

Patria

ANNUAL REVIEW

Annual Report 2020



ANNUAL REVIEW

ANNUAL REVIEW

PATRIA IN BRIEF

OUR VALUES

PATRIA 100 YEARS

YEAR 2020

KEY FIGURES

REVIEW BY THE PRESIDENT AND CEO

OPERATING ENVIRONMENT

STRATEGY

DIGITALISATION

BUSINESS UNITS

AVIATION

SYSTEMS

INTERNATIONAL SUPPORT PARTNERSHIPS

LAND

AEROSTRUCTURES

MILLOG

NAMMO

Patria's Annual Report consists of the Business Units' Review, the Corporate Responsibility Progress Report and the Financial Statements Report. Patria's Annual Report is published on the company's website at www.patriagroup.com.



Content

ANNUAL REVIEW

ANNUAL REVIEW

- 3 Patria in brief
- 4 Our values
- 5 Patria 100 years
- 6 Year 2020
- 7 Key figures
- 8 Review by the President and CEO
- 11 Operating environment
- 13 Strategy
- 14 Digitalisation

16 BUSINESS UNITS

- 17 Aviation
- 20 Systems
- 23 International Support Partnerships
- 26 Land
- 29 Aerostructures
- 32 Millog
- 36 Nammo

Patria in brief

Patria is an international provider of defence, security and aviation life cycle support services, pilot training and technology solutions. Patria provides its aerospace and military customers with equipment availability, continuous performance development as well as selected intelligence, surveillance and management system products and services. Patria's mission is to give its customers confidence in all conditions, and the vision is to be the #1 partner for critical operations on land, sea and air. Patria has several locations including Finland, Sweden, Norway, Belgium, Estonia and Spain. Patria employs approximately 3,000 professionals. Patria is owned by the State of Finland (50.1%) and Norwegian Kongsberg Defence & Aerospace AS (49.9%). Patria owns 50% of Norwegian Nammo, and together these three companies form a leading Nordic defence partnership.

www.patriagroup.com

Business units and net sales as share of group net sales

17% Aviation

provides life cycle support services for aircraft and helicopters, covering maintenance, repair and modification of fuselages, engines and equipment as well as pilot training.

16% Systems

delivers comprehensive systems and equipment to defence forces and other security authorities. Its areas of special expertise are reconnaissance, surveillance and command systems, as well as their integration and life cycle support.

15% International Support Partnerships

provides life cycle support services for aircraft and helicopters internationally. The business unit's core functions are maintenance and overhaul, modifications, spare parts and technical support.

7% Land

The key products and services include cutting-edge armoured wheeled vehicles, mortar systems and related life cycle support services. Patria AMV product family and Patria Nemo mortar system are the highest-profile products in this range.

3% Aerostructures

Designs and manufactures demanding aerospace composite structures and is actively involved in the development programmes of the new composite technologies. The core competences are the design of composite structures and efficient manufacturing processes.

43% Millog

Provides defence materiel life cycle support services to its strategic partner, the Finnish Defence Forces and to other security-critical actors. Patria owns 61.8% of Millog.

Nammo

Focuses on developing and producing ammunition and missile products, as well as environmentally sound demilitarization services. Nammo is equally owned by Patria and the State of Norway.

ANNUAL REVIEW

ANNUAL REVIEW

PATRIA IN BRIEF

» **OUR VALUES**

PATRIA 100 YEARS

YEAR 2020

KEY FIGURES

REVIEW BY THE PRESIDENT AND CEO

OPERATING ENVIRONMENT

STRATEGY

DIGITALISATION

BUSINESS UNITS

AVIATION

SYSTEMS

INTERNATIONAL SUPPORT PARTNERSHIPS

LAND

AEROSTRUCTURES

MILLOG

NAMMO

OUR VALUES

**WE WANT
TO SUCCEED**

We are proud of our work, and we want to show it.

**OUR OPERATIONS
ARE CUSTOMER
ORIENTED**

Cooperation guarantees the success of all parties.

**TOGETHER WE
CREATE SUCCESS**

We give constructing feedback. We enjoy succeeding together.

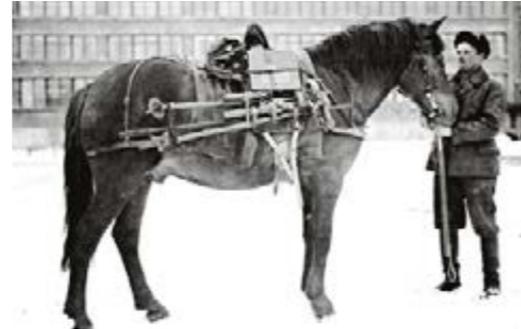
**Mission:
WE GIVE OUR
CUSTOMERS CONFIDENCE
IN ALL CONDITIONS.**

**Customer promise:
WHEN IF IS NOT
AN OPTION.**

**Employer promise:
YOU MAKE THE
DIFFERENCE.**

**Vision:
THE #1 PARTNER
FOR CRITICAL
OPERATIONS.**

Patria 100



The Finnish Air Force Aircraft Factory is established at Suomenlinna under the command of Major Arne Somersalo.

1921

1924-1927
The first results of Finnish aircraft design, the test fighters I.V.L.C24, I.V.L.C25, Haukka and Kurki are completed.

Mortar production begins at Tampella.

1932

Yhteissisu Oy is established.

1943

1959
The 122 K/60, the first field gun fully developed in Finland, is completed.

The Finnish aviation industry enters the jet engine era with the Fouga Magister.

1960

1965

The first Proto-Sisu are handed over to the Finnish Defence Forces. Patria starts the manufacturing of military vehicles.



1980-luvulla

The serial production of the Pasi XA-180 and Nasu NA-140 begins.



1996

The first single-seat Hornet F-18C is completed on the production line.



1997
Vammis Oy, Lapua Oy, Sisu Defence Oy, Vihtavuori Oy and Finavitec Oy are merged and the current Patria is established.

2004

The serial production of the Patria AMV begins. Patria AMV 8x8 vehicles are sold to Poland and Sweden, among others.



2016
The State of Finland sells 49.9% of Patria to Kongsberg Defence & Aerospace AS.



2020
A contract was signed with Saab, selected as the combat system contractor for the Squadron 2020 project, for the delivery of an anti-submarine warfare sonar system for Pohjanmaa class vessels.

Year 2020

ANNUAL REVIEW

ANNUAL REVIEW

PATRIA IN BRIEF

OUR VALUES

PATRIA 100 YEARS

» **YEAR 2020**

KEY FIGURES

REVIEW BY THE PRESIDENT AND CEO

OPERATING ENVIRONMENT

STRATEGY

DIGITALISATION

BUSINESS UNITS

AVIATION

SYSTEMS

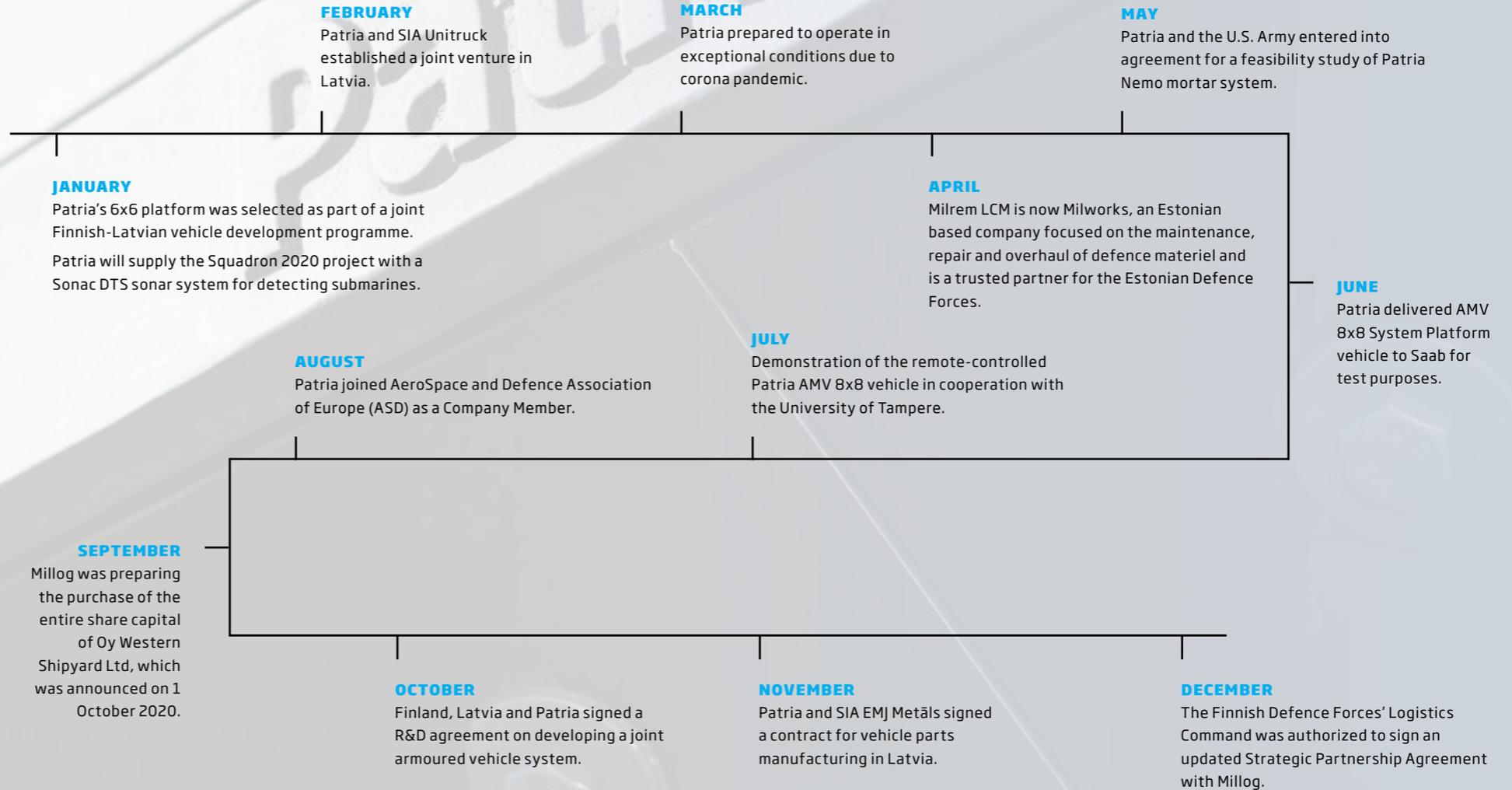
INTERNATIONAL SUPPORT PARTNERSHIPS

LAND

AEROSTRUCTURES

MILLOG

NAMMO



ANNUAL REVIEW

ANNUAL REVIEW

PATRIA IN BRIEF

OUR VALUES

PATRIA 100 YEARS

YEAR 2020

» KEY FIGURES

REVIEW BY THE PRESIDENT AND CEO

OPERATING ENVIRONMENT

STRATEGY

DIGITALISATION

BUSINESS UNITS

AVIATION

SYSTEMS

INTERNATIONAL SUPPORT PARTNERSHIPS

LAND

AEROSTRUCTURES

MILLOG

NAMMO

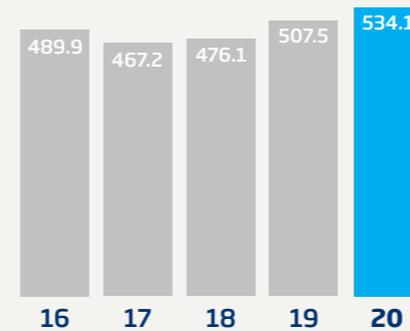
Key figures

534.1 MEUR
NET SALES

40.3 MEUR
OPERATING PROFIT

2,973
PERSONNEL

Net sales, EUR million



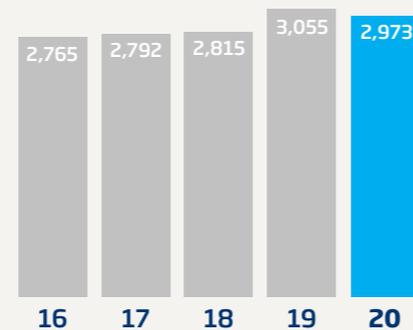
Operating profit, EUR million



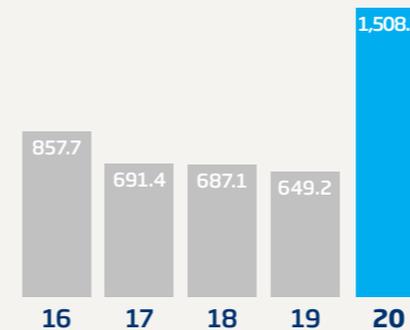
Gross investments in fixed assets, EUR million



