



## COMPANY OVERVIEW

*“We care. We perform. We deliver!”*

Civitanavi Systems is one of the main players in the sector of high-tech inertial navigation and stabilisation systems.

Thanks to a vertically integrated business model and a constant desire for technological innovation, Civitanavi excels in the design, development and production of high precision inertial navigation and stabilisation systems. The application of proprietary methods and technologies, based on FOG (Fiber Optic Gyroscope) and MEMS (Micro Electro Mechanical Systems) technology, enables the company to best meet the specific needs of its customers, depending on the sector in question: aerospace, defense and industrial. These procedures, part of a clear and effective long-term growth and expansion strategy, make the group an excellence in its field of activity.

Founded as a start-up in 2012, Civitanavi was recognised as an innovative SME in 2017 and today is presented as a benchmark in the global competitive scenario. With the aim to constantly improve, a team of global experts in the field of inertial technologies grants the company to offer the highest standards of quality, thanks to the introduction of increasingly cutting-edge techniques and components. The company operates from its registered office in Pedaso (FM) and two further sites in Ardea (RM) and Casoria (NA), with a staff of 121 employees working throughout Italy as of December 31st 2021.

## MANAGEMENT

The company operates through a high-profile international team of some of the world's leading inertial navigation experts, with a proven and extensive knowledge of the sector.

- **ANDREA PIZZARULLI**

*CEO and co-founder*

Former Director of the Advanced Research Centre at GEM Elettronica, a company specialising in inertial navigation systems for Defence. He was founder and CEO of Xanto Technology, a startup developing integrated cryptography systems. From 2000 to 2005 he worked at Terawave Communication in Silicon Valley, as Chief Engineer for optronic subsystems for fibre optic telecommunications.

- **MIKE PERLMUTTER**

*Executive VP and co-founder*

Former President of Skylight Navigation and still a member of Converge Venture Partners. Co-founder of Fibersense Technology (1994), a world leader in advanced navigation and inertial stabilisation technology. Previously, he worked on the development of various gyroscopes at Raytheon and Northrop Grumman. 3 degrees from MIT and 17 patents granted.

- **MASSIMO VEROLA**

*Director Engineering*

- Program Manager at Northrop Grumman Italy
- Technical Leader in Quadrics
- 25 years of experience in Software Engineering, Control System Engineering, Parallel Computing, Avionics Systems and Inertial Navigation.

- **ROBERTO SENATORE**

*Chief Technology Officer*

- Extensive experience in inertial systems, software/firmware development and VHDL architecture design.

- **ALAN E. KAILE**

*VP Business Development Aerospace and Defense*

- Senior Consultant at Selex ES UK and Italy
- Inertial business development at Northrop Grumman Italy
- Sales, marketing and engineering at Aviointeriors, Litton Industries, GEC Marconi and Bae Systems

- **STEVE TOGHILL**

*Director of Business Development Industrial Products*

- R&D Engineer at Litef
- Development of Litef's first FOG AHRS system (LCR92), an industry benchmark product

- **MARIO DAMIANI**

*Strategies & Institutional Relationships*

- Forty years of experience in the A&D sector
- Business Development, Sales and Management in the avionics sector at Elmer, GEC Marconi, Selex Comms, Selex ES, Finmeccanica
- Board member of Euromids, Essor and Sirio Panel.

- **ALESSANDRO SGUAZZOTTI**

*Director of Operations*

- Fifteen years of professional experience at CISCO Systems
- Production Manager in a Petro-Oil Company.

- **LETIZIA GALLETTI**

*CFO and Investor Relation Director*

- Audit Senior Manager at Ernst & Young S.p.A.
- Chartered Accountant and Auditor
- Extensive experience in business consulting and auditing of international groups, listed companies and middle market companies.

## SHAREHOLDING

The Company is directly controlled by Civitanavi Systems Ltd, whose majority shareholders are the two co-founders Andrea Pizzarulli and Mike Perlmutter.

The founding shareholders are joined by two investors and a 5.4% share is represented by own shares allocated to employees.

## VALUES

- Teamwork: *"It's a joint effort"*.
- Goal-oriented: *"We take things seriously"*.
- Technology: *"Devoted to innovation"*.
- Customer satisfaction: *"We want to solve our customers' problems"*.
- Loyalty and Integrity: *"Whatever you do, do it right"*.

