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© Demil: Change in Nammo's position in the US

© Development contract for AMRAAM

© Teaming leads to award of 40mm L/60 program



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Editorial

By Sissel Solum, Senior Vice President Communication, Nammo Group

2010 started with success for Nammo! At the Olympics in Vancouver, Nammo biathlon ammunition LAPUA was used by more than 88% of the athletes, and 23 out of 30 medals were won with our ammunition.

The Group's core products and services continue to be ammunition, rocket motors and demilitarization. One of the latest highlights is our development program for the APEX ammunition for the new Joint Strike Fighter. We believe the ammunition will be an important add-on for future scenarios. Within rocket motors, we newly signed an important development contract with the Raytheon Group as second source for the AMRAAM missile system.

Nammo's demil facilities handled the first contracts originating from the Convention on Cluster Munitions. The Convention becomes binding international law when it enters into force on 1 August 2010. You can read all about this – and more – on the following pages.

Nammo's new vision, Securing the Future, is the Group's driving force. We want to take part in securing the future by delivering high quality products to the national armed forces and our allied nations for a safe return of the expeditionary troops.

The Group's prime goal is to maintain a sustainable business based on secure products and work environment for the benefit of our employees, customers and the local communities.

Happy reading!

VISION

Nammo's vision outlines what the organization wants to accomplish. It concentrates on the future. It is the company's source of inspiration, common focus and driving force:

Nammo – Securing the future

- We will protect our National and Allied Forces with high quality defense products
- We will secure future development of eco-friendly products, processes and services
- We will secure further growth based on a strong financial development
- We will develop and secure a long term sustainable business for our customers and for our employees
- Our future development depends on secure and safe work environment. We must emphasize the importance of every single employee

VALUES

Dedication

We are enthusiastic and creative, always searching for the best solutions

Precision

We are reliable and accurate in our technology, processes and business

Care

We are inclusive and open-minded, always encouraging team spirit and cooperation



F-35, next generation fighter aircraft

By Ola Skrivervik, Senior Vice President Business Development, Nammo Group

The F-35 Lightning II has been formally selected by the Norwegian Government as the F-16 replacement and the fighter of choice for Norway after many years of competition among several fighter candidates. Formal acquisition, however, is pending approval from the Norwegian Parliament in 2011, and this again will be pending acceptance of an industrial participation package which has to be presented by the Prime Contractor, Lockheed Martin. Nammo has for several years promoted

cooperation with Lockheed Martin, regarding both previous offset situations and the current F-35 industry participation initiative. For Nammo it has been essential to promote areas where we are in possession of world class and competitive capabilities, rather than pursue opportunities in direct participation such as aircraft components. Two such areas have been identified: aircraft ammunition and missile propulsion. Nammo has a long heritage of products and involvement in aircraft ammunition

and is now developing the next generation aircraft ammunition, called APEX. This program is now fully funded through development and qualification by the Norwegian Government, and discussions on cooperation with other nations, including the US, are progressing. Within missile propulsion, Nammo is also discussing with Lockheed Martin Missile and Fire Control several new opportunities which seem promising.

Nammo aircraft ammunition solutions

By Jan Hasslid, Vice President Marketing, Medium and Large Caliber Division
Eva Friis, Program Manager Aircraft Ammunition, Medium and Large Caliber Division

Nammo is a state-of-the-art developer and manufacturer of aircraft ammunition solutions for the international market. We have unique competence, as exemplified by our people and long-term collaboration with the Norwegian Defense Research Establishment (FFI), NAVAIR and PMA-242, and by the basic research conducted in the Multipurpose (MP) Technology programs. We use numerical simulations in our design work and conduct vulnerability analysis for performance optimization and for verification testing at our firing range. This enables rapid and cost effective design of projectiles.