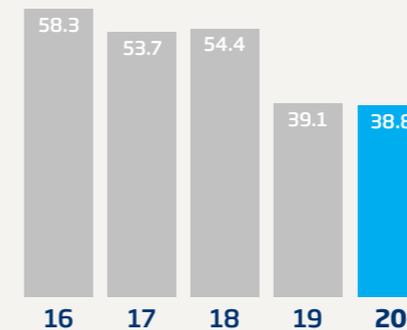
Personnel, end of period (FTE)



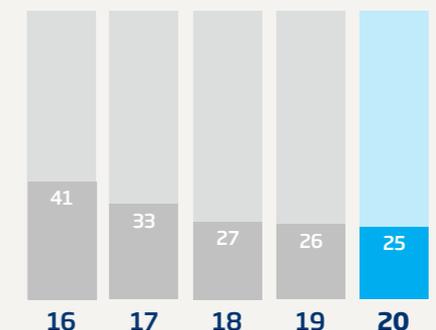
Order stock, EUR million



Equity ratio, %



Net sales outside Finland, %



As of 2018 figure personnel, end of period

ANNUAL REVIEW

PATRIA IN BRIEF

OUR VALUES

PATRIA 100 YEARS

YEAR 2020

KEY FIGURES

» **REVIEW BY THE PRESIDENT AND CEO**

OPERATING ENVIRONMENT

STRATEGY

DIGITALISATION

BUSINESS UNITS

AVIATION

SYSTEMS

INTERNATIONAL SUPPORT PARTNERSHIPS

LAND

AEROSTRUCTURES

MILLOG

NAMMO

PRESIDENT AND CEO'S REVIEW

Developing partnerships and paving the way for future growth



For Patria, 2020 was a year of strong development in terms of partnerships and our own operations in both Finland and international markets. Our new strategy, which emphasises profitable growth, internationalisation and working together, will give us a clear direction in the years to come.

Patria will be turning one hundred this year and our customer promise – *When if is not an option* – means that our operations must be one-hundred-per-cent reliable and dependable under all circumstances.

In 2020, Patria's operating methods and the cooperation models developed together with customers were really

put to the test by the COVID-19 pandemic. However, we still managed to provide our customers with good service in spite of the exceptional circumstances. We were also doing our bit to ensure security of supply and the continuity of society's core functions even during exceptional circumstances such as a pandemic.

In Patria's business units, 2020 was a year of strong development in terms of both partnerships and operations, and also a year paving the way for future growth. Additionally, it was an extremely good year financially for the Group, and our objectives were achieved in this respect. The pandemic's main impacts on Patria were seen in the civilian market, as the collapse of commercial air traffic reduced demand for both pilot training and civil aircraft components.

Global interest in Patria's products and services

Year 2020 was excellent for International Support Partnerships (ISP), which provides international life cycle support services. ISP's new organisation and operating methods are now starting to bear result. A good example is one of Patria's acquisitions, Belgium Engine Center SPRL (BEC), which specialises in the global maintenance and repair of military aircraft engines.

Systems business unit also had a good year financially, and good openings were made for project deliveries over the coming years. The biggest ongoing project in the business unit is the life cycle upgrade of Hamina class missile boats for the Finnish Defence Forces, with Patria serving as overall responsible provider, designer and main

ANNUAL REVIEW

ANNUAL REVIEW

PATRIA IN BRIEF

OUR VALUES

PATRIA 100 YEARS

YEAR 2020

KEY FIGURES

» REVIEW BY THE PRESIDENT AND CEO

OPERATING ENVIRONMENT

STRATEGY

DIGITALISATION

BUSINESS UNITS

AVIATION

SYSTEMS

INTERNATIONAL SUPPORT PARTNERSHIPS

LAND

AEROSTRUCTURES

MILLOG

NAMMO

integrator. Of the four ships to be upgraded, two missile boats were delivered to the Finnish Navy during 2020.

The highlights of Land's year were several cooperation agreements made with partners. Patria signed a research and development agreement with the States of Finland and Latvia for the joint development of an armoured vehicle system. This system is based on the Patria 6x6 vehicle platform, and series production could potentially be launched during 2021.

Patria and the U.S. Army signed a research and development agreement to determine Patria Nemo's suitability and performance as a 120 mm turreted mortar system for U.S. Army vehicles.

Deepening our strategic partnership with the Finnish Defence Forces

Millog, which provides fleet maintenance and life cycle support services, signed a renewed strategic partnership agreement with the Finnish Defence Forces. This agreement is valid until further notice and covers services to the value of approximately EUR 1.4-1.6 billion in 2021-2028.

Millog signed an agreement to acquire 100% of the shares of Oy Western Shipyard Ltd with APX-Metalli Ltd. The Company continues to be owned by Millog as an independent subsidiary which business includes docking and repairs of ships and floating structures.

Senop Oy, which is part of Millog, signed a procurement agreement with the Finnish Defence Forces for night vision combat equipment and target acquisition devices.

2020 was a year of strong growth for Nammo, which is equally owned by Patria and the State of Norway.

The company is an internationally recognised supplier of ammunition, rocket engines and demilitarisation services. It also plays an important strategic role for Patria's stakeholders in Finland. In November, the Finnish Defence Forces signed a partnership agreement with Nammo Lapua Oy and Nammo Vihtavuori Oy to ensure security of supply for Finland's ammunition and explosives sector over the coming years.

New strategy will lead the way in the coming years

In August, the Board of Directors approved Patria's new Horizon 2025 strategy. As its name says, the strategy will steer the Group's activities over the next five years. In the new strategy, the Group will be viewed as an even more cohesive entity: we are building a joint offering that brings together all of Patria's products and services.

Profitable growth lies at the heart of our new strategy and will be sought from international markets in areas such as maintenance, repair and overhaul. In addition to acquiring new customers, Patria promises to continue nurturing and developing existing customer relationships, so that we can provide them with cost-effective and performance-enhancing solutions.

Patria's basic mission is to ensure and develop security of supply. This requires financial resources, and income from international markets is also needed in addition to domestic revenue streams.

Having a competitive and cost-effective defence sector is also important for national economies, as the sector's companies generate jobs, expertise and tax revenues for the country.



In the new strategy, the Group will be viewed as an even more cohesive entity: we are building a joint offering that brings together all of Patria's products and services.

Working together towards our goals

This year, in addition to achieving the targets set for 2021, we will be focusing on putting our Horizon 2025 strategy into practice. Leadership development plays a key role in this new strategy.

In addition to profitable growth, the new strategy requires improved operational efficiency. The latter will

ANNUAL REVIEW

PATRIA IN BRIEF

OUR VALUES

PATRIA 100 YEARS

YEAR 2020

KEY FIGURES

» REVIEW BY THE PRESIDENT AND CEO

OPERATING ENVIRONMENT

STRATEGY

DIGITALISATION

BUSINESS UNITS

AVIATION

SYSTEMS

INTERNATIONAL SUPPORT PARTNERSHIPS

LAND

AEROSTRUCTURES

MILLOG

NAMMO

also be one of Patria Group's focus areas from now on. In practice, boosting operational efficiency means better resourcing, prioritisation and planning. We will continue this work also this year in order to assure the quality and reliability of customer deliveries and improved customer satisfaction.

In order to develop Patria's operations and sharpen our strategic direction, the Group is currently running a BOOST way of working. Two key elements in the new working model are getting all personnel involved and working together across unit and country borders.

Group management, supervisors and a wide range of employees from all areas of the Group have been involved in the new operating model. It's important that every employee knows where Patria is heading and how each of us can make a difference through our own work.

In addition to developing internal activities, the change programme is seeking to improve our understanding of customer requirements and find new business opportunities.

Responsibility is part of everything we do

At Patria, responsibility, reliability and transparency are integral aspects of everything we do. A company that is majority-owned by the Finnish state cannot operate without a good corporate citizenship. As a strategic partner to the Finnish Defence Forces, Patria also carries out an important task in the Finnish society by ensuring security of supply.

Ethics, transparency and a strong focus on preventing corruption lie at the heart of our business. In the future, we will communicate even more openly with stakeholders about what Patria is doing and about the significance of our company as an employer, taxpayer

In addition to developing internal activities, the change programme is seeking to improve our understanding of customer requirements and find new business opportunities.

and security of supply provider in our various operating countries.

Patria's environmental responsibility is guided by the Group's environmental policy, and the international principles for environmental responsibility to which the company is committed. We will be promoting these things with concrete measures, such as optimising energy, water and materials use.

Over the coming years, the defence industry will also be placing a greater focus on the fight against climate change, reducing emissions and other environmental issues. Patria can offer effective solutions to these challenges by, for example, developing more energy-efficient technologies and providing life cycle services that extend the lifespan of equipment.

After the review period, Transparency International Defence & Security released Defence Companies Anti-Corruption Index (DCI) 2020 results, according to which Patria was ranked in the second-highest category B. We are a responsible operator in the defence sector developing systematically the various areas of Corporate Social Responsibility. The main focus has been highlighting transparency, importance of ethical operating methods and anti-bribery measures. Our operating environment is constantly changing, which requires active and continuous CSR development work.

Looking ahead

In order to repair the damages done by the coronavirus pandemic, countries have been forced to take on large amounts of new debt and it will further burden their economies over the coming years.

No growth is expected in defence budgets anywhere in the world in the foreseeable future. Major fleet acquisitions, such as Finland's HX project, will be made less frequently. However, many countries do need to modernise and renew defence equipment that is reaching the end of its life cycle. This will open up new growth opportunities for Patria's international maintenance business.