## BUSINESS AREAS

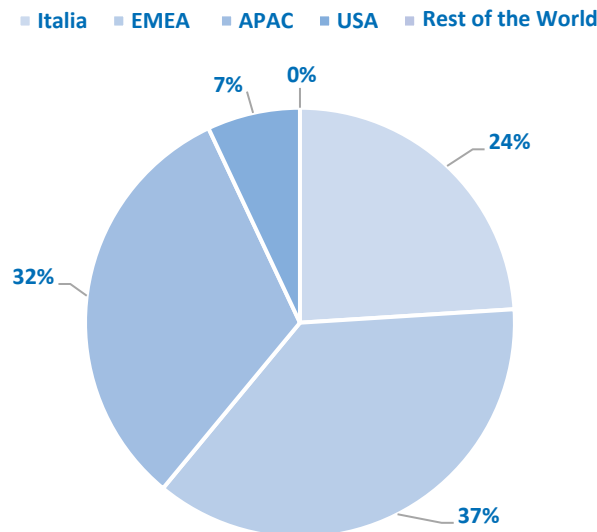
Civitanavi Systems operates in the technologically innovative sector of inertial navigation, with reference to the following business areas:

- aerospace and defense (in the space, land, aeronautical and naval sectors);
- industrial (mining and oil & gas) for the construction of tunnels (tunnelling) and horizontal tunnels (horizontal drilling).

Civitanavi is positioned in the high-end<sup>1</sup> segment within the inertial navigation sensors market thanks to the exceptional accuracy of its products, that have classified the company as a Tier 2<sup>2</sup> operator. Its objective is to become a Tier 1<sup>3</sup> supplier through an articulated investment plan aimed towards the streamlining and innovation of production processes, to achieve vertical integration of the entire value chain in the medium to long-term period.

## GEOGRAPHICAL AREAS

### % TURNOVER AS OF DECEMBER 31<sup>ST</sup> 2021 BY GEOGRAPHICAL AREA



<sup>1</sup> The term high-end (or high-performance) inertial sensors refers to all types of sensors with the exception of those used in consumer, telephone and automotive applications. The main discriminating characteristic is therefore the measurement accuracy of the sensors.

<sup>2</sup> The companies defined as Tier 2 are the main suppliers of Tier One companies, which are essential for the latter to supply the OEMs.

<sup>3</sup> Tier 1 suppliers are the companies directly supplying the OEM (original equipment manufacturer).

## PRODUCTS AND TECHNOLOGIES

Inertial systems for navigation and stabilization are motion measurement devices based on inertial sensors (i.e. Gyroscopes and Accelerometers inside an IMU - Inertial Measurement Unit), capable of providing precise indications on position, attitude (roll and pitch), orientation with respect to geographic north, angular velocity and linear accelerations of vehicles (such as ships, aircraft and space vehicles), without the need for external references such as satellite navigation devices or those based on the earth's magnetic field.

Full ownership of the know-how developed in-house guarantees Civitanavi a higher quality and reliability of its systems, making it highly competitive compared to much larger international market players. The solutions offered by the company stand out precisely because of the versatility of the technologies and methods used in their design and subsequent production, as well as a high degree of customisation aimed at meeting customers' needs in the best possible way. In fact, thanks to the application of FOG and MEMS technologies, Civitanavi sensors are particularly effective, as they allow autonomous and high-precision inertial navigation, stabilisation and precise orientation of the mobile device to which they are applied.

Below, we summarise the main product categories:

### **IMU**

System used for "mission critical" applications for placing satellites in Earth orbit for various uses (Earth observation, communication, etc.) and on board space transport systems (including unmanned).

### **PETRA**

System applied to vehicles on the ground and in motion for stabilising them during adverse weather events.

### **ARGO**

System used for "safety critical" applications in order to guarantee the stabilisation of flight or navigation in case of lack of a global navigation satellite system (GNSS).

### **NAUTILUS**

System applied on oil platforms for the stabilization of the same or on boats suitable for monitoring the seabed.

### **CFA100IC**

System used for long tunnel boring operations where it is necessary to drill through the mountain from two opposite directions.

### **CFA100M**

System applied on drilling equipment that enables the alignment of the drill in underground quarry drilling operations.

### **KRIO**

Stabilisation system applied on naval and underwater exploration or inspection devices, such as ROVs - (Remotely Operated Underwater Vehicle).

### **DOWNHOLE**

A system with miniaturised dimensions, required for small diameters, which allows the geographical north to be determined in an underground hole with horizontal drilling.



