightly declined (-0.5%).
- ▶ Embraer and ST Engineering signed a letter of intent in February 2024 for the maintenance of the Brazilian group's C-390 Millennium tactical transport aircraft in the Asia-Pacific region, should a country in the region purchase the aircraft.
- In February 2024, the group completed the acquisition of Singapore-based D'Crypt, which offers solutions in various fields including encrypted communications, single-chip crypto tokens and secure computing, for SGD 68m (€47m).

#### Home market

- The result of the consolidation of Singapore's defence industry, ST Engineering is the leading supplier to the Ministry of Defence of Singapore.
- In December 2023, ST Engineering secured a contract (amount unspecified) for the mid-life upgrade of the Republic of Singapore Navy's six Formidable-class frigates, which entered service between 2007 and 2009. Naval Group, which built the first unit and transferred technology to ST Engineering for the construction of the other five frigates, will be involved as a subcontracting partner. The first upgraded frigate is due to be handed over by 2028.
- In March 2024, ST Engineering cut the first steel for the first of the six future MRCV multirole combat ships, scheduled for delivery in 2028.

#### Export markets

- The group is struggling to win international contracts. In recent years, it submitted (with local partners) its Bronco, Hunter and Terrex land vehicles for the Cold Weather All-Terrain Vehicle (U.S. Army), Mobile Protected Firepower (U.S. Army) and Land 400 Phase 2 (Australian Army) programmes respectively, but was not selected.
- In February 2024, Proteus Advanced Systems, a joint venture between ST Engineering and Israel Aerospace Industries, delivered to Estonia the first Blue Spear 5G anti-ship coastal defence missiles ordered in 2021.
- The U.S. subsidiary iDirectGov was awarded a contract in May 2024 by the U.S. Defense Innovation Unit to develop a prototype solution for mitigating co-channel interference in 5G (interference due to signals emitted by other stations using the same frequency), based on its Communications Signal Interference Removal (CSIR) technology.
- ► The group signed several contracts worth a total of SGD 100m (€69m) in the second half of 2024 for the supply of 40 mm and 155 mm calibre ammunition to European NATO member countries.

#### Technology and Innovation

- ► Self-financed R&D expenditure amounted to SGD 188m (€129m) in 2023, representing 1.9% of revenues.
- ST Engineering presented several new platforms at the Singapore Airshow in February 2024, including a self-funded hybrid-electric 4x4 armoured personnel carrier based on its Belrex vehicle, the Next Generation Protected Vehicle (NGPV), and a future Wing-in-Ground (WIG) craft developed in partnership with Peluca. Called AirFish, this WIG craft can seat up to ten passengers or carry freight for civil and military use.



# SWISSTO12

Swiss company founded in 2011, manufacturer of the HummingSat small GEO satellite and Radio-Frequency (RF) systems

# **BUSINESS AREAS**

Satellite and RF components manufacturer

- Geostationary satellites
- RF components and subsystems

# **GOVERNANCE**

Chairman	Roland Loos
Chief Executive Officer	Emile de Rijk
Chief Product Officer	Frank Schreckenbach

Chief Operations Officer

Frank Schreckenbach Jean-Marie Jacquet

# KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	N/A	N/A	N/A	N/A
△ (%)	N/A	N/A	N/A	N/A
Defence (%)	N/A	N/A	N/A	N/A
Export (%)	N/A	N/A	N/A	N/A
Operating profit/loss	N/A	N/A	N/A	N/A
Operating margin	N/A	N/A	N/A	N/A
Net income	N/A	N/A	N/A	N/A
Order book	N/A	N/A	N/A	200
Employees	N/A	N/A	≈ 50	> 100

# OWNERSHIP STRUCTURE

Symbol	
Listed on	Unlisted company
Market Cap	

Major shareholders (as of 10.10.2024)

CNB Capital, Swisscom, Zürcher Kantonalbank

N/A

# REVENUE BY BUSINESS SEGMENT (%)



#### MAIN JOINT VENTURES AND ASSOCIATES\*

Country Name

\*No information available

# **REVENUE BY REGION (%)**



# MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS

	ESA Thales Airbus
Satellite	
HummingSat future small geostationary telecommunications satellite	• •
RF components and subsystems	
Routing and waveguide solutions (licensed from Airbus Defence and Space)	•
Antennas and antenna components	
Electronically steered antenna array	
ELINT / SIGINT antenna systems	
MCK (Material Characterization Kit) dielectric material characterization solution	

\*European Space Agency

#### Business trends

- SWISSto12 grew out of work carried out by Emile de Rijk at the École Polytechnique Fédérale de Lausanne (EPFL) and became an independent entity in 2011. The company is based in Switzerland, near Lausanne, and has a subsidiary in the United States. It employs more than 150 people and had an order book of more than 6350m in September 2024.
- SWISSto12 developed a 3D printing technology to produce RF components and subsystems, with applications in space, telecommunications, surveillance and the aeronautics industry. In November 2023, the company entered into a partnership with Thales to develop Active Electronically Steerable Antennas (AESA) for satellite communications.
- ► SWISSto12 is developing the HummingSat geostationary satellite (36,000 km altitude) with the support of the European Space Agency (ESA), which has invested €30m under the ARTES (Advanced Research in Telecommunications Systems) programme, and nine member countries (Austria, Canada, Germany, the Netherlands, Norway, Poland, Spain, Sweden and Switzerland). SWISSto12's ambition is to provide satellites that are smaller (around 1 tonne) and less expensive than existing geostationary satellites. The launch of the first satellite, for Intelsat, is scheduled for 2026 using Ariane 6. Three other satellites have been sold to Inmarsat.
- SWISSto12 raised CHF 18.1m (€16.3m) in August 2019 from investors including Swiss bank Zürcher Kantonalbank (through its Swisscanto fund), Swiss telecoms and IT services provider Swisscom (through Swisscom Ventures) and Austrian investment firm CNB Capital. In September 2023, SWISSto12 secured financing of CHF 25m (€26m) from the Swiss bank UBS to continue the development of the HummingSat satellite.

#### Home market

Following a 2,000 m² extension in 2023, SWISSto12 further expanded capacity at its Swiss site in Renens in March 2024 with the addition of a 1,200 m² production area, including a clean room.

#### Export markets

- In March 2023, SWISSto12 set up a subsidiary in the United States, called St12 RF Solutions Inc., to help market its RF products in the American market. Based in New Hampshire, the subsidiary will be supported by U.S. company Frontgrade Technologies (formerly Cobham Advanced Electronic Solutions), which also supplies RF components.
- Satellite communications service provider Intelsat selected SWISSto12 in November 2022 for its future Intelsat 45 satellite, becoming the Swiss company's first customer.
- In May 2023, the British satellite telecommunications operator Inmarsat (which was acquired by its American competitor Viasat) also chose SWISSto12 for its future I-8 satellites. SWISSto12 will supply three HummingSat satellites, scheduled for launch in 2026.
- In May 2024, SWISSto12 announced the delivery of three RF antenna components to Northrop Grumman for one of the American group's GEOStar-3 communications satellite.
- ▶ In August 2024, SWISSto12 won a contract worth around \$10m (€9m) to supply RF equipment to a European aeronautical equipment manufacturer. The aim is to improve the performance of communications systems at sea.