Patria's products, services and technology - coupled with our team of around 3,000 professionals - provide a firm foundation for partnerships both in Finland and globally. Our excellent reputation as a professional and reliable partner also provides us with a competitive advantage. Our goal is to continue providing our customers with high-quality and cost-effective solutions.

Patria's hundred-year history provides an excellent foundation for this. We have chosen *The foundation for a secure future* as the theme for our centenary year, as our long history creates a firm foundation for growth, success, working together and a secure future. On behalf of myself and all Patria employees, I would like to thank our customers, owners, partners and other stakeholders. I would also like to thank all Patria personnel for their efforts during 2020. This challenging year has shown that together we can succeed!

Esa Rautalinko

President and CEO, Patria Group

ANNUAL REVIEW

PATRIA IN BRIEF

OUR VALUES

PATRIA 100 YEARS

YEAR 2020

KEY FIGURES

REVIEW BY THE PRESIDENT AND CEO

» OPERATING ENVIRONMENT

STRATEGY

DIGITALISATION

BUSINESS UNITS

AVIATION

SYSTEMS

INTERNATIONAL SUPPORT PARTNERSHIPS

LAND

AEROSTRUCTURES

MILLOG

NAMMO

OPERATING ENVIRONMENT

International cooperation intensifies in Europe



Multinational cooperation within the EU is becoming more important in the defence sector. Patria is increasingly involved in the joint development of the sector in Europe.

Both world politics and the global security environment have changed dramatically in recent years. In particular, the operating environment is currently being affected by relations between major powers, which have escalated in many issues. Europe also needs to keep up with the USA and China in the ongoing technological competition. The coronavirus pandemic brought its own challenges in 2020. Various uncertainties have contributed to the emphasis on the role of international cooperation in the European Union and more broadly in the world.

Patria is closely monitoring technological developments in the defence sector, but it is equally important to keep a close eye on the civilian sector as well. For example, advances in artificial intelligence, 5G networks and 3D printing must be taken into account in Patria's business and the development of future solutions.

The coronavirus pandemic has put the spotlight on continuity management and, in particular, the functionality of value chains that operate across national borders. During the year, Patria's operating methods and collaboration with customers have also been seriously put to the test. However, Patria has still been able to provide its customers with good service and meet their needs in spite of the exceptional circumstances.

The pandemic has underlined the importance of national solutions in many areas, as countries all across the world are supporting their own economies and

companies. A greater emphasis on national perspectives can also be seen in Europe. This has a number of potential implications for Patria. For example, it might be more difficult for the Group's products and services to access local markets.

Another of the pandemic's long-term impacts relates to public-sector finances, as more funds will be required in areas such as healthcare and debt servicing over the coming years. This may affect future budgets for defence procurement.

Debate on export licences for defence materiel

An export licence is required for all exports of defence materiel. In Finland, these export licences are issued by the Government, with the Minister of Defence deciding on smaller deals. Export licences are currently a subject

ANNUAL REVIEW

ANNUAL REVIEW

PATRIA IN BRIEF

OUR VALUES

PATRIA 100 YEARS

YEAR 2020

KEY FIGURES

REVIEW BY THE PRESIDENT AND CEO

» OPERATING ENVIRONMENT

STRATEGY

DIGITALISATION

BUSINESS UNITS

AVIATION

SYSTEMS

INTERNATIONAL SUPPORT PARTNERSHIPS

LAND

AEROSTRUCTURES

MILLOG

NAMMO



of public debate in Finland. In 2020, this discussion focused on extensions to previously issued licences for defence materiel agreements that, for example, involve warranty or maintenance programmes.

Patria's guiding principle in the export of defence materiel is to engage in sustainable and responsible business. Patria complies with all official export legislation, regulations and practices, both in Finland and in other countries as necessary, including those that prohibit exports to countries currently at war. The export control system is open and transparent, and every export licence is considered separately in accordance with the criteria of the EU Common Position. Patria considers important that

export licences are processed consistently, predictably and logically. This should also be the case for extensions to any previously issued licences for defence materiel deliveries, so that any commitments for life cycle services may be fulfilled.

European Defence Fund promotes cooperation

Patria plays a significant role in the development of projects in Finland's national defence sector and as a strategic partner to the Finnish Defence Forces. At the same time, Patria also wants to be even more closely involved in developing the joint European defence sector.

The European Defence Fund (EDF) is an EU-funded programme that was established to coordinate and finance investments and R&D in the European defence sector.

In Patria's opinion, the European Defence Fund offers significant opportunities for networking within the European defence equipment industry. Through competitive tendering, the Fund supports R&D projects that address performance deficiencies defined by Member States. Its guiding principle is cross-border cooperation, as a project must involve actors from at least three Member States in order to receive funding.

Actual implementation of the European Defence Fund is currently behind schedule, and the size of the fund has also been decreased. However, it is still a significant programme

The European Defence Fund consists of R&D packages that are currently ongoing or in the pipeline. Patria is involved in several projects in the European Defence Industrial Development Programme (EDIDP).

Patria's guiding principle in the export of defence materiel is to engage in sustainable and responsible business.

Access to funding is based on open competition and the independent assessment of applications without any quotas per Member State.

Patria involved in European development

In August, Patria became a direct corporate member in the AeroSpace and Defence Association of Europe (ASD), after previously being involved via the Association of Finnish Defence and Aerospace Industries (AFDA). As one of the largest companies in the Finnish aerospace and defence sector, Patria will also continue to be an active member of the AFDA.

ASD is the voice of European Aeronautics, Space, Defence and Security industries, representing more than 3,000 companies and actively supporting the competitive development of the sector both in Europe and worldwide. It includes direct members (including 18 major European companies) and 23 national associations operating in 18 countries.

As Patria's strategy emphasises internationalisation, direct membership in the ASD constitutes an important strategic opening for business development, lobbying and influencing. Patria is now even more actively involved in European development, taking stands on issues and making new openings with regard to the European Union, the European Commission and European governments. The ASD also provides an excellent forum for promoting Patria's products, services and expertise.

ANNUAL REVIEW

PATRIA IN BRIEF

OUR VALUES

PATRIA 100 YEARS

YEAR 2020

KEY FIGURES

REVIEW BY THE PRESIDENT AND CEO

OPERATING ENVIRONMENT

» STRATEGY

DIGITALISATION

BUSINESS UNITS

AVIATION

SYSTEMS

INTERNATIONAL SUPPORT PARTNERSHIPS

LAND

AEROSTRUCTURES

MILLOG

NAMMO

STRATEGY

New strategy highlights growth and internationalisation

The Board of Directors approved Patria's new Horizon 2025 strategy in August. As its name suggests, this strategy will steer the Group's activities over the next five years. It centres around profitable growth that will be sought from international markets.

The new Horizon 2025 strategy is extremely significant for Patria, as it is a genuine Group strategy rather than the previous combination of business unit-specific strategies. Performance targets and performance-based management have traditionally been set separately by business units, which has sometimes led to group synergies being left unharnessed. Thanks to its new strategy, Patria has a common growth target that will, for the first time, be supported by all of the Group's products and services in a single joint offering.

The company's new strategy is founded on thorough preparatory work that examined areas such as operating processes, systems, corporate culture and competence. Patria's important international markets were also carefully analysed.

Basic mission requires profitable growth

Patria's basic mission is - both now and in the future - to ensure and develop security of supply in Finland. This requires financial resources, and income from international markets is needed in addition to domestic revenue streams.

Profitable growth lies at the heart of this strategy, and it will be sought above all from international markets. In line with its strategy, Patria is seeking growth that will enable the Group's net sales to increase to about EUR 900 million by 2025.

Internationally, Patria operates openly in competitive markets in which success requires efficient operations and innovative products and services.

Continuous development in these areas will also benefit security-critical customers in Finland, and in particular the Finnish Defence Forces. Maintaining competitiveness internationally will also enable Patria to provide its Finnish customers with new solutions that will improve both cost-effectiveness and performance.

Combining Patria's expertise with market potential

Patria's proactive approach means that the company analyses appropriate target markets and market poten-

tial from its own perspective. This requires improved international sales and marketing capabilities.

Patria's key strengths include its in-depth understanding of the needs of security-critical organisations. However, the company's own product and service portfolio must be continually developed to ensure that its offering meets customers' changing needs to the greatest possible extent. It is therefore essential to combine Patria's own expertise with market potential.

In order to put the Group's new strategy into practice, Patria will be thoroughly investigating any potential needs to update its operational structure and operating models.

The Group is currently utilising the BOOST operating method to develop its operations. BOOST focuses on involving all personnel and working together across country and business unit borders. The new strategy and its premises will also be openly highlighted in communications, so that stakeholders will get as clear and unified image of Patria as possible.

ANNUAL REVIEW

ANNUAL REVIEW

PATRIA IN BRIEF

OUR VALUES

PATRIA 100 YEARS

YEAR 2020

KEY FIGURES

REVIEW BY THE PRESIDENT AND CEO

OPERATING ENVIRONMENT

STRATEGY

» **DIGITALISATION**

BUSINESS UNITS

AVIATION

SYSTEMS

INTERNATIONAL SUPPORT PARTNERSHIPS

LAND

AEROSTRUCTURES

MILLOG

NAMMO

DIGITALISATION

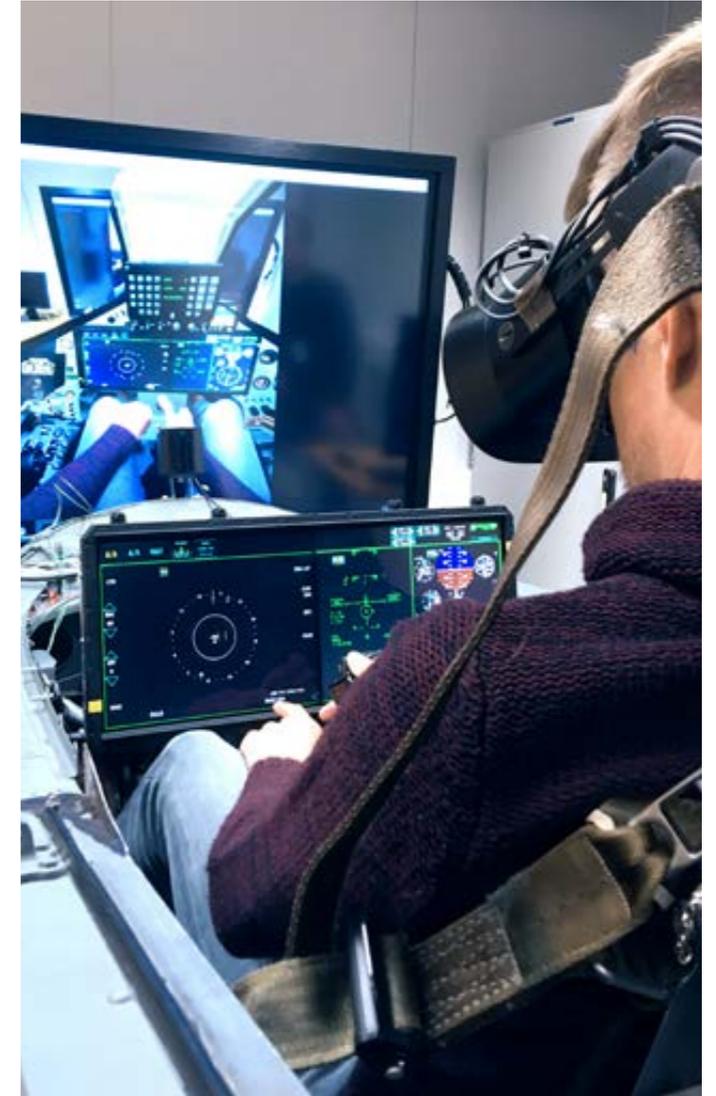
Data-driven business generates added value for customers

Patria is developing data-driven business in which data and analytics applications are used to optimise operations and create new services. Everything revolves around generating added value for customers.