## FINANCIAL RESULTS

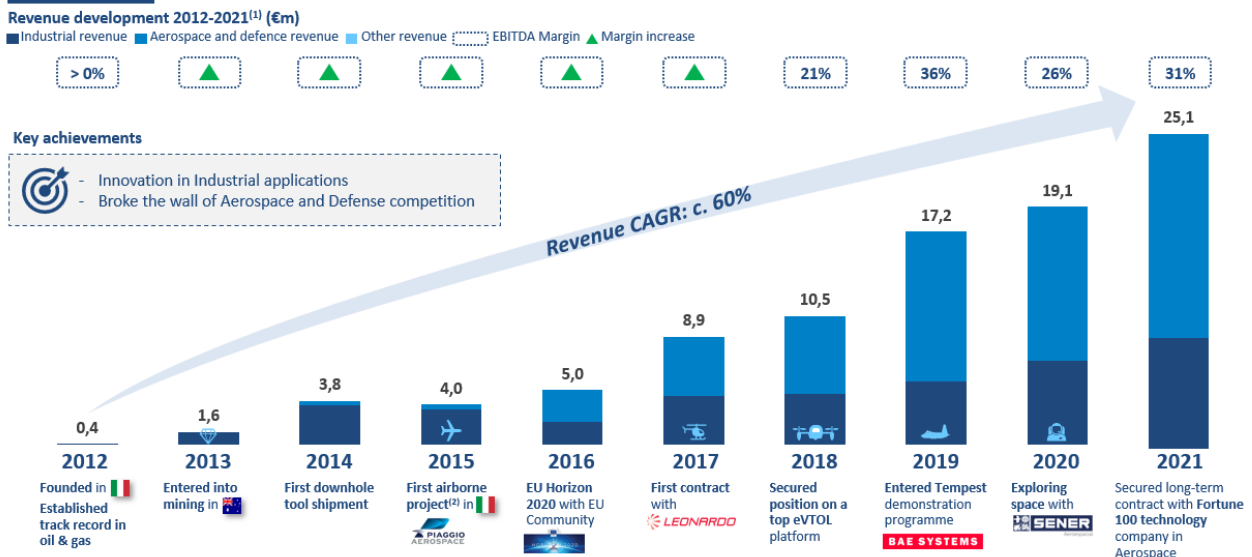
The NFP at December 31<sup>st</sup> 2021 was of EUR 2.9 million (reclassified according to IFRS accounting standards).

<i>in EUR thousands</i>	As of December 31st 2021	As of December 31st 2020	As of December 31st 2019
<b>TOTAL REVENUE</b>	25,142	19,135	17,177
<b>EBITDA</b>	7,762	5,010	6,142
<b>EBITDA MARGIN</b>	31%	26,2%	35,8%
<b>NET INCOME</b>	4,879	5,891	3,814

*In accordance with IFRS accounting standards*

An important indication of the growth of the Company's activities is given by the evolution recorded by the orders acquired within a fiscal year, whether they have been fulfilled within the same (so-called "Booking"). During the last years 2018-2021, the Company's Booking increased by EUR 13.9 million, EUR 13.5 million, EUR 18.1 million and EUR 29.8 million, respectively; the latter represented a record in terms of orders acquired during an annual period.

From 2012 and 2021, the company grew profitably while maintaining a positive revenue trend, registering a CAGR of c.60%.



## COMPETITOR POSITIONING

Thanks to the industry expertise of its team and the level of sophistication of its proprietary technologies, Civitanavi is positioned as a major player on a global market, the latter dominated largely by a few large players. Its main competitors are the US companies Honeywell (and Northrop Grumman, the French companies Safran and Thales, and the Israeli company IAI (Israel Aerospace Industries Ltd.)

Despite its smaller size in terms of turnover and market share (0.4%), Civitanavi competes with the major players in the sector, as it is the only operator able to develop and produce high performance ITAR free<sup>4</sup> inertial systems, with technology suitable for both navigation and aircraft stabilisation. Civitanavi stands out from its competitors above all because of the exceptional variety of application areas and the cost-effectiveness, combined with extremely high quality, of its inertial systems, which bring significant benefits:



**MINOR COSTS OF DEVELOPMENT**



**GREATER QUALITY AND TRUSTWORTHINESS OF SYSTEMS**



**REDUCTION OF WAREHOUSE STOCK**



**TAILOR-MADE SOLUTIONS**



**INTEGRATED AND FLEXIBLE ORGANISATIONAL MODEL**



**ORGANIC REVENUE GROWTH COMBINED WITH HIGH PROFITABILITY  
AND CASH GENERATION**

---

<sup>4</sup> Inertial systems not subject to US regulations controlling the manufacture, sale and distribution of defence and aerospace items.