# Technology and Innovation

In March 2022, SWISSto12 announced the launch of the ARAMIS (Active Reconfigurable telecommunication pAyload for Micro-geostationary Satellites) project to develop a Ka-band antenna for geostationary satellites, in partnership with Thales and with financial support from ESA, the French Space Agency (CNES) and the Swiss Space Agency (SSO).



# **TECHNICATOME**

A major player in naval nuclear propulsion (French Navy submarines and aircraft carriers), also active in civil nuclear energy, resulting from the nationalisation of Areva TA in 2017

# **BUSINESS AREAS**

Compact nuclear reactors designer

- Naval nuclear propulsion
- Support engineering for defence infrastructure
- Design and production engineering
- Reactors simulation and modelisation of physical phenomena
- MRO and services
- Civil nuclear energy

#### **GOVERNANCE**

Reactors

Chairman and CEO
Director of Defence

Loïc Rocard

Hugues Martin

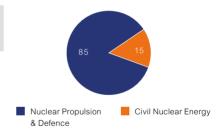
# KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	400	452	498	551
△ (%)	-4.76%	13.00%	10.18%	10.64%
Defence (%)	≈ 80%	≈ 80%	≈ 80%	≈ 85%
Export (%)	0%	0%	0%	0%
Operating profit/loss	76	88	78	100
Operating margin	19.00%	19.47%	15.66%	18.15%
Net income	57	65	54	81
Order book	1,049	1,621	≈ 1,500	≈ 1,800
Employees	1,756	1,845	1,900	2,000

# OWNERSHIP STRUCTURE

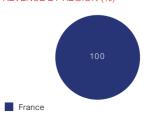
Symbol	
Listed on Un	listed group
Market Cap	
Major shareholders (as of 10.10.2024)	
French State Holdings Agency (APE)	50.32%
Naval Group	20.32%
CEA	20.32%
EDF	9.03%

# REVENUE BY BUSINESS SEGMENT (%)



# MAIN JOINT VENTURES AND ASSOCIATES REVENUE BY REGION (%)

Name	%	Country
Arcys	51%	France
Vanatome	30%	France



# MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS

AND EXPORT PARTNERSHIPS	th, kalagung Gunb
Naval nuclear propulsion	
PA-NG future new generation aircraft carrier	• •
SNLE 3G future third-generation nuclear-powered ballistic missile submarine (SSBN)	• •
Suffren-class nuclear-powered attack submarine (SSN) (Barracuda programme)	•
RES programme (shore-based nuclear test reactor for French naval propulsion and its related facilities construction and operation)	
MRO and services	
Operational maintenance for steam supply systems on nuclear-powered vessels	•
Support engineering for defence infrastructure	
Assistance with the infrastructure transformation of Toulon and Brest naval bases	
Operational maintenance of the infrastructure of Brest and Île Longue naval bases	
Assistance with the engineering and operation of Laser MegaJoule (Simulation programme)	
Civil nuclear energy	
Jules Horowitz research Reactor (JHR)	

<sup>\*</sup>Alternative Energies and Atomic Energy Commission

#### Business trends

- ► TechnicAtome revenues reached €551m in 2023 (+10.6% year-on-year), of which approximately 85% from defence activities. The group recorded a profitability level of 15% in 2023 and had an order book of €1.8bn at the end of the year, representing more than three years of sales.
- ► TechnicAtome is a major player in nuclear marine propulsion for French Navy submarines and aircraft carriers. The group is also involved in project management assistance for the infrastructures of the Brest and Toulon naval bases. In particular, it conceives the programme to adapt the ports' basins.
- ▶ In July 2024, Framatome (an EDF subsidiary) and TechnicAtome announced the acquisition of 70% and 30% respectively of French company Daher Valves. The company, with annual revenue of around €20m and 120 employees, produces valves and taps for the nuclear and defence industries, in particular for the propulsion systems of French Navy vessels. Renamed Vanatome, it should benefit from investments to increase its production in the coming years.

#### Home market

- The French SSBN Le Vigilant (third unit of the Le Triomphant-class, which entered service in 2004) began a 30-month technical stop in January 2024. TechnicAtome is taking part in this periodic intervention, known as IPER (periodic unavailability for maintenance and repair, in French), in particular to check and upgrade the nuclear reactor and reload the nuclear fuel.
- TechnicAtome is involved in the Barracuda programme for the construction of six new-generation Suffrenclass nuclear-powered attack submarines (SSNs) by 2030. The group is in charge of the design, production and maintenance of the nuclear boiler rooms, their support system and their fuel. In April 2024, TechnicAtome and Naval group carried out the first divergence operation on the nuclear reactor of the Tourville SSN (the third submarine in the Barracuda programme), which began sea trials in July 2024.
- Construction of the first of the four future third-generation SSBNs (SNLE 3G, in French) began in March 2024 with the first steel cutting. Naval Group is the prime contractor for the overall construction of the submarines, in partnership with TechnicAtome, which will build the nuclear reactors.
- In April 2024, Naval Group and TechnicAtome received notifications to begin construction of the nuclear reactors for the future aircraft carrier (PA-NG, in French), scheduled to last until 2029. TechnicAtome will supply two new-generation K22 reactors, more powerful and with extended autonomy. Commissioning of the PA-NG is currently scheduled for 2038.
- At the beginning of 2024, the French Alternative Energies and Atomic Energy Commission (CEA) awarded TechnicAtome, in partnership with the French group Egis, the 7-year AIEL 2 contract to provide services related to the operation and maintenance of the Laser Megajoule.

#### Technology and Innovation

In 2023, TechnicAtome modernised the virtual reality room inaugurated in 2010 at its Aix-en-Provence site (in southeastern France) for the design of nuclear reactors. In particular, the display and representation tools and software were upgraded.