A massive volume of fragmented data is generated during Patria's and its partners' projects and other operations, and this data could be more effectively utilised in the development of products, services and new business. This is the basic premise of JOAN (Joint Analytics Project), an ongoing project that is developing capabilities and performance in data-driven business.

Patria can benefit from a data-driven operating model in two ways. Firstly, it can be used to develop new business and services for customers in, for example, the maintenance business. Secondly, data can be used to develop new offering for Patria's products.

It thereby enables Patria to combine its expertise in business, application areas and technology in an optimal manner. Partners can also be used as part of solutions and business models. The main objective is to generate added value for customers, as digital solutions can provide them with cost-effective and performance-enhancing solutions.



ANNUAL REVIEW

ANNUAL REVIEW

PATRIA IN BRIEF

OUR VALUES

PATRIA 100 YEARS

YEAR 2020

KEY FIGURES

REVIEW BY THE PRESIDENT AND CEO

OPERATING ENVIRONMENT

STRATEGY

» DIGITALISATION

BUSINESS UNITS

AVIATION

SYSTEMS

INTERNATIONAL SUPPORT PARTNERSHIPS

LAND

AEROSTRUCTURES

MILLOG

NAMMO



Patria is investing in analytics expertise

Patria has been involved in developing analytics to meet the operational needs of Finnish authorities. These projects have created a foundation for technology and expertise that can be harnessed in the development of data-driven business.

New digital tools enable efficient data processing, drawing conclusions and steering operations. Some good examples of this include a variety of analytics tools, algorithms, machine learning and artificial intelligence.

Advanced analytics enable us to better understand everything that is happening in and around business or line operations. Analytics can also be used in forecasting.

For example, servicing requirements and equipment wear and tear can be better predicted in maintenance operations. Analytics can also help to identify the need for new services, thereby creating new business opportunities.

Analytics make decision-making more efficient

Processes generate a lot of data. This data needs to be processed into clear and comprehensible information that can be used to steer operations. Data will become even more important in the future, as rapid advancements in industrial internet applications will enable data

Developing data-driven business supports Patria's new strategy.

to be collected even more efficiently from a variety of devices and systems. At best, an organisation will be able to use data and analytics in real-time both in its operations and for decision-making.

Data-driven business deeply involves also the data generated in customers' and partners' processes. For example, Patria's maintenance business is integrated into its customers' processes, which means that Patria has access to both its own data and its customers' interlinked data. This must be taken into consideration during development work. Cybersecurity is essential in data-driven business and Patria has made considerable invests to guarantee it.

Data-driven approach supports the new strategy

Developing data-driven business supports Patria's new strategy, which aims to make the Group an even more closely knit unit. Instead of individual businesses, all of Patria's products and services are being brought together into a single offering.

The JOAN project is seeking synergies between Patria's various products and services. Developing data-driven business also supports BOOST, an ongoing internal operating model that is seeking not only to harness synergies in the Group, but also to improve Patria's understanding of customer needs and reveal new business opportunities.

ANNUAL REVIEW

ANNUAL REVIEW

PATRIA IN BRIEF

OUR VALUES

PATRIA 100 YEARS

YEAR 2020

KEY FIGURES

REVIEW BY THE PRESIDENT AND CEO

OPERATING ENVIRONMENT

STRATEGY

DIGITALISATION

» BUSINESS UNITS

AVIATION

SYSTEMS

INTERNATIONAL SUPPORT PARTNERSHIPS

LAND

AEROSTRUCTURES

MILLOG

NAMMO



Business Units

ANNUAL REVIEW

ANNUAL REVIEW

PATRIA IN BRIEF

OUR VALUES

PATRIA 100 YEARS

YEAR 2020

KEY FIGURES

REVIEW BY THE PRESIDENT AND CEO

OPERATING ENVIRONMENT

STRATEGY

DIGITALISATION

BUSINESS UNITS

» AVIATION

SYSTEMS

INTERNATIONAL SUPPORT PARTNERSHIPS

LAND

AEROSTRUCTURES

MILLOG

NAMMO

PATRIA 100 CASE

It all begins from the Finnish Air Force Aircraft Factory

Patria's history begins in 1921 with the establishment of the Finnish Air Force Aircraft Factory at Suomenlinna. The operations began with licensed manufacturing of the German Hansa-Brandenburg aircraft, with the total production volume between 1922 and 1926 amounting to 120 aircraft. This workload provided the factory with a strong foundation on which future developments could be based. After seven years, the factory was renamed the State Aircraft Factory (Valtion lentokonetehtäas).

AVIATION provides life cycle support services for aircraft and helicopters, covering maintenance, repairs and modifications of fuselages, engines and equipment. The business area's customer base includes defence forces and other safety critical organisations in various countries, as well as original equipment manufacturers and civilian authorities all across the globe. Its pilot training services cover both military and civil aviation training. Aviation is a strategic partner to the Finnish Defence Forces.

786
Personnel

17%
Of Group net sales

26%
Of Group personnel

ANNUAL REVIEW

PATRIA IN BRIEF

OUR VALUES

PATRIA 100 YEARS

YEAR 2020

KEY FIGURES

REVIEW BY THE PRESIDENT AND CEO

OPERATING ENVIRONMENT

STRATEGY

DIGITALISATION

BUSINESS UNITS

» AVIATION

SYSTEMS

INTERNATIONAL SUPPORT PARTNERSHIPS

LAND

AEROSTRUCTURES

MILLOG

NAMMO

AVIATION

Ongoing projects progress as planned



The Aviation business unit was able to provide life cycle support services as planned during the coronavirus pandemic. Preparations for the HX project were one of the focal points of the year.

Aviation’s life cycle support services for aircraft and helicopters were successfully adapted to the coronavirus situation. The maintenance, repair and modification services of customers’ fleets were carried out almost according to plan by making changes to operating methods and management practices. This was an excellent achievement, as the nature of Aviation’s business means that the majority of its work must be done on location, even in exceptional circumstances.

The NH90 helicopter retrofit project in Sweden, which began in 2017, progressed according to plan during the year. This project covers a total of seven helicopters.

A project to make structural repairs to the Finnish Air Force’s Hornet fighters was also significant in terms of workload.

A project to renew the Air Force’s elementary training fleet also progressed during the year, as refits and cockpit modifications for Grob 115E elementary training aircraft continued as planned. In January 2020, a conscript in military service made the first training flight in a modified aircraft in Tikkakoski. The modernised aircraft will replace the current L-70 Vinka training fleet.

The Finnish Air Force’s project to update its Hawk Nk51 fleet was completed during 2020. Flight simulation technology was installed in the cockpits of fighters

used as training aircraft, and analogue systems were transformed into a digital environment. The project also involved inspection of the structural integrity of aircraft, conducting a damage repair analysis, structural condition monitoring and preventive structural modifications.

Pandemic reduces civil aviation training volumes

The coronavirus pandemic had a major impact on Aviation’s civil aviation training, as it made commercial aviation extremely difficult the world over. Pilot training continued throughout the year, although the number of trainees fell considerably. Training in Córdoba, Spain had to be halted in March, but recommenced in November.

Aviation has pilot training agreements with Qatar Airways and Turkish Airlines for customised training

ANNUAL REVIEW

PATRIA IN BRIEF

OUR VALUES

PATRIA 100 YEARS

YEAR 2020

KEY FIGURES

REVIEW BY THE PRESIDENT AND CEO

OPERATING ENVIRONMENT

STRATEGY

DIGITALISATION

BUSINESS UNITS

» AVIATION

SYSTEMS

INTERNATIONAL SUPPORT PARTNERSHIPS

LAND

AEROSTRUCTURES

MILLOG

NAMMO

In spite of the pandemic maintenance, repair and overhaul services were provided to the customers almost as planned.

based on the Multi-Crew Pilot License (MPL) programme. Pilots receive training in both the required aircraft type and the requirements of cockpit work for the airline in question. However, as a result of the pandemic training couldn't be started.

Patria carries out its elementary pilot training in Córdoba using a fleet of single-engine DA40s. In Pirkkala, Patria provides theory and simulator training for commercial pilots, and multi-engine and instrument flight training in DA42 aircraft. In spite of the downswing caused by the pandemic, Patria is seeking strong growth in commercial pilot training over the coming years.

Long-term collaboration on pilot training between Patria and the Finnish Defence Forces continued as planned in 2020. The agreement covers elementary and basic pilot training as a service. It also includes maintenance and servicing of the equipment required for training.

Closely involved in the HX project

Finland's acquisition of fighters to replace its fleet of Hornets - aka the HX project - is highly significant for Aviation. In 2020, Aviation was actively involved in

preparatory work for the project with Patria's Aerostructures and Systems business units.

During the year, Patria took part in negotiations between the Finnish Defence Administration and the companies involved in the HX procurement process. These negotiations covered industrial participation and future maintenance of the Hornet replacements.

Patria is a neutral strategic partner to the Finnish Defence Forces in this project. The most important task will involve cooperation to meet the requirements of industrial participation, and to ensure domestic security of supply and fleet maintenance in line with the tender.

Pandemic impacts

The coronavirus pandemic significantly impacted civil aviation and thereby also Patria's pilot training volumes, as major customers' projects were delayed. As a result, the Pilot Training unit conducted employee cooperation negotiations in April, which resulted in the temporary lay-off of 20 flight instructors and 15 employees. The lay-offs were either full or part time for an average of two months.

However, redundancies were avoided and the payroll remained roughly at the same level as in the previous year.

Revised operating models facilitate work

Major investments were made in personnel induction and training during the year.

Progress was also made with revisions to operating models that were begun in 2018. This had a major impact on daily work, particularly in production. The revised models facilitate work by standardising production



planning, clarifying work supervision roles and responsibilities, and making more effective use of the ERP system. For customers, this means an organisation that can take end-to-end responsibility for handling each customer's individual needs.

Environmental activities

Aviation's environmental system and policy meet the ISO 14001 standard. An extensive environmental risk assessment was carried out in Halli, Jämsä, and several of the areas for development have now been addressed, including groundwater protection, storm water treatment and building basins around fuel tanks.