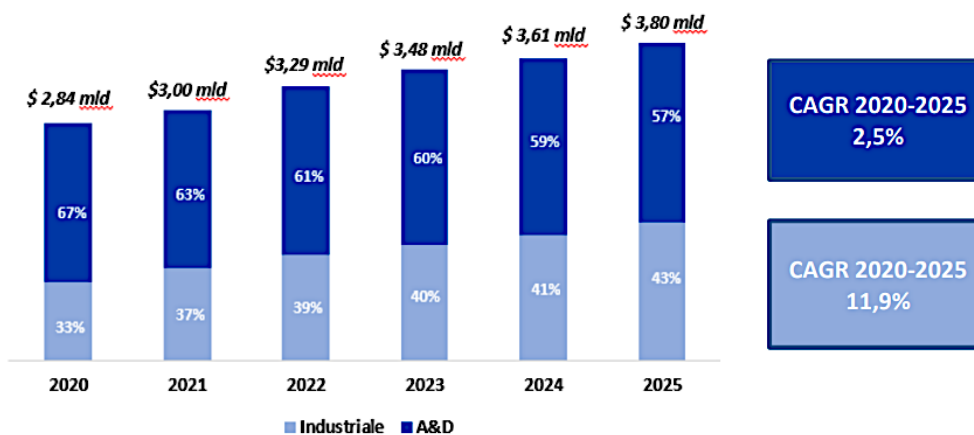
**MANAGEMENT WITH PROVEN EXPERIENCE AND PROFESSIONAL COMPETENCE IN THE TECHNICAL AND STRATEGIC FIELD OF REFERENCE**



**CLEAR AND EFFECTIVE GROWTH AND EXPANSION STRATEGY**

## GROWTH STRATEGY

Among the main factors that will drive the company's growth is the breadth and diversity of global market demand, which is growing at a rapid pace. Indeed, the high-end inertial market is expected to reach €3.8bn by 2025, fueled in particular by the industrial segment (CAGR 11.9%) and the A&D segment (CAGR 2.5%). Despite the significant growth expected in the market, CNS has historically outgrown its industry, thanks to its distinctive factors.



Fonte: Yole Développement, "High end inertial Senosors for Defense, Aerospace & Industrial Application" – Market and Technology report 2020

Over the course of a few years, Civitanavi has expanded and strengthened its presence in international markets such as Australia, Canada, South Africa, Taiwan, Turkey, the United Kingdom and the USA, going beyond the boundaries of its national reference market. The growth plan undertaken by the company is strongly oriented towards increasing the company's market share in high-potential markets and in geographical areas of high strategic interest, through the adoption of the following strategic lines:

- **Increased production capacity and global competitive positioning**, through the achievement of economies of scale and greater international presence;
- **Vertical integration along the value chain**, with particular reference to the emerging Urban Air Mobility market, and consequent increase in R&D investments to consolidate proprietary technologies;
- **Innovation and marketing of new products**, through a gradual but substantial improvement in terms of accuracy, size, weight and power;
- **Consolidation and development of a competitive corporate structure**, based on a significant increase in the workforce in the medium-long term and the simultaneous maintenance of a competitive and flexible work team;
- **Strengthening and developing new commercial partnerships with important OEMs** (original equipment manufacturers) and evaluating possible acquisitions of companies;
- **Implementation of a marketing strategy** aimed at consolidating brand awareness and improving its standing.

## HISTORY

**2012**\_ Constitution of the company by Andrea Pizzarulli and Michael Perlmutter; entry into the Oil&Gas sector;

**2013**\_ Entrance into the mining sector and achievement of ISO9001;

**2014 - 2015**\_ Acquisition of the first two aerospace programmes;

**2015**\_ Entrance into the Oil & Gas sector;

**2016**\_ Signing a contract within the "SME Innovation H2020" programme with the European Union (called NICENAV) to co-finance the development of the first European ITAR-free system;

**2017**\_ Signing of the first contract with Leonardo S.p.A. and of a three-year partnership with a leading Turkish company in the Aerospace and Defence sector;

**2018**\_ Entry into the Horizontal Drilling sector and achievement of EN9100 certification; entry into the Urban Air Mobility sector;

**2019 - 2020**\_ Optimization of ADOP (Alternative Procedures to Design Organisation) approval, required for civil avionics equipment design, and POA (Production Organisation Approval) approval required for civil avionics equipment design;

**2020**\_ Design of the inertial system as part of a space launch programme in collaboration with the European Space Agency (ESA);

**2021**\_ Signing of a contract for the development of an aerospace inertial system for distribution in the US and internationally; Civitanavi Systems becomes an S.p.A.;

**2022**\_ Civitanavi goes public on the main market, Euronext Milan.