# TELEDYNE TECHNOLOGIES

Equipment manufacturer and supplier of subsystems and components, 77st-largest defence contractor with an expanded portfolio of sensor and unmanned systems thanks to FLIR

#### **BUSINESS AREAS**

Systems integrator and components supplier

- Aerospace systems and components
- Subsystems and components for missile, defence and combat systems
- Naval systems and components
- Unmanned systems (UAVs and UGVs)

#### **GOVERNANCE**

Executive Chairman	Robert Mehrabian
Chief Executive Officer	Edwin Roks
Chierf Operating Officer	G. C. Bobb III

# OWNERSHIP STRUCTURE (as of 10.10.2024)

Symbol	TDY
Listed on	NYSE
Market Cap (\$m)	21,184

#### Major shareholders (as of 10.10.2024)

Vanguard Fiduciary Trust Co.	11.89%
T. Rowe Price International Ltd.	9.28%
BlackRock Advisors LLC	6.32%
T. Rowe Price IM, Inc.	6.10%

# MAIN JOINT VENTURES AND ASSOCIATES\*

Name	%	Country
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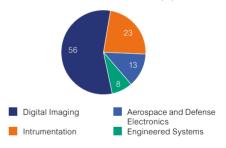
<sup>\*</sup>No information available

# KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	2,702	3,901	5,184	5,214
Δ (%) [\$]*	-2.45%	49.51%	18.30%	3.25%
Defence (%)**	19%	19%	20%	19%
Export (%)	45%	47%	47%	49%
Operating profit/loss	420	528	923	957
Operating margin	15.56%	13.53%	17.81%	18.35%
Net income	352	376	749	819
Order book	1,386	N/A	N/A	N/A
Employees	10,670	14,500	14,700	14,900

<sup>\*</sup>Variation based on revenue in local currency

#### REVENUE BY BUSINESS SEGMENT (%)



# REVENUE BY REGION (%)



See €/\$, p.9

<sup>\*\*</sup>Sales to the U.S. Department of Defense only

	<i>*</i>
MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	(1613) Stephen
Military aircraft systems and components	
Subsystems and components of the Joint Helmet Mounted Cueing System (JHMCS) (F-15, F-16, F/A-18)	• •
Fiber optic quad transceiver products for the F-35 fighter aircraft	•
Ejection seat sequencers for fighter aircraft (F-15, F-16, F/A-18, F-22, F-35)	•
Star Safire and Ultraforce imaging systems	
Subsystems and components for missile, defence and combat systems	
Cooling Equipment Units (CEU) of the AN/TPY-2 early warning radar system	•
Realistic-threat ballistic target missiles (TACRAM 2 programme)	
Traveling Wave Tubes (TWT) of the Aegis combat system	•
Subsystems and components for space systems	
Launch Vehicle Stage Adaptor (LVSA) of the Space Launch System (SLS)	• • •
Image detectors for the Sentinel future observation satellites (Copernicus programme)	•
Naval systems and components	
Slocum autonomous underwater glider	•
Gavia, Osprey and SeaRaptor UUVs	
Mk11 Shallow Water Combat Submersible (SWCS) manned combat submersible vehicle	
SeaFLIR imaging and surveillance systems	
Unmanned systems (UAVs and UGVs)	
Rogue 1, Black Hornet, R80D SkyRaider and SkyRanger R71 small UAS	
Reconnaissance and counter-IED operation UGVs (Centaur, PackBot)	

\*Formerly Raytheon Technologies \*\*Joint venture between Boeing and Lockheed Martin

#### Business trends

- ▶ Teledyne revenues reached \$5.6bn (€5.2bn) in 2023, up 3.2% year-on-year in local currency. The Instrumentation (+5.8%), Aerospace and Defense Electronics (+6.5%) and Engineered Systems (+6.7%) divisions recorded increased sales in certain segments (test and measurement instruments, electronic components for aerospace and defense, etc.). Revenues in the Digital Imaging division grew at a slower pace (+1.1%), driven by higher sales of X-ray products, infrared detectors and surveillance systems.
- The Engineered Systems division generates nearly 90% of its revenues with the U.S. government (Department of Defense, NASA, etc.). The group's other defence and space activities are distributed among the other three divisions.
- ▶ In March 2024, Teledyne announced the acquisition of the British company Valeport (around 100 employees), a manufacturer of underwater sensors (probes, systems for measuring currents, flow, temperature, etc.) designed in particular for military applications. In June 2024, the group also completed the acquisition of the Dutch company Adimec, now part of the Digital Imaging division. Adimec produces industrial and scientific cameras for applications requiring high image quality, including defence and security, and employs more than 170 people.
- In August 2024, Teledyne announced that its site in Kopavogur (Iceland) was doubling its manufacturing capacity to meet increased demand for unmanned underwater vehicles, including its Osprey and SeaRaptor UUVs.

#### Home market

- The group generated 51% of its sales on the U.S. market in 2023. Sales to the U.S. Department of Defense, its largest customer, accounted for almost 20% of revenues.
- Teledyne FLIR Defense is one of three operators selected in April 2024 to supply loitering munitions to the U.S. Marine Corps as part of the Organic Precision Fires-Light (OPF-L) programme. The subsidiary signed an initial contract worth \$12m (€11m) to deliver the first 127 units for evaluation purposes. The contract has a ceiling value of \$249m (€230m) over 8 years (including 3 years of options).
- ► Teledyne Brown Engineering signed a \$114m (€105m) contract in August 2024 to supply the U.S. Army with target missiles for testing missile defence systems. The group is continuing this mission as part of the TACRAM 2 (Tactical Range Air Defense Missile) programme, which runs until March 2028.

# Export markets

- ➤ Teledyne generated 49% of its revenues from exports in 2023. The United Kingdom, China, Japan, Germany and Norway are the group's main foreign markets and accounted for approximately 21% of total revenues. Most of the group's revenues in these markets come from the civil sector.
- ▶ In February 2024, Canada's Department of National Defence ordered over 800 SkyRanger R70 UAS from Teledyne FLIR Defense, valued at more than CAD 95m (€65m) and intended for Ukraine. The UAS are produced in Canada and can carry up to 3.5 kg of payload, including munitions.
- ► The U.S. Army awarded a \$15m (€14m) contract to Teledyne FLIR Defense in July 2024 to supply a NATO member country with more than 150 ThermoSight HISS-XLR thermal sights and associated services (logistical support, training, etc.).
- In September 2024, Teledyne FLIR Defense announced the delivery to the Japan Maritime Self-Defense Force of three Star SAFIRE 380-HLD multi-spectral imaging systems, to be fitted on SH-60L helicopters (the Japanese version of the Sikorsky SH-60). The order, worth \$20.8m (€18.8m), calls for ten Star SAFIRE 380-HLD systems to be delivered over the next 3 years.

#### Technology and Innovation

Self-financed R&D expenditure represented around 6% of revenue in 2023.



# **TEXTRON**

Civil and military industrial conglomerate mainly operating in military aeronautics (ISR aircraft, tiltrotor aircraft, helicopters, UAS), and 43rd-largest defence contractor worldwide

# **BUSINESS AREAS**

Platform manufacturer and systems integrator

- Military aircraft and business jets
- Commercial and military helicopters
- Unmanned systems (UASs, USVs, RCVs)
- Landing craft
- Training solutions

President and CEO, Bell.