ANNUAL REVIEW

ANNUAL REVIEW

PATRIA IN BRIEF

OUR VALUES

PATRIA 100 YEARS

YEAR 2020

KEY FIGURES

REVIEW BY THE PRESIDENT AND CEO

OPERATING ENVIRONMENT

STRATEGY

DIGITALISATION

BUSINESS UNITS

AVIATION

» SYSTEMS

INTERNATIONAL SUPPORT PARTNERSHIPS

LAND

AEROSTRUCTURES

MILLOG

NAMMO

PATRIA 100 CASE

How Patria became an avionics expert

Patria launched its pioneering work in digital avionics back in the early '80s. By 1983, the company was modernising equipment with western avionics and had already begun to produce its own processor-based devices. This created a foundation for projects to build a data link system for the Draken fleet. When Finland was taking its first steps to renew its fighter fleet, we were more prepared to take responsibility for developing aircraft equipment for the F/A-18 Hornet's national data link system, and later for building the Hornet's system testing environment (the Software Test and Integration Center – STIC).

[Read more »](#)

SYSTEMS makes comprehensive system and equipment deliveries to defence forces and other security authorities. Its areas of special expertise are reconnaissance, surveillance and command systems, as well as their integration and life cycle support. Systems is a strategic partner to the Finnish Defence Forces.

387
Personnel

16%
Of Group net sales

13%
Of Group personnel

ANNUAL REVIEW

- PATRIA IN BRIEF
- OUR VALUES
- PATRIA 100 YEARS
- YEAR 2020
- KEY FIGURES
- REVIEW BY THE PRESIDENT AND CEO
- OPERATING ENVIRONMENT
- STRATEGY
- DIGITALISATION

BUSINESS UNITS

- AVIATION
- » **SYSTEMS**
- INTERNATIONAL SUPPORT PARTNERSHIPS
- LAND
- AEROSTRUCTURES
- MILLOG
- NAMMO

SYSTEMS

A focus on building the future

Systems has focused on investing in future growth in both domestic and international sales, marketing and tenders. Efforts to improve profitability have also continued.

Systems specialises in demanding system and equipment deliveries. The business unit successfully progressed with its ongoing projects in spite of the operational challenges posed by the coronavirus pandemic. However, acquiring new international projects became more difficult, as trade fairs were cancelled and it was harder to set up meetings with customers.

In spite of the coronavirus pandemic, Systems continued to invest in international sales and marketing during the year, and these determined efforts are expected to start bearing fruit in the form of new orders during 2021.

Systems will also continue to further develop and deepen its collaboration with the Finnish Defence Forces. The goal is to maintain its involvement in future research projects and other projects to improve operational capability.

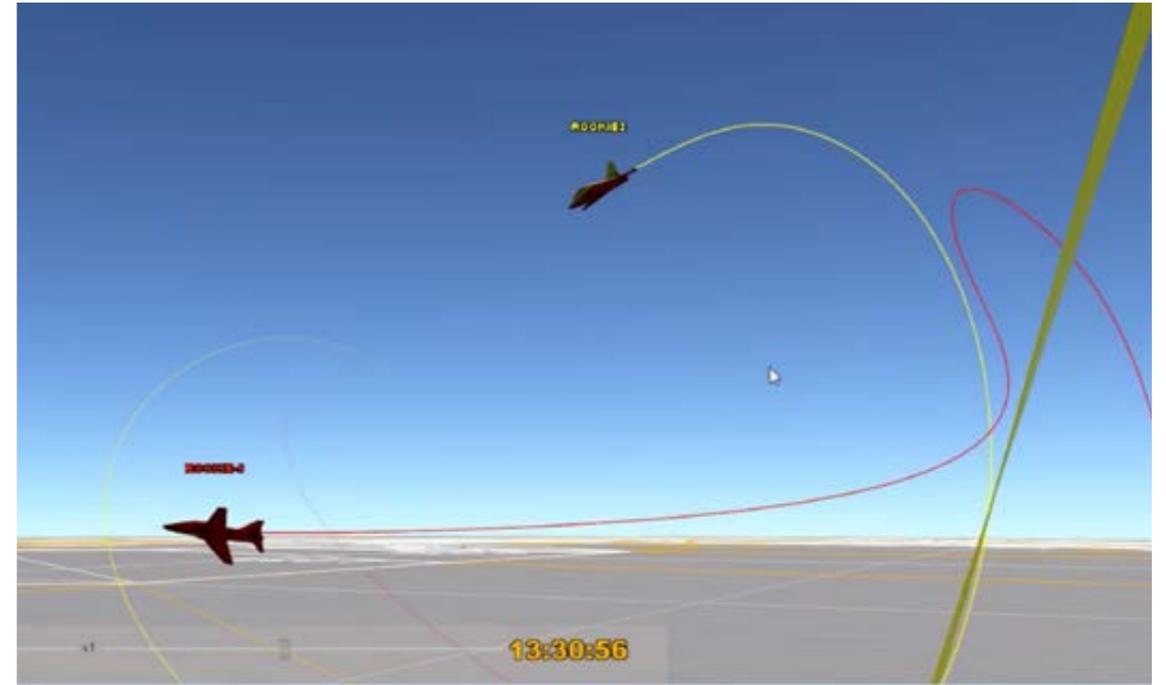
Projects progress as planned

The largest ongoing project in the Systems business unit is a mid-life upgrade of Hamina Class fast attack

craft for the Finnish Defence Forces. Patria is the main contractor, lead designer and lead system integrator for the project. Two of the four vessels to be upgraded were handed over to the Navy during 2020 - the first in January and the second in December.

Overhauling and upgrading these vessels will enhance the Navy's Anti-Submarine Warfare (ASW) and surface defence capabilities with new features. The goal is to lengthen the vessels' independent operation time and extend their service life into the 2030s.

Patria also signed a contract with Saab, which has been selected to provide the weapons systems for the Finnish Defence Forces' Squadron 2020 project. Patria



ANNUAL REVIEW

ANNUAL REVIEW

PATRIA IN BRIEF

OUR VALUES

PATRIA 100 YEARS

YEAR 2020

KEY FIGURES

REVIEW BY THE PRESIDENT AND CEO

OPERATING ENVIRONMENT

STRATEGY

DIGITALISATION

BUSINESS UNITS

AVIATION

» **SYSTEMS**

INTERNATIONAL SUPPORT PARTNERSHIPS

LAND

AEROSTRUCTURES

MILLOG

NAMMO

will supply a Sonac DTS sonar system for detecting submarines. Collaboration will encompass both system integration and software development for the weapons system. The Patria Sonac DTS system will also strengthen Patria's product range in international markets.

Systems carries out maintenance, repairs and performance-enhancing measures on the Finnish Air Force's avionics systems. This work continued as planned during the year.

The business unit's Software Test and Integration Center (STIC) received the prestigious F-18 Hornet Handler award from the Finnish Air Force in recognition of the expertise and commitment shown by Patria's STIC expert team in testing software for F/A-18 Hornets. Software and system testing for Hawk and Grob fleets also continued as planned.

Systems supplied the Finnish Air Force with two modern tactical flight simulators built into the cockpit chassis of a Hawk training fighter. These simulators will further enhance the Air Force's modern training environment.

In the field of surveillance and control systems, the clients Systems has gained include not only the Finnish Defence Forces, but also other security-critical authorities. A significant system delivery was made during the year to the Finnish national security authority. Security-critical systems are now more dependent on software,



In the field of surveillance and control systems, the clients include not only the Finnish Defence Forces, but also other security-critical authorities.

electronics and other digital solutions, and this will open up new opportunities for Systems in the future.

Increased expertise in new technologies

A survey of Patria personnel indicated that job satisfaction was at a good level. According to the survey, personnel were highly committed to their own teams, tasks and employer. The areas requiring the most development were communications and information flow, which is partly due to increased remote working as a result of the coronavirus pandemic. The impacts of remote working

will be studied in order to obtain information that can be used to develop new working methods.

Systems recruited new employees during the year, for tasks such as programming, testing, analytics, and project management. The goal is to ensure broad-ranging engineering expertise, and particularly in sensor and surveillance systems. In recent years, Systems has also made considerable investments in expertise in the fields of artificial intelligence and data analytics. Systems' expertise is also being increasingly harnessed within the Patria Group in addition to customer projects.

ANNUAL REVIEW

ANNUAL REVIEW

PATRIA IN BRIEF

OUR VALUES

PATRIA 100 YEARS

YEAR 2020

KEY FIGURES

REVIEW BY THE PRESIDENT AND CEO

OPERATING ENVIRONMENT

STRATEGY

DIGITALISATION

BUSINESS UNITS

AVIATION

SYSTEMS

» INTERNATIONAL SUPPORT PARTNERSHIPS

LAND

AEROSTRUCTURES

MILLOG

NAMMO

PATRIA 100 CASE

From mail deliveries to maintenance services

In 1947 Ostermans Aero AB, nowadays Patria, starts commercial helicopter business. With Bell 47 the company delivered mail to Stockholm archipelago.

In 1957 the company celebrated its anniversary as a helicopter operator with own maintenance organisation. Main missions were post delivery, medical transport, forestry disinfection, agricultural fertilizing, taxi flights, personal transport to central Stockholm from the islands and power line inspections.

Photo: Pratt & Whitney

INTERNATIONAL SUPPORT PARTNERSHIPS

provides life cycle support services internationally. The business unit's core functions are maintenance and overhaul, modifications, spare parts and technical support. Its services include maintenance for fighter jet engines, helicopters and military vehicles at service centres authorised by the manufacturers.

246
Personnel

15%
Of Group net sales

8%
Of Group personnel

ANNUAL REVIEW

PATRIA IN BRIEF

OUR VALUES

PATRIA 100 YEARS

YEAR 2020

KEY FIGURES

REVIEW BY THE PRESIDENT AND CEO

OPERATING ENVIRONMENT

STRATEGY

DIGITALISATION

BUSINESS UNITS

AVIATION

SYSTEMS

» **INTERNATIONAL SUPPORT PARTNERSHIPS**

LAND

AEROSTRUCTURES

MILLOG

NAMMO

INTERNATIONAL SUPPORT PARTNERSHIPS

Planned actions start to bear fruit

The operating model that has been systematically built for International Support Partnerships (ISP) is starting to bear fruit, and this international service provider is now paving the way for other Patria products and services.

2020 was an extremely strong year for ISP both financially and operationally. ISP's operating model and organisation have been built up over the past two years to create a service provider that can successfully supply the international defence market. This included two acquisitions that were made in 2019. In one of these acquisitions, Patria acquired the entire share capital of a company specialising in the global maintenance, repair

and servicing of military aircraft engines. This company was named Patria Belgium Engine Center (PBEC). The second acquisition involved a company responsible for maintaining and upgrading the Norwegian Air Force's aircraft and helicopters. After the transaction, Kongsberg Defence & Aerospace AS owned 50.1% and Patria 49.9% of the company, which was renamed Kongsberg Aviation Maintenance Services (KAMS). As a result of this acquisition, the company's operations have experienced strong development and its service offering has expanded from the maintenance of F16 fighters and Sea King helicopters to the maintenance and servicing of F135 engines and new types of helicopters.

Patria's helicopter unit in Sweden has been a key player in helicopter maintenance since 1947. It services helicopters manufactured by companies such as

Leonardo, Airbus and Bell. Patria also maintains Sweden and Norway's NH90 helicopters, and acts as the Nordic service centre for these helicopters.

Milworks (formerly Milrem LCM) operating in Estonia is another ISP unit. The company maintains and repairs armoured vehicles belonging to the Estonian Defence Forces, and has also expanded into weapons systems such as automatic firearms. In 2020, Milworks was also granted permission to handle the Estonian Defence Forces' weapons outside official defence force areas, which has made maintenance easier and more efficient to organise.

ISP strengthened its position in Latvia with the acquisition of Milrem Latvia SIA's entire share capital, and the company was renamed Patria Latvia. This acquisition will enable Patria to permanently expand its operations



ANNUAL REVIEW

ANNUAL REVIEW

PATRIA IN BRIEF

OUR VALUES

PATRIA 100 YEARS

YEAR 2020

KEY FIGURES

REVIEW BY THE PRESIDENT AND CEO

OPERATING ENVIRONMENT

STRATEGY

DIGITALISATION

BUSINESS UNITS

AVIATION

SYSTEMS

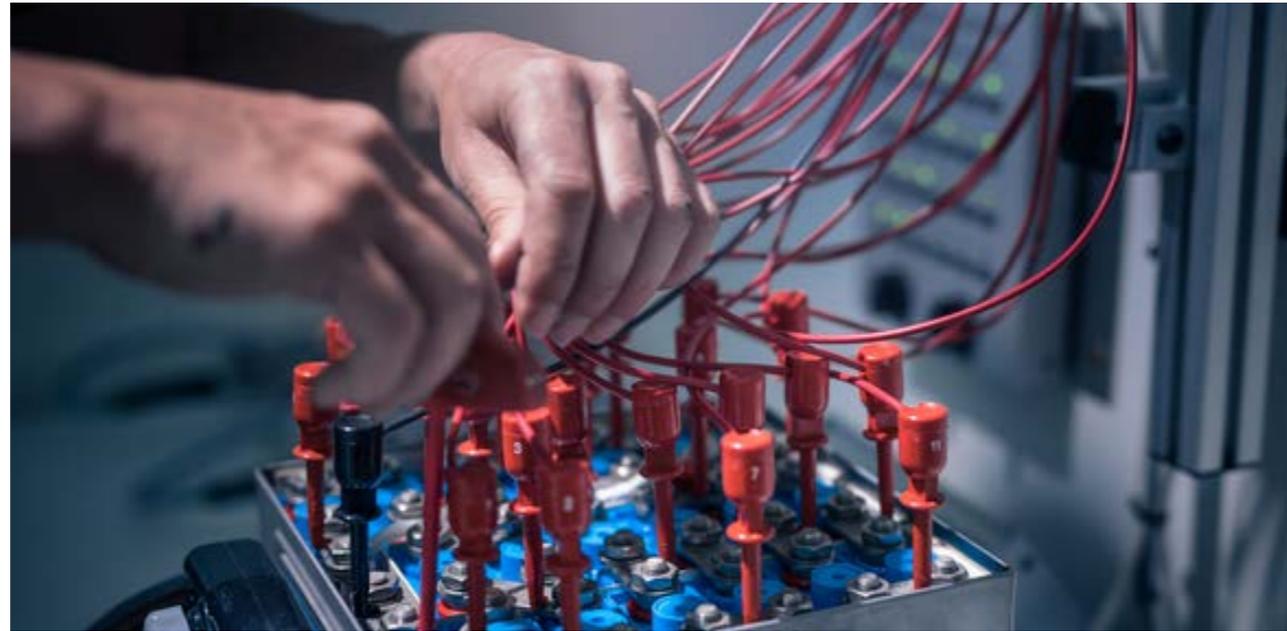
» INTERNATIONAL SUPPORT PARTNERSHIPS

LAND

AEROSTRUCTURES

MILLOG

NAMMO



into the Latvian defence market and provide a wide range of services to the Latvian Defence Forces. In conjunction with the acquisition, Patria also established a joint venture with a Latvian partner (Defence Partnership Latvia).

ISP is opening doors to international markets

Operating methods were standardised across country borders over the course of the year. Standardised operating models also proved their worth during the pandemic: all units could be kept open to ensure the uninterrupted operation of important customer services. Although delays in spare part deliveries hindered ISP's operations, more effective solutions to this challenge were found during the year.

There is growing market interest in ISP's services, which offer comprehensive partnerships to both defence and civilian authorities. This means both the potential for business growth in existing core business and opportunities to develop new services. Concrete results have already been achieved in Latvia: Patria has signed a research and development agreement with the States of Finland and Latvia for the joint development of an armoured vehicle system. The system is based on the Patria 6x6 vehicle platform developed by Land business unit.

Responsibility and cooperation with local communities

In Belgium, almost 30 new employees were hired by Patria Belgium Engine Center (PBEC) in 2020 to cover increased volume and compensate for retirements.

There is growing market interest in ISP's services, which offer comprehensive partnerships to both defence and civilian authorities.

Patria Helicopters AB's contract for the maintenance of the Swedish Defence Forces' Black Hawk helicopters expired at the end of 2020, which led to the closure of the Linköping site and redundancies for 28 employees. However, all of them found new jobs before the end of the year.

Responsibility and sustainable operating methods are an integral aspect of ISP's daily work. In addition to energy efficiency, ISP is also paying more attention to material efficiency and other environmental issues. ISP is promoting the circular economy by, for example, using repaired components rather than acquiring new ones whenever possible.

In practice, ISP's social responsibility involves cooperation between its units and local communities. In Belgium, for example, PBEC's site canteen delivered lunches to the local hospital and care home during the coronavirus pandemic.

ANNUAL REVIEW

ANNUAL REVIEW

PATRIA IN BRIEF

OUR VALUES

PATRIA 100 YEARS

YEAR 2020

KEY FIGURES

REVIEW BY THE PRESIDENT AND CEO

OPERATING ENVIRONMENT

STRATEGY

DIGITALISATION

BUSINESS UNITS

AVIATION

SYSTEMS

INTERNATIONAL SUPPORT PARTNERSHIPS

» LAND

AEROSTRUCTURES

MILLOG

NAMMO

PATRIA 100 CASE

The reconstruction of Finland

The large construction sites of the early 1950s required heavy transport equipment. Vanaja's automobile factory profiled itself even more clearly as a manufacturer of heavy trucks, sturdy special-purpose vehicles, and bus chassis. The serial production and quality control were learned during the war and those skills helped also succeed in later times.

LAND'S key product and service areas include cutting-edge armoured wheeled vehicles, mortar systems and their associated life cycle support services. The Patria AMV, Patria 6x6 vehicles and the Patria Nemo mortar system are the highest-profile products in this range. Both the AMV and Nemo are market leaders in their product segments.

231
Personnel

7%
Of Group net sales

8%
Of Group personnel

ANNUAL REVIEW

- PATRIA IN BRIEF
- OUR VALUES
- PATRIA 100 YEARS
- YEAR 2020
- KEY FIGURES
- REVIEW BY THE PRESIDENT AND CEO
- OPERATING ENVIRONMENT
- STRATEGY
- DIGITALISATION

BUSINESS UNITS

- AVIATION
- SYSTEMS
- INTERNATIONAL SUPPORT PARTNERSHIPS

» **LAND**

- AEROSTRUCTURES
- MILLOG
- NAMMO

LAND

New agreements pave the way for future growth

The Land business unit signed an agreement with Finland and Latvia for the joint development of an armoured vehicle system. A research and development agreement made with the U.S. Army will deepen cooperation on mortar systems.

Land is focused on paving the way for future growth, and this was furthered by several agreements signed with partners during the course of the year.

Patria signed a research and development agreement with the Ministries of Defence of Finland and Latvia for the joint development of an armoured vehicle system. This agreement aims to develop a joint

armoured vehicle system that is based on the Patria 6x6 vehicle platform and meets both countries' requirements. The agreement will also enable future R&D for other vehicle versions and system features.

This multinational collaboration is based on identified common benefits that will be generated throughout the product's life cycle. The participating countries will receive an extremely high-performance and cost-effective solution that will most likely interest other countries that are seeking to improve the mobility of their defence forces.

Patria expects the joint project to lead to serial production of the new vehicle platform, and this could potentially start as early as 2021. In connection with this, Patria and SIA EMJ Metāls (a Latvian metalworking

company) signed an agreement on vehicle component manufacture in November.

Turreted mortar interests the U.S.

Patria and the U.S. Army signed a research and development agreement to determine Patria Nemo's suitability and performance as a 120 mm tower mortar system for U.S. vehicles. This agreement is a logical continuation of Patria's collaboration with the U.S. Government, which began with export deals for Patria Nemo.

The agreement reflects the increased performance that a modern turreted mortar system is capable to provide to the army, and also demonstrates Patria's leading global role in this field of technology.



ANNUAL REVIEW

ANNUAL REVIEW

PATRIA IN BRIEF

OUR VALUES

PATRIA 100 YEARS

YEAR 2020

KEY FIGURES

REVIEW BY THE PRESIDENT AND CEO

OPERATING ENVIRONMENT

STRATEGY

DIGITALISATION

BUSINESS UNITS

AVIATION

SYSTEMS

INTERNATIONAL SUPPORT PARTNERSHIPS

» LAND

AEROSTRUCTURES

MILLOG

NAMMO

AMV^{XP} 8x8 – Patria’s armoured personnel carrier and support vehicle – is also generating global interest. In October, the AMV^{XP} was selected for the next phase of Bulgaria’s vehicle project on the basis of a competitive tender. The final decision on the acquisition will be made after negotiations and field tests.

Patria AMV^{XP} is also taking part in field tests in Japan, where vehicles from three companies are being tested on the basis of a competitive tender. Japan’s Ministry of Defence purchased two test vehicles from Patria. The final decision on the acquisition will be made after the tests, which last approximately a year.

Patria AMV 8x8 System Platform vehicle was delivered to Saab in Sweden, where it will be used as a testing and development platform in the electronics and video



systems of Saab’s latest generation of vehicles. The agreement includes both the vehicle and training and maintenance services related to its use.

During the year, Land continued to develop its products and services. One of the priorities in Patria’s vehicle R&D has been a steering system that enables remote control and autonomous functions. Patria organised a demonstration in which a Patria AMV 8x8 vehicle was remotely controlled from outside visual range using 5G and 4G networks. This demonstration was organised in collaboration with the University of Tampere, which is one of Patria’s partners.

In Croatia, Patria fulfilled its counter-trade commitments related to the agreement on the manufacture and supply of 126 Patria AMV 8x8 vehicles. The fulfilment of Patria’s commitment was verified in December by Croatia’s Ministry of Economy and Sustainable Development. The counter-trade project, which ran until the end of the year, involved Croatian companies from several industrial sectors. It also included the transfer of skills for the long-term benefit of the Croatian economy.