 Industrial sector (E-Z-GO, Greenlee, Jacobsen, Kautex)

#### **GOVERNANCE**

Symbol

Chairman and CEO	Scott C. Donnelly
President and CEO, Textron Aviation	Ron Draper

Lisa M. Atherton

TXT

# OWNERSHIP STRUCTURE (as of 10.10.2024)

Listed on	NYSE
Market Cap (\$m)	16,019
Major shareholders (as of 10.10.2024)	
Vanguard Fiduciary Trust Co.	11.65%
BlackRock Advisors LLC	7.28%
T. Rowe Price IM, Inc.	7.14%
State Street Corporation	4.70%

# MAIN JOINT VENTURES AND ASSOCIATES

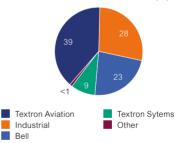
Name	%	Country
Bell-Boeing	50%	United States
Textron Airland	50%	United States
Cessna-AVIC Aircraft (Shijiazhuang)	N/A	China
Cessna-AVIC Aircraft (Zhuhai)	N/A	China

# KEY FIGURES (Fiscal year ended: December 31st)

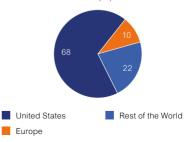
€ millions	2020	2021	2022	2023
Revenue	10,202	10,467	12,221	12,658
Δ (%) [\$]*	-14.52%	6.27%	3.93%	6.33%
Defence (%)**	30%	26%	22%	21%
Export (%)	32%	31%	32%	32%
Operating profit/loss	658	959	1,079	1,228
Operating margin	6.45%	9.16%	8.83%	9.70%
Net income	271	631	818	852
Order book	7,743	8,945	12,433	12,578
Employees	33,000	33,000	34,000	35,000

<sup>\*</sup>Variation based on revenue in local currency See €/\$, p.9

# REVENUE BY BUSINESS SEGMENT (%)



# **REVENUE BY REGION (%)**



<sup>\*\*</sup>Sales to the U.S. Government only

MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	Agillo 1	Schleed y	Agriin Agros	Qace Ao	ithiop (	Sturmer Transfer	ar old	iles iles iles iles iles iles iles iles	e Aerospo	de pilati
Military aircraft (Textron Aviation)										
AT-6 Wolverine light attack aircraft*	•		•		•					•
T-6C Texan II trainer aircraft*			•							•
T-54A trainer aircraft**			•							
Super King Air 360ER and Grand Caravan EX utility aircraft			•						•	
Citation Longitude surveillance aircraft			•							
Military helicopters (Bell)										
V-280 Valor future utility tiltrotor	•	•					•			
V-22 Osprey transport tiltrotor	•						•			
UH-1Y Venom utility helicopter				•				•		
AH-1Z Viper attack helicopter	•		•	•				•		
Unmanned systems (Textron Systems)										
RQ-7 Shadow tactical UAS										
Aerosonde HQ future small UAS										
Common Unmanned Surface Vehicle (CUSV)										
Ripsaw family of robotic combat vehicles						•				
Landing craft (Textron Systems)										
Ship-to-Shore Connector (SSC)					•		•			
Training solutions (Textron Systems)										
U.S. Air Force's Adversary Air Services (ADAIR) pilot training programme										

<sup>\*</sup>Based on the Pilatus PC-9 \*\*Based on the King Air 260 \*\*\*Formerly Raytheon Technologies \*\*\*\*Subsidiary of Teledyne \*\*\*\*\*Formerly GE Aviation

#### Business trends

- ► Textron revenues increased 6.3% in local currency to \$13.7bn (€12.7bn) in 2023. Growth was driven by the Industrial division (+10.9%), predominantly civilian-oriented. Revenues in the Textron Aviation, Bell and Textron Systems divisions grew at a slower pace (+5.9%, +5.4% and +1.8% respectively). On the other hand, Bell's military sales fell by 2.2% year-on-year.
- ▶ The group is taking part in several tenders for U.S. Armed Forces programmes, including Future Tactical Unmanned Aircraft System (FTUAS) with its Aerosonde HQ SUAS against Griffon Aerospace; Advanced Reconnaissance Vehicle (ARV) with its Cottonmouth 6x6 amphibious reconnaissance vehicle, in partnership with Elbit Systems and competing with General Dynamics; and Robotic Combat Vehicle-Light (RCV-L) with its Ripsaw M3, in partnership with FLIR Systems and against General Dynamics, McQ and Oshkosh Defense.
- ▶ In February 2024, the U.S. Army cancelled its Future Attack Reconnaissance Aircraft (FARA) programme, for which Bell offered the 360 Invictus and Sikorsky the Raider X, after considering that the programme is no longer relevant in light of the massive use of small drones on battlefields, notably in Ukraine.
- ▶ In March 2024, Bell opened a Weapon Systems Integration Lab (WSIL) in Arlington, Texas. The facility will support the integration and testing of the V-280 Valor, developed as part of the U.S. Army's Future Long-Range Assault Aircraft (FLRAA) programme.

#### Home market

- The U.S. is Textron's largest market, accounting for 68% of revenues in 2023. The goup is a key partner of the U.S. Armed Forces, thanks in particular to its monopoly in tiltrotor military aircraft with the V-22 Osprey (produced in partnership with Boeing) and the future V-280 Valor utility tiltrotor (FLRAA programme).
- ▶ In April 2024, Textron Aviation delivered to the U.S. Navy the first two T-54A training aircraft from the Multi-Engine Training System (METS) programme, under which ten aircraft have been ordered. A further 54 aircraft could be ordered for the U.S. Navy, the U.S. Marine Corps and the U.S. Coast Guard.
- In July 2024, the U.S. Navy awarded Textron Systems a contract worth \$312m (€289m) for the production of nine additional SSC amphibious landing craft. Twelve units have been delivered since 2020.
- In September 2024, Textron Systems was selected by the U.S. Air Force to provide training services for pilots as part of the ADAIR programme, along with seven other operators. The programme has a budget of \$5.4bn (€5.0bn) over 4 years.

#### Export markets

- ▶ Textron generated 32% of its revenues from exports in 2023, mainly in Europe and Asia-Pacific.
- In November 2023, Bell delivered eight 505 helicopters: five to Jordan and three to South Korea.
- ▶ In January 2024, the Canadian government awarded Bell a CAD 2.28bn (€1.56bn) contract to provide services (maintenance, engineering, technical and design modifications, etc.) for the CH-146 Griffon helicopter fleet (produced by the group).
- Nigeria ordered twelve AH-1Z Viper helicopters from Bell in March 2024 for \$455m (€421m), including the supply of weapons and spare parts. Deliveries will take place between summer 2025 and early 2028.
- In March 2024, the U.S. Army awarded a contract to Textron Aviation for the supply, under FMS procedures, of two Grand Caravan EX multimission aircraft to the Djibouti Air Force.

# Technology and Innovation

Self-financed R&D expenditure amounted to \$570m (€527m) in 2023, representing 4.2% of revenues.

# THALES

Aerospace, defence and security group specialising in complex electronic systems, ranked 17th-largest defence company worldwide

# **BUSINESS AREAS**

Systems integrator/equipment supplier

- Aerospace equipment and systems
- ▶ Contact drone systems
- Sensors, systems and communications
- ▶ Weapon systems and ammunition
- Simulation and training solutions
- Cybersecurity
- ► Space (see also Thales Alenia Space)

#### **GOVERNANCE**

Symbol

Self-owned

Chairman and CEO	Patrice Caine
Executive Vice-President, Land and Air Systems	Hervé Dammanr

Executive Vice-President, Defence Mission Systems

Philippe Duhamel

HO

1 69%

# OWNERSHIP STRUCTURE (as of 10.10.2024)

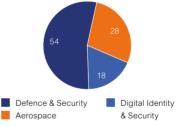
Listed on	Euronext Paris
Market Cap (€m)	31,405
Major shareholders (as of 10.10.202	24)
French State	26.06% 26.05%
Dassault Aviation	26.05%
Employees	2.91%

# KEY FIGURES\* (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	15,371	16,192	17,569	18,428
∆ (%)	-16.47%	5.34%	8.50%	4.89%
Defence (%)**	53%	53%	52%	53%
Export (%)	73%	72%	73%	70%
Operating profit/loss	1,248	1,649	1,935	2,132
Operating margin	8.12%	10.18%	11.01%	11.57%
Net income***	937	1,361	1,556	1,768
Order book	30,512	34,744	40,957	45,251
Employees	72,757	73,268	76,776	81,060

<sup>\*</sup>Figures excluding Transport division (sold in May 2024)

# REVENUE BY BUSINESS SEGMENT (%)\*

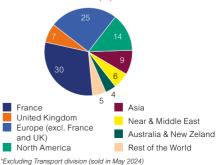


<sup>\*</sup>Excluding Others division and Transport division (sold in May 2024)

# MAIN JOINT VENTURES AND ASSOCIATES

Name	%	Country
Thales Alenia Space	67%	France
Athea	50%	France
Lynred	50%	France
TRS AMDC2	50%	France
Diehl Aerospace	49%	Germany
UAV Tactical Systems (U-TacS)	49%	United Kingdom
Naval Group	35%	France
ELT Group	33.33%	Italy
Telespazio	33%	Italy

# REVENUE BY REGION (%)\*



<sup>\*\*</sup>Defence & Security division only
\*\*\*Net income attributable to shareholders

MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	tildit syst	ans adus oasad	A Kayation Stems	Heusoldt G	Kang bog	e nd meda
Combat systems and embedded electronics						
SPECTRA electronic warfare suite		•				
Targeting Long-range Identification Optronic System (TALIOS)		•				
Defence electronics as part of the NGWS programme (Next Generation Weapon System)			•			
TopOwl and Scorpion helmet mounted displays	•	•				
Mission and surveillance systems						
CONTACT and SYNAPS software defined radios						
Watchkeeper WK450 ISTAR UAV*	•					
Payload sensors for the Falcon 8X future intelligence aircraft (CUGE programme)		•				
Radar and sonar systems						
RBE2 AESA airborne radar (Rafale)		•				
Ground Master and Ground Fire ground radars						
Sea Fire naval radar				•		
CAPTAS towed sonars		•		•		
Missiles, weapon systems and ammunition						
RAPIDFire and RAPIDFire Naval air defence systems				•		
Missile guidance systems (Aster, MICA, EXOCET)						•
SAMP/T surface-to-air missile defence system						•
Mortar and rocket systems						
Military vehicles						
4X4 Bushmaster armoured vehicle						
4X4 Hawkei light tactical vehicle					•	

<sup>\*</sup>Based on Elbit Systems' Hermes 450

#### Business trends

- Thales revenues reached €18.4bn in 2023, up 4.9% year-on-year. Revenues in the Defence & Security division increased by 7%, driven by the Rafale fighter aircraft programme, networks and infrastructure systems, critical information systems, cyber defence solutions and surface radars. Sales in the Aerospace division rose by 10.7% driven by original equipment and after-sales services.
- ▶ In April 2024, the group acquired Cobham's Aerospace Communications business (ELT and VHF/UHF antennas, lighting systems, avionics systems, etc.) for \$1.1bn (€1.02bn). This business generates revenues of \$200m (€185m), 30% of which in defence, and employs 690 people. The transaction involves five sites in France (including two factories) and manufacturing facilities in Denmark, Canada, the United States and South Africa
- In May 2024, Thales completed the sale of its Transport division (railway signalling in particular) to Japan's Hitachi Rail for €1.66bn.
- ▶ In July 2024, the group inaugurated an assembly line at its Herstal site (Belgium), designed to increase production of 70 mm laser-guided rockets fivefold, as part of the European Commission's Act in Support of Ammunition Production (ASAP) programme.

#### Home market

- Thales is a key industrial partner of Dassault Aviation (Rafale fighter aircraft, Falcon 8X intelligence aircraft, etc.), Naval Group (FDI and FREMM frigates, etc.) and KNDS (Scorpion programme, MGCS future main battle tank, etc.).
- In March 2024, the group handed over to the French Navy the e-POC (expeditionary-Portable Operations Center) demonstrator, a system for planning, managing and analysing mine countermeasures missions using unmanned underwater vehicles.
- In July 2024, Naval Group selected Thales' omnidirectional passive hull sonar for installation on its Unmanned Combat Underwater Vehicle (UCUV) demonstrator.
- In July 2024, the French defence procurement agency (DGA) awarded Thales the Neptune contract for the supply of 30 Syracuse IV satellite communication stations to equip KNDS France's Serval light armoured vehicles.

#### Export markets

- ▶ Thales generated 70% of its revenues from exports in 2023.
- The German Navy selected Thales in February 2024 to equip its future F126 frigates with the SurfSAT-L solution, which includes several satellite communication terminals and a ground-based system dedicated to operator training.
- In February 2024, the group delivered the first CAPTAS-4 sonar for the U.S. Navy's Constellation-class frigate programme to Marinette Marine (a Fincantieri subsidiary).
- Thales won two contracts for its Ground Master 200 Multi-Mission (GM200 MM/C) compact radars in 2024: with Lithuania in January and with the Netherlands in April.

#### Technology and Innovation

- ▶ The group's self-financed R&D expenditure amounted to €1.1bn in 2023, representing 6.0% of revenues.
- Thales and Indra Sistemas signed a cooperation agreement in February 2024 to develop technologies related to radar systems, cybersecurity, communication systems and simulation.
- ▶ In March 2024, Thales announced the launch of cortAlx, an entity that brings together its artificial intelligence (Al) capabilities in the fields of research, sensors and systems. The aim is to promote the integration of Al technologies into the group's various activities.