In Finland, Patria continued mid-life upgrades to the Finnish Defence Forces’ XA-180 personnel carriers in order to guarantee the performance, condition and technical life cycles of these vehicles into the 2040s. Among other things, the project will update the vehicles’ electrical systems, recondition their transmission components, and renew their suspension and exterior coating.

Patria also continued deliveries for the armoured bridge layers ordered by the Finnish Defence Forces. This project, which runs from 2019–2021, will increase the number of armoured bridge layers and update existing equipment.

Patria expects the joint project between Finland and Latvia to lead to serial production of the new vehicle platform as early as 2021.

Significant improvement in job satisfaction

When the coronavirus pandemic began, Land was able to organise its own operations effectively, even in exceptional circumstances. Although there were minor delays in component deliveries from subcontractors, they did not have a major impact on operations.

According to a personnel survey, job satisfaction had clearly improved on the previous year. The survey also highlighted some areas for development that were discussed at both team and business unit level.

The number of accidents at work and the rate of sickness absences remained at the same good level as in the previous year. During the year, Land achieved 385 days without any accidents at work.

Environmental impact of products assessed

Land’s direct impact on the environment is fairly minor. The business unit’s environmental policy has identified and assessed the environmental impacts and associated risks caused by its own products and services throughout their entire life cycles, and likewise for the operations of its subcontractors.

ANNUAL REVIEW

ANNUAL REVIEW

PATRIA IN BRIEF

OUR VALUES

PATRIA 100 YEARS

YEAR 2020

KEY FIGURES

REVIEW BY THE PRESIDENT AND CEO

OPERATING ENVIRONMENT

STRATEGY

DIGITALISATION

BUSINESS UNITS

AVIATION

SYSTEMS

INTERNATIONAL SUPPORT PARTNERSHIPS

LAND

» **AEROSTRUCTURES**

MILLOG

NAMMO

PATRIA 100 CASE

Beyond the stars

Patria's space expertise: In 1997 the XMM scientific satellite was delivered to the customer, the European Space Agency ESA. The Rosetta spacecraft was launched into space in 2004 in search of new information about the early development of our solar system. Patria designed and built the spacecraft's platform structure and some of its power distribution units. Rosetta landed on the surface of a comet in 2014.

AEROSTRUCTURES

designs and manufactures demanding composite and metal structures for aircraft and the defence sector. The business unit is actively involved in programmes to develop new manufacturing technologies. Its core competence comprises strong structural design expertise and efficient production processes.

101
Personnel
3%
of Group net sales
3%
of Group personnel

ANNUAL REVIEW

PATRIA IN BRIEF

OUR VALUES

PATRIA 100 YEARS

YEAR 2020

KEY FIGURES

REVIEW BY THE PRESIDENT AND CEO

OPERATING ENVIRONMENT

STRATEGY

DIGITALISATION

BUSINESS UNITS

AVIATION

SYSTEMS

INTERNATIONAL SUPPORT PARTNERSHIPS

LAND

» **AEROSTRUCTURES**

MILLOG

NAMMO

AEROSTRUCTURES

COVID-19 pandemic impacts civil aviation deliveries

The Aerostructures business unit continued to manufacture demanding aircraft structures for both civil aviation and defence applications. However, the difficulties caused by the coronavirus in commercial aviation led to a fall in deliveries.

The Aerostructures business unit was significantly affected by the coronavirus pandemic in 2020, as it manufactures composite and metal structures for aircraft and defence applications. Commercial air traffic volumes plummeted suddenly, and this has forced many airlines to cancel or postpone orders for new aircraft.

In 2020, the aircraft manufacturer Airbus made 45 per cent fewer orders for composite civil aircraft components manufactured by Aerostructures. Deliveries of metal components to Airbus and Embraer, another aircraft manufacturer, halved.

The majority of the composite unit's net sales still consist of carbon fibre structures for the tail fins of Airbus A320 passenger aircraft. These structures are manufactured in Halli, Jämsä. During 2020, last spoilers for Airbus A380 aircraft were delivered to Airbus, following the company's decision to end this aircraft programme.

Patria will continue to manufacture radar structures and other demanding structures for the Airborne Early Warning system used in SAAB surveillance aircraft.



Patria highly involved in the HX program

One of the Patria Group's most significant projects for the coming years is Finland's HX fighter program, in which the Finnish Air force will be replacing its existing Hornet fleet with a solution based on a new multipurpose fighter.

Aerostructures together with the Aviation and Systems business units has been engaged in the industrial participation part of the project. During the year, Patria took part in the industrial participation negotiations between the Finnish defence administration and the companies involved in the HX procurement process. The aim is to secure a significant Finnish industrial footprint in the program and to secure the national security of supply as well as to strengthen the technological

ANNUAL REVIEW

ANNUAL REVIEW

PATRIA IN BRIEF

OUR VALUES

PATRIA 100 YEARS

YEAR 2020

KEY FIGURES

REVIEW BY THE PRESIDENT AND CEO

OPERATING ENVIRONMENT

STRATEGY

DIGITALISATION

BUSINESS UNITS

AVIATION

SYSTEMS

INTERNATIONAL SUPPORT PARTNERSHIPS

LAND

» AEROSTRUCTURES

MILLOG

NAMMO

During the HX program Patria has also charted the future competencies that the industrial cooperation requires.

and industrial basis of the Finnish defence. During the program Patria has also charted the future competencies that the industrial cooperation requires.

Difficulties in civil aviation impact business

Aerostructures conducted three employee cooperation negotiations during the year. The negotiations were a result of work reorganisation and reduced delivery volumes in civil aviation projects.

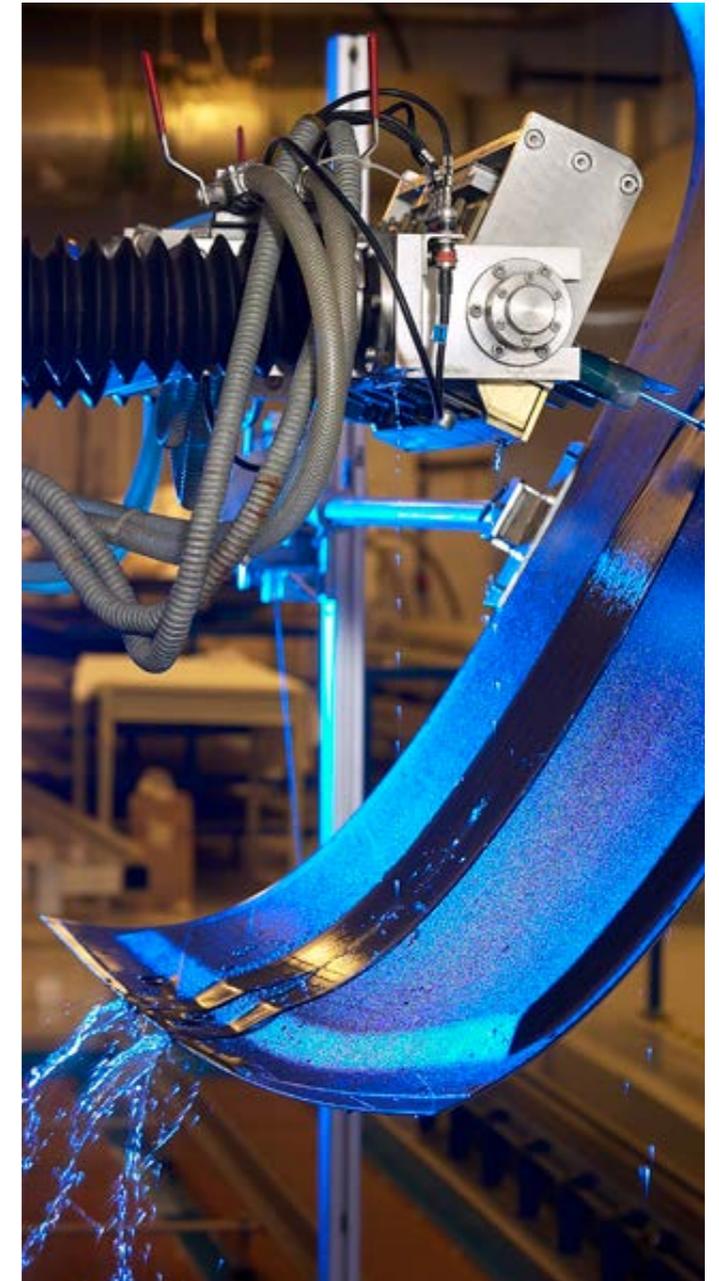
Various measures were agreed on as a result of these negotiations, including shorter working hours, lay-offs, a six-week closure of the unit over the summer, and redundancies for 12 personnel, as the amount of work done in the unit has significantly declined or, in some cases, ceased altogether.

Supporting health

In occupational healthcare, the focus has been on joint measures to prevent and reduce musculoskeletal disorders. A particular focus has been placed on promoting the working capacity of older employees.

Material efficiency and environmental activities

Implementation, monitoring and reporting continued to comply with the ISO 14001 environmental standard. In production, continued efforts were made to improve material efficiency, minimise waste and increase recycling.



ANNUAL REVIEW

ANNUAL REVIEW

PATRIA IN BRIEF

OUR VALUES

PATRIA 100 YEARS

YEAR 2020

KEY FIGURES

REVIEW BY THE PRESIDENT AND CEO

OPERATING ENVIRONMENT

STRATEGY

DIGITALISATION

BUSINESS UNITS

AVIATION

SYSTEMS

INTERNATIONAL SUPPORT PARTNERSHIPS

LAND

AEROSTRUCTURES

» MILLOG

NAMMO

PATRIA 100 CASE

Millog guarantees life cycle support for military equipment

Millog was established in 2006 and is today a consortium of various companies, with Patria holding most shares. For the Finnish Defence Forces, Millog is the life cycle maintenance provider for the defence materiel of the Finnish Army and Navy, as well as for the surveillance systems of the Finnish Air Force in all conditions. Millog also serves civil industries for whom national security, security of supply, and partnership are critical success factors.

[Read more »](#)

MILLOG provides material life cycle support services to strategic partners such as the Finnish Defence Forces and other security-critical actors. The company's responsibilities include the maintenance of vehicles and armoured equipment, weapon and electronic systems, vessels and various other systems; the provision of the material and life cycle services required by them; as well as equipment and system installations and modifications. Patria owns 61.8% of Millog.

1,137
Personnel

43%
Of Group net sales

38%
Of Group personnel

ANNUAL REVIEW

PATRIA IN BRIEF

OUR VALUES

PATRIA 100 YEARS

YEAR 2020

KEY FIGURES

REVIEW BY THE PRESIDENT AND CEO

OPERATING ENVIRONMENT

STRATEGY

DIGITALISATION

BUSINESS UNITS

AVIATION

SYSTEMS

INTERNATIONAL SUPPORT PARTNERSHIPS

LAND

AEROSTRUCTURES

» **MILLOG**

NAMMO

MILLOG

Deepening the continuing strategic partnership with the Finnish Defence Forces

Millog and the Finnish Defence Forces signed an updated strategic partnership agreement. The long contractual period will enable long-term collaboration, cost-effectiveness and active business development.