# THALES ALENIA SPACE

French-Italian aerospace manufacturing company majority-owned by Thales, and a global leader in satellites, space infrastructure and space navigation systems

# BUSINESS AREAS

Platform manufacturer, systems integrator/ equipment supplier

- Satellites
- ► Satellite platforms (satellite buses)
- Ground control seament
- Navigation systems
- Space systems and space exploration

#### **GOVERNANCE**

Chairman	Massimo Comparini
of the Supervisory board	Massimo Companni
Chairman and CEO	Hervé Derrey
Chief Operating Officer	Bertrand Maureau

#### OWNERSHIP STRUCTURE

Symbol	
Listed on Unli	sted group
Market Cap	
Major shareholders (as of 10.10.2024)	
Thales	67%
Leonardo	33%

# KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	1,850	2,150	2,150	2,200
Δ (%)	≈ -14%	≈ 16.2%	≈ 0%	≈ 2.3%
Defence (%)	N/A	N/A	N/A	N/A
Export (%)	N/A	N/A	N/A	N/A
Operating profit/loss	N/A	N/A	N/A	N/A
Operating margin	N/A	N/A	N/A	N/A
Net income	N/A	N/A	N/A	N/A
Order book	N/A	N/A	N/A	N/A
Employees	7,700	7,929	8,550	8,600

# REVENUE BY BUSINESS SEGMENT (%)



# MAIN JOINT VENTURES AND ASSOCIATES\* REVENUE BY REGION (%)

Name	%	Country
ALTEC	63.75%	Italy
Pyxalis	15.53%	France
RascomStar	12.36%	Mauritius
NorthStar Earth and Space	N/A	Canada

#### \*In November 2024, the U.S. company BlackSky acquired Thales Alenia Space's stake in their joint venture LeoStella.



ID EXPORT PARTNERSHIPS	Airbus	Saltan N	anotolic.	a Sistema	ido Thales	HB NO	throp Gru	\$000 5000 C
Satellites								
Syracuse IV military communications satellites	• •			•				
Spainsat New Generation (NG) communications satellites	•		•					
SICRAL 3 secure satellite communication system				•				
CSO Earth observation satellite programme	•							
CERES space-borne military intelligence system	•							
COSMO-SkyMed Second Generation (2G) Earth observation satellite system				•				
Satellite platforms (satellite buses)								
Space INSPIRE (INstant SPace In-orbit REconfiguration) flexible platform	•	•						
NIMBUS platform (IRIDE future Earth observation constellation)				•				
Spacebus NEO platform	•							
Satellite navigation systems								
Galileo 2nd Generation (G2G) programme (prime contractor for 6 satellites, ground mission segment, system engineering activities)	•			•			•	
European Geostationary Navigation Overlay Service (EGNOS)			•	•	•			
Space systems and space exploration								
EuroHAPS project (development of 3 stratospheric demonstrators)				•			•	•
ExoMars 2028 mission (prime contractor and equipment supplier)	•			•	•			
Elements of the Lunar Gateway space station						•		
LEO Cargo Return Service space transport programme								
Cygnus Pressurized Cargo Module (PCM)						•		

#### Business trends

- ► Thales Alenia Space (TAS) revenues increased 2.3% in 2023, to €2.2bn. Observation, Exploration and Navigation (OEN) and Defence activities recorded strong growth and generated two-thirds of revenues, compared with one-third for commercial telecommunications activities, where global demand got weaker.
- To improve profitability, Thales Alenia Space announced in March 2024 that it would cut 1,300 jobs, including 1,000 in France at the Toulouse and Cannes sites (out of a total workforce of around 4,500) and 300 in Belgium, Spain and the UK. Applicable in 2024 and 2025, the internal mobility plan provides for employees to be reassigned to other Thales group activities.
- Thales Alenia Space is one of the operators, mainly alongside Airbus Defence and Space and satellite operators Eutelsat, Hispasat and SES, who submitted a bid for the future European IRIS<sup>2</sup> constellation (Infrastructure for Resilience, Interconnectivity and Security by Satellite). Part-financed by the European Union and the European Space Agency (ESA), the constellation is to be developed under a public-private partnership. OHB, Telespazio (another joint venture between Thales and Leonardo), Thales, Deutsche Telekom, Orange and Hisdesat are also involved in the project.

#### Home markets (France, Italy)

- ► Thales Alenia Space signed a €22m contract with the Italian Space Agency in March 2024 for phase B1 of the I-MIM (International Mars Ice Mapper) mission. This two-year phase aims to develop the communication system and the LDR (Large Deployable Reflector) antenna that will connect the infrastructures on Mars and on Earth.
- ► Thales Alenia Space was selected by ESA to develop one of the two LEO-PNT (Low Earth Orbit Positioning Navigation and Timing) orbital demonstrators, designed to strengthen the Galileo constellation. TAS signed a €78m contract in March 2024 to act as prime contractor for the programme, covering the space segment (launch of five satellites), the ground and test segments and in-orbit operations.
- ESA relaunched the ExoMars space mission, suspended in 2022, and awarded Thales Alenia Space a €522m framework contract in April 2024 to oversee the development of a European rover, scheduled for launch in late 2028. As prime contractor for the project, TAS will design the Entry, Descent and Landing Module (EDLM) and integrate the Analytical Laboratory Drawer (ALD) onboard the rover.
- ► Thales Alenia Space signed a €25m contract with ESA in May 2024 for the first two-year phase of the development of a reusable vehicle and a cargo return service to and from space stations in low-Earth orbit (LEO Cargo Return Service). A cargo delivery mission to the International Space Station (ISS) is planned for the end of 2028.

# Export markets

- In February 2024, Thales Alenia Space signed a contract with U.S. equipment manufacturer Ball Aerospace (acquired by BAE Systems in early 2024) to supply communications equipment (repeaters, modulators and amplifiers) for NASA's NEO Surveyor mission, scheduled for launch in 2028.
- In May 2024, Japanese satellite communications operator SKY Perfect JSAT placed an order with Thales Alenia Space for a satellite based on the Space Inspire platform, named JSAT-31. The satellite is due to be launched in 2027 and will cover Asia and Oceania.

# Technology and Innovation

Thales Alenia Space was selected in March 2024 to lead a consortium tasked with developing the Synthetic Aperture Radar (SAR) instruments for the two Harmony Earth observation satellites (10th mission of ESA's Earth Explorer programme), scheduled for launch by 2029.



# THYSSENKRUPP MARINE SYSTEMS (TKMS)

Naval branch of the mainly civilian industrial conglomerate thyssenkrupp, world's largest exporter of submarines, and parent company of Atlas Elektronik

#### **BUSINESS AREAS**

Platform manufacturer and systems integrator

- Surface ships
- Submarines
- Underwater weapons
- Autonomous systems (USVs, UUVs)
- Combat systems and mine warfare systems
- Sonar and acoustic systems
- Equipment and MRO services

#### **GOVERNANCE**

Chief Executive Officer	Oliver Burkhard
Chief Operating Officer	Dirk Steinbrink
Chief Financial Officer	Paul Glaser

#### KEY FIGURES (Fiscal year ended: September 30th)

€ millions	2019-20**	2020-21	2021-22	2022-23
Revenue	1,760	2,022	1,831	1,839
Δ (%)	-2.22%	14.89%	-9.45%	0.44%
Defence (%)	N/A	N/A	N/A	N/A
Export (%)	82%	82%	74%	76%
Operating profit/loss*	20	26	32	80
Operating margin*	1.14%	1.29%	1.75%	4.35%
Net income	N/A	N/A	N/A	N/A
Order book	6,035	10,789	13,615	12,630
Employees	6,355	6,534	6,943	7,772

<sup>\*</sup>Adjusted operating profit/loss (EBIT)

#### OWNERSHIP STRUCTURE

8	symb	ol
1	ictor	١.

Listed on Unlisted division
Market Cap

Major shareholders (as of 10.10.2024)

thyssenkrupp 100%

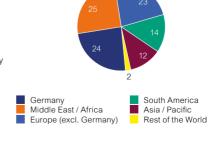
# REVENUE BY BUSINESS SEGMENT (%)



# MAIN JOINT VENTURES AND ASSOCIATES

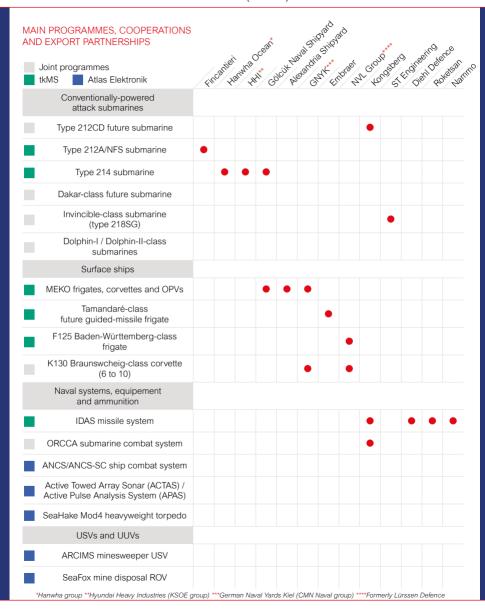
#### Name Country Águas Azuis Construção Naval 75% Brazil Kta Naval Systems 50% Norway Atlas Flektronik - LIAF 49% UAF MTG Marinetechnik 49% Germany Blohm + Voss German Naval 40% Oatar Technology South CybiCOM Atlas Defence 40% Africa Hellenic Shipyards 24.9% Greece

# REVENUE BY REGION (%)



<sup>\*\*</sup>Figures restated

# THYSSENKRUPP MARINE SYSTEMS (TKMS)



# THYSSENKRUPP MARINE SYSTEMS (TKMS)

#### STRATEGIC HIGHLIGHTS

#### Business trends

- The naval branch of the German conglomerate thyssenkrupp, thyssenkrupp Marine Systems (tkMS) generated revenues of €1,839m in 2022-2023, virtually unchanged year-on-year (+0.4%). During the year, the division delivered two frigates to Egypt and a submarine to Singapore.
- tkMS has historically been involved in the design and construction of submarines and the design of surface vessels (construction being largely subcontracted). Since the integration of Atlas Elektronik in 2017, tkMS is also active in the design and production of naval equipment and systems.
- In October 2024, the American investment firm Carlyle decided not to acquire a majority stake in tkMS. Thyssenkrupp aims to withdraw from its marine arm, valued at around €1.5bn, by 2026. The group is considering various options, including a total or partial sale (with the German state potentially taking a minority stake) and a stock market flotation.

#### Home market

- tkMS generated 24% of its revenues in its domestic market in 2022-2023. The division is also expected to benefit from future German Navy programmes, in particular the supply of additional Type 212CD submarines, a third batch of K130 corvettes and the future F127 air defence frigates.
- In February 2024, Germany's Federal Office of Bundeswehr Equipment (BAAINBw) extended the technical and logistical support contract with tkMS and NVL Group for the four F125 frigates, commissioned between 2019 and 2022, for a further 5 years, or until March 1st, 2029.
- tkMS announced in September 2024 the completion of the Critical Design Review for the six Type 212CD submarines (two for the German Navy and four for the Royal Norwegian Navy). Deliveries are scheduled between 2029 and 2035 for Norway and between 2032 and 2034 for Germany. Both countries may order additional units.
- In September 2024, tkMS and NVL Group joined forces to build the German Navy's future F127 frigates, for which tkMS offered its MEKO A-400 AMD (Air Missile Defense) frigate. Up to six ships could be ordered, with the first unit expected to enter service in 2034.

#### Export markets

- tkMS is currently participating in a tender in India, in partnership with Mazagon Dock Shipbuilders, for the supply of six submarines (P-75I programme), and is competing with Navantia. On the other hand, tkMS' appeal against the award to Naval Group of the contract to supply four submarines to the Netherlands was rejected in July 2024.
- ▶ In December 2023, tkMS delivered the third of four MEKO A-200EN frigates to the Egyptian Navy. The fourtth unit was launched at the Alexandria shipyard (Egypt) and is scheduled for delivery in October 2025.
- In January 2024, the Hellenic Navy appointed tkMS and Thales to oversee the mid-life upgrade of its four MEKO 200 HN frigates, which have been in service since the mid-1990s. Modifications to the ships will be carried out by a local shipyard, under subcontract to tkMS.
- ► The last Invincible-class submarine (type 218SG), named Inimitable, was launched at the Kiel shipyard in April 2024 and is scheduled for delivery to the Republic of Singapore Navy in 2025.
- ▶ In June 2024, tkMS laid the keel for the second of the four Tamandaré-class frigates ordered by the Brazilian Navy, scheduled to enter service between late 2025 and 2028.
- In November 2024, tkMS launched the third and last Dolphin-II-class submarine, scheduled for delivery in 2025, and launched construction of the first of three Dakar-class submarines for the Israeli Navv.
- tkMS and Mitsubishi Heavy Industries (MHI) were shortlisted in November 2024 for Australia's SEA 3000 programme to procure up to 11 general purpose frigates. tkMS offered the MEKO A-200-class and MHI the Mogami-class. Delivery of the first unit is scheduled for 2029.