Millog provides fleet maintenance, life cycle management and material services. The company achieved its financial targets for the year and fulfilled its agreed service deliveries as planned in spite of the challenges posed by the coronavirus pandemic.

Millog has been employing its readiness plan during the pandemic, and this has enabled the company to

quickly adapt its operations even in the face of a disruption such as the pandemic. In terms of protection and operating methods, Millog proactively implemented more stringent measures than required by official recommendations in line with its main customer, the Finnish Defence Forces. These measures kept the number of infections at a very low level in 2020, and infections did not have an impact on Millog's service provision.

After a year of preparatory work, the highlight of the year was the updated strategic partnership agreement signed between Millog and the Finnish Defence Forces in December. This agreement is valid until further notice and covers services to the value of about EUR 1.4-1.6 billion in the pricing period 2021-2028. Procurement related to this agreement will have an employment

impact of about 10,000-11,000 person-work-years during the aforementioned period.

Millog companies have a network of 28 locations in Finland and approximately 1,200 employees. Millog companies also make use of their extensive subcontractor network, and together they are important for domestic security of supply.

Actively developing collaboration

A long pricing period enables long-term collaboration and cost-effectiveness. Proactive operational development will play an even more significant role in cooperation. Key areas for development include requirements related to changes in the reliability-based maintenance, digitalisation and cost-effectiveness management. Their



ANNUAL REVIEW

ANNUAL REVIEW

PATRIA IN BRIEF

OUR VALUES

PATRIA 100 YEARS

YEAR 2020

KEY FIGURES

REVIEW BY THE PRESIDENT AND CEO

OPERATING ENVIRONMENT

STRATEGY

DIGITALISATION

BUSINESS UNITS

AVIATION

SYSTEMS

INTERNATIONAL SUPPORT PARTNERSHIPS

LAND

AEROSTRUCTURES

» MILLOG

NAMMO



development will be actively supported with the aid of, for example, mutual incentives.

Millog's largest ongoing project is the upgrade of the Finnish Defence Forces' Jurmo Class landing craft. The vessels' hulls, engines, gears and cockpits will be renewed or repaired to the required extent. The project progressed on schedule and according to plan during 2020, and will run until the end of 2021.

Millog's acquisition of new customers will focus on areas that are important for Finland's security-critical infrastructure and whose operation must be assured in exceptional circumstances. The VR Group is one of Millog's partners, and Millog will be repairing locomotive

gearboxes and equipment. Coronavirus restrictions have extended sales cycles in the acquisition of new customers.

Millog expands into new fields

During 2020, two strategic acquisitions were made to strengthen the range of products and services provided by Millog companies. These acquisitions were a concrete step forward in Millog's growth strategy to expand into new sectors and acquire new customers.

Ownership of Virve Tuotteet ja Palvelut Oy was transferred to Millog at the beginning of 2020, and the company will continue to operate as an independent sub-

Millog executes its growth strategy by expanding into new sectors and acquiring new customers.

sidary. Its business includes the sale and maintenance of terminal equipment for terrestrial trunked radio (TETRA) networks. The company's customers include security-critical organisations such as the Finnish Defence Forces, the Police, the Rescue Services, and the social welfare and healthcare sector. When it comes to business development and partnerships, Millog is currently focusing on new technology: existing solutions based on a 2G network are being replaced with 5G technology.

In October 2020, Millog signed an agreement with APX-Metalli Oy to acquire the entire share capital of Oy Western Shipyard Ltd, which will continue as an independent subsidiary under Millog's ownership. The company provides docking and repairs for ships and floating structures, and its customers include the Finnish Defence Forces, the Finnish Border Guard, Finferries and Patria. The acquisition will enable Millog companies to provide a larger overall maintenance service package than any other shipyard in Finland.

New recruits and developing leadership

Millog's company-specific collective labor agreement was signed in November 2020 and will remain in force until the end of 2021.

Millog recruited 90 new employees during the year. As several dozen employees retire every year, Millog has

ANNUAL REVIEW

ANNUAL REVIEW

PATRIA IN BRIEF

OUR VALUES

PATRIA 100 YEARS

YEAR 2020

KEY FIGURES

REVIEW BY THE PRESIDENT AND CEO

OPERATING ENVIRONMENT

STRATEGY

DIGITALISATION

BUSINESS UNITS

AVIATION

SYSTEMS

INTERNATIONAL SUPPORT PARTNERSHIPS

LAND

AEROSTRUCTURES

» MILLOG

NAMMO

invested in finding young experts by, for example, engaging in closer cooperation with educational institutions all across Finland.

Millog made further investments in developing leadership during the year. The “Fair Leadership” coaching programme for supervisors has significantly improved leadership quality. This improvement has also been concretely measured using a supervisor index that will now be used annually to follow up and steer leadership development.

The number of sickness absences was at a record low in 2020. Proactive efforts have led to a significant improvement in work safety over the past few years. For example, personnel have been encouraged to make safety observations that will help develop operations, prevent accidents, and improve occupational safety culture. An increasingly positive attitude to safety at work is reflected in the more than 3,000 safety observations that were made during 2020, compared to about 2,000 observations in 2019. Proactivity also had a positive impact on accident rates.

Significant order for Senop from the Finnish Defence Forces

Millog’s wholly owned subsidiary Senop Oy develops and manufactures high-tech night vision systems, MIL-compliant system platforms and demanding system integration solutions.

In 2020, Senop’s net sales experienced a clear increase on the previous year. The company has contin-



ued its strategic efforts by focusing on the development of existing partnerships with Finnish customers. International sales and marketing has also been intensified in Sweden and the Baltic countries in particular.

Senop’s international customers include the Norwegian company Kongsberg Defence & Aerospace AS, which has been provided with lightweight container solutions for command centres. These deliveries are a continuation of Kongsberg and Senop’s earlier collaboration, and will continue over the coming years.

In Finland, Senop Oy signed a procurement agreement with the Finnish Defence Forces’ Logistics

Command for night combat equipment and target acquisition devices. The contract, which includes new image intensifiers, laser sights and target acquisition devices, is worth more than EUR 13 million.

It also includes an additional procurement option for weapon-mounted laser sights, image intensifiers and target acquisition devices. The five-year additional procurement option is worth about EUR 209 million including VAT. Without the additional procurement option, the contract will have a domestic employment impact of 40 person-work-years.

ANNUAL REVIEW

ANNUAL REVIEW

PATRIA IN BRIEF

OUR VALUES

PATRIA 100 YEARS

YEAR 2020

KEY FIGURES

REVIEW BY THE PRESIDENT AND CEO

OPERATING ENVIRONMENT

STRATEGY

DIGITALISATION

BUSINESS UNITS

AVIATION

SYSTEMS

INTERNATIONAL SUPPORT PARTNERSHIPS

LAND

AEROSTRUCTURES

MILLOG

» **NAMMO**

PATRIA 100 CASE

Nammo's heritage dates back to 1920s Finland

Nammo and the Finnish Defence Forces signed a new long-term strategic partnership agreement on December 2020. The agreement is a continuation of a previous security of supply agreement between the two parties signed in 2014.

"This agreement confirms the close relationship between Nammo and the Finnish government, which has existed since the formation of Nammo in 1998, and before that since our current Finnish factories were founded in the 1920s", said Morten Brandtzæg, President and CEO of the Nammo Group.

[Read more »](#)

NAMMO is an international aerospace and defense company headquartered in Norway. With more than 2,700 staff spread across more than 30 sites and offices in 12 countries, Nammo is one of the world's leading providers of ammunition, rocket motors and demilitarization services for both military and civilian customers. Patria and the State of Norway own equal shares of Nammo (50%).

Nammo AS publishes its own annual report and corporate responsibility report, available on the company's website at www.nammo.com.

2,752
Personnel

562.8%
Net sales

ANNUAL REVIEW

PATRIA IN BRIEF

OUR VALUES

PATRIA 100 YEARS

YEAR 2020

KEY FIGURES

REVIEW BY THE PRESIDENT AND CEO

OPERATING ENVIRONMENT

STRATEGY

DIGITALISATION

BUSINESS UNITS

AVIATION

SYSTEMS

INTERNATIONAL SUPPORT PARTNERSHIPS

LAND

AEROSTRUCTURES

MILLOG

» **NAMMO**

NAMMO

Nammo delivers unprecedented results in unprecedented conditions



Owned 50% by Patria, the Norwegian aerospace and defense innovator delivers solid performance in challenging times

In 2020, the global coronavirus pandemic has shadowed also Nammo's operations - but the company has demonstrated remarkable resilience in tough times. Nammo's delivery rate for the year was 95% or better.

Nammo attributes this result to its employees who have shown great initiative and resilience in a tough situation. Though the challenges of coronavirus are in no way over, the company has seen remarkable examples of

teamwork and of everyone pulling together to get the job done.

Nammo currently operates through four business units: Commercial Ammunition, Small and Medium Caliber Ammunition, Large Caliber Systems, and Aerospace Propulsion. The company remains one of the world's leading manufacturers of specialty ammunition and rocket motors and has grown significantly in the years following its founding in 1998.

Lately, the company has been steadily strengthening its presence in its European and North American core markets. All key markets had a positive underlying trend in 2020 despite COVID-19.

Finnish Defence Forces partnership continues

The most recent highlight for Nammo was the December 2020 signing of the strategic partnership agreement with the Finnish Defence Forces. The agreement is a continuation of a previous security of supply agreement between the two parties signed in 2014.

Nammo sees itself as committed to Finnish safety and security as it has ever been, believing that a new agreement will allow it to take on an even greater role and build an even closer partnership with the Finnish Defence Forces.

ANNUAL REVIEW

ANNUAL REVIEW

PATRIA IN BRIEF

OUR VALUES

PATRIA 100 YEARS

YEAR 2020

KEY FIGURES

REVIEW BY THE PRESIDENT AND CEO

OPERATING ENVIRONMENT

STRATEGY

DIGITALISATION

BUSINESS UNITS

AVIATION

SYSTEMS

INTERNATIONAL SUPPORT PARTNERSHIPS

LAND

AEROSTRUCTURES

MILLOG

» **NAMMO**



In 2020, the company reported its third consecutive year of record-high revenue and order books.

Welcoming Nammo Perry

The year was also significant with Nammo completing its acquisition of Chemring Ordnance Inc. in Perry, Florida, in May 2020. The company is now known as Nammo Perry Inc. The Florida operation joins the group during a time of major change and development for the company, as it is delivering more than ever, and taking an even greater role in supporting the security of supply for its core markets.

Also, with the arrival of Perry, Nammo now has more employees in the U.S. than in any other country, which in itself represents a major milestone for the company.

Growth despite pandemic

In 2020, the company reported its third consecutive year of record-high revenue and order books. Nammo has also succeeded in improving its overall profitability.

Nammo believes its operations are going strong, and it continues to work on new technology developments, particularly within areas where it can combine its twin competencies of ammunition and rocket motors. To that end, it will continue its focus on improving its operations to ensure it remains able to invest in its future.

Patria 100

Patria Oyj

Arkadiankatu 2, 00100 Helsinki, Finland

www.patriagroup.com

info@patriagroup.com