# TURKISH AFROSPACE

Aerospace and defence company with civil and military activities, major aeronautics and space supplier to the Turkish Armed Forces, and 50th-largest defence contractor

# BUSINESS AREAS

Platform manufacturer and equipment supplier

- Military aircraft (fighter aircraft, trainer aircraft, helicopters)
- Unmanned aircraft systems
- Commercial and military aerostructures
- Propulsion systems
- Satellites
- MRO and modernisation services

# **GOVERNANCE**

Chairman	Ömer Cihad Vardan
Chief Executive Officer	Mehmet Demiroglu
Executive VP, Aircraft	Atilla Dogan

#### KEY FIGURES (Fiscal year ended: December 31st)

€ millions	2020	2021	2022	2023
Revenue	1,317	1,324	1,746	2,041
∆ (%) [\$]*	-33.66%	4.12%	17.43%	19.96%
Defence (%)	84%	83%	81%	82%
Export (%)	N/A	N/A	N/A	N/A
Operating profit/loss	N/A	N/A	N/A	N/A
Operating margin	N/A	N/A	N/A	N/A
Net income	N/A	N/A	N/A	N/A
Order book	N/A	N/A	N/A	N/A
Employees	≈ 11,000	≈ 14,000	14,167	≈16,000

<sup>\*</sup>Variation based on revenue in U.S. dollars See €/\$, p.9

# OWNERSHIP STRUCTURE

Symbol				
Listed on U	Unlisted group			
Market Cap				
Major shareholders (as of 10.10.2024	)			
Turkish Armed Forces Foundation	54.49%			

(TSKGV)	54.49%
Defence Industry Agency (SSB)	45.45%
Turkish Aeronautical Association (THK)	0.06%

# REVENUE BY BUSINESS SEGMENT (%)



# MAIN JOINT VENTURES AND ASSOCIATES REVENUE BY REGION (%)

Name	%	Country
TUSAS Engine Industries	50.5%	Turkey
TAAC	50%	Turkey
GSatCom	50%	Turkey
TR Mekatronik	50%	Turkey
CTech	49%	Turkey
Airbus Military	5.6%	Spain



MAIN PROGRAMMES, COOPERATIONS AND EXPORT PARTNERSHIPS	Airous	eonardo Sik	orsky.	K System	solsar Solsar	ing of	. Aerosi	pace Til	jitak UZ	des Ale	nia Space
Fighter and trainer aircraft											
TF Kaan future air superiority fighter aircraft			•	•	•						
Hürjet future advanced trainer and light attack aircraft						•					
Hürkus-A/B trainer aircraft and Hürkus-C light attack aircraft				•							
Military helicopters											
T625 Gökbey future utility helicopter				•		•					
T70 utility helicopter*		•		•		•					
T929 ATAK 2 future heavy attack helicopter											
T629 future attack helicopter											
T129 ATAK attack helicopter**	•			•		•					
Unmanned aircraft systems											
Aksungur and Anka III UCAVs				•		•	•				
Anka surveillance and reconnaissance MALE UAV				•		•	•				
Aerostructures											
A400M transport aircraft (forward center fuselage, paratrooper doors, tailcone, fins, spoilers)	•										
H215M helicopter (fuselage, tail, canopy)	•										
KUH-1 Surion helicopter (forward fuselage)											•
Satellites											
Türksat 6A communications satellite				•				•			
Göktürk family of Earth observation satellites				•			•	•	•	•	

"Sublicensed production of Sikorsky's S-70i "Based on Leonardo's A129 Mangusta ""Subsidiary of Lockheed Martin
""Formerly GE Aviation, through TUSAS Engine Industries """Space Technologies Research Institute (Turkey) """Korea Aerospace Industries

#### Business trends

- ► Turkish Aerospace revenues increased 20% in U.S. dollars in 2023, to \$2,206m (€2,041m). Defence activities contributed to this growth, particularly on certain programmes for the Turkish Armed Forces (Hürkus and P-72 TMPA aircraft, T70 and T129 ATAK helicopters, Aksungur and Anka MALE UAVs, etc.). The upturn in production rates in the civil aeronautics sector, for which the group supplies aerostructures (in particular to Airbus and Boeing), also boosted sales.
- Turkish Aerospace has been building on technology skills acquired through programmes under U.S. and European licences. The group now offers one nationally designed aircraft, the Hürkus trainer and light attack aircraft, and is completing the development of three other aircraft (the Hürjet advanced trainer and light attack aircraft, and the T625 Gökbey and T929 ATAK 2 helicopters).
- In July 2024, SpaceX's Falcon 9 Block 5 launcher placed the Türksat 6A telecommunications satellite into geostationary transfer orbit. The satellite is the first of its kind to be developed entirely in Turkey.

#### Home market

- Turkish Aerospace is a major supplier to the Turkish Armed Forces in the aviation and space sectors. The group is the prime contractor for most of Turkey's major aeronautical programmes, including the future TF Kaan air superiority fighter aircraft.
- In April 2023, Turkish Aerospace handed over to the Turkish Navy the sixth and last ATR 72-600 passenger aircraft (Leonardo) modified as a P-72 TMPA maritime patrol aircraft (Meltem III project). Equipped with the Thales AMASCOS system, the aircraft have anti-ship and anti-submarine warfare capabilities and can carry out search and rescue missions.
- Turkish Aerospace signed several contracts with the Turkish Ministry of National Defense in April 2024, for the supply of twelve Hürjet Block 1 advanced trainer and light attack aircraft, twenty T625 Gökbey utility helicopters and forty Hürkus-B trainer aircraft.
- ▶ In July 2024, the group delivered an 18th T70 utility helicopter to the Turkish Air Force (out of 109 units ordered).

#### Export markets

- In terms of exports, Turkish Aerospace is mostly present in Africa and in Asia. The group also supplies aerostructures to U.S. and European aircraft manufacturers.
- Turkish Aerospace won several contracts in 2023, for its Anka-S surveillance and reconnaissance MALE UAV (twelve units for Indonesia, ten for Algeria and two for Chad) and its Aksungur combat MALE UAV (an unspecified number for Angola).
- Turkish Aerospace signed a contract with Azerbaijan's Ministry of Defense in July 2023 to upgrade the fleet of Su-25 Grach ground attack aircraft (United Aircraft Corporation, Rostec Group), in particular by integrating guided bombs and missiles and installing new avionics.
- ▶ In November 2023, the group completed delivery of the six T129 ATAK attack helicopters ordered by the Philippine Air Force in 2020. The fourth of the six T129 ATAK helicopters ordered by the Nigerian Air Force was also delivered in September 2024.

#### Technology and Innovation

Two of the group's platforms made their maiden flights in late 2023/early 2024: the Anka III UCAV, a wing-shaped version of the Anka-S surveillance and reconnaissance UAV capable of carrying 1.2 tonnes of munitions, in December 2023; and the TF Kaan air superiority fighter aircraft, powered by two GE Aerospace F110-GE-129 turbojet engines, in February 2024.

# PROJECT TEAM (Xerfi Specific)

Eline Maurel (Research Director)

Jérémy Robiolle (Development Director)

# STEERING COMMITEE DGA/DID

Anne Manenc and Michel Boivin with the support of the DID's sector offices and financial expertise

LAYOUT and GRAPHICS

Xerfi Specific

DGA institutional website www.defense.gouv.fr/dga

The armaments portal https://armement defense gouv fr

French defence procurement agency (DGA)

Defence Industry Directorate

60. bd du général Martial Valin - CS 21 623 - 75 509 Paris Cedex 1.