Nammo is currently manufacturing medium caliber ammunition in support of International Joint Operations, and our aircraft ammunition is the ammunition of choice amongst F-16 and F-18 pilots. We are committed to deliver performance products to the modern fighter aircraft that will enable safe and precise engagement under all conditions and challenges. We are supported by the Norwegian Air Force for the development and qualification of two new ammunition products as follows:

25 mm x 137 APEX Aircraft Ammunition for the F-35 Lightning II (JSF)

Nammo solutions for fighter aircraft ammunition will enable pilots to defeat a wide range of targets with economy of ammunition. The ammunition technologies developed by Nammo help provide precision projectiles capable of defeating armored-vehicle targets as well as softer targets, i.e. providing the right response to the challenging targets in the 21st-century battle zone. Nammo is currently under contract with the Norwegian Defense

Logistic Organization for development and qualification of a mechanically fuzed Armor Piercing Explosive, APEX, ammunition that will give the pilots of the Norwegian Air Force the best ammunition solution available for the F-35.

The APEX has all the combat-zone advantages of high explosive incendiary ammunition with softer target materials, including enhanced capability for defeating armored targets in modern land warfare. The projectile body is designed to fragment upon impact and carries a lethal tungsten carbide penetrator for successfully piercing thicker targets.

The hit mechanism of the projectile body is divided into separate phases depending on the type of target engaged. The mechanical fuze will support the transition between the phases of target defeat. For targets with light to medium protection, the projectile body can make full penetration with a time-delayed fuze to ensure maximal blast and fragmentation well inside the target.

The tungsten carbide penetrator is able to penetrate armored targets because of the full utilization of focused energy and high density tungsten materials. The penetrator is a sub-caliber design with high L/D ratio for performance and it is securely fastened inside the projectile body. The tungsten carbide penetrator is placed in the front end of the projectile for maximum performance during penetration, and will generate lethal fragments inside the target by splitting into multiple heavy fragments.

Nammo's APEX ammunition provides a cost effective solution that meets all the performance, safety and environmental requirements of a 21st-century warfighter.



25 mm x 137 TP-RRR Aircraft Ammunition for the F-35 Lightning II (JSF)

Nammo is committed to support the war-fighter with precision products that deliver the requested effect to the target. The need for effective and safe training is increasing, with pilots having to provide frequent close air support within small areas. The Nammo target practice ammunition is the ammunition of choice. It provides accuracy, ballistic match to the high explosive ammunition and safe operation with small surface danger zones.

The solution is the Reduced Ricochet Risk ammunition, RRR. This ammunition will not ricochet like ordinary target practice ammunition after impacting soft soil like sand or dirt. The projectile features a break-up function upon target/ground impact and breaks into small parts with rapid velocity decay in ground and in air. The technology is well proven with 20mm ammunition on the F-16s and the F-18s.

Nammo is currently under contract with the Norwegian Defense Logistic Organization to qualify the TP-RRR for use with the GAU-22 gun on the F-35 Lightning II. This program is running in parallel with the APEX program for the Norwegian Air Force.

In summary, Nammo aircraft ammunition will provide the modern fighter pilot with solutions from training to war-fighting. We are committed to deliver precision products that the pilot can rely on for performing successful missions today and tomorrow. Nammo is currently developing the 25mm APEX and RRR. The rounds will be ready for flight certification in 2013.



Teaming leads to award of 40mm HEI L/60 program

By Gary Ostendorf, Marketing Manager, Nammo Talley

Two of the business units in Nammo, Medium and Large Caliber Division and Nammo Talley, formed a team in November 2008 to successfully bid on the US Army 40mm HEI L/60 Program. The proposal process was challenging as we worked across several time zones and two languages. However, the process was rewarding as we brought two separate Nammo sites together Nammo LIAB in Lindesberg, Sweden, and Nammo Talley in Mesa, Arizona, to cooperate on a project. The Nammo team put in a successful bid to execute a difficult program and deliver the 40mm HEI L/60 rounds of test ammunition in 10 months. The first 5,000 test rounds

have been shipped from Nammo LIAB for test and qualification purposes.

The team worked together to create a comprehensive proposal document that exceeded the customer requirements. The team was awarded a five-year contract with indefinite delivery and indefinite quantities. The maximum number of rounds to be procured under the contract is 2 million. The first phase of the program was the delivery of 5,000 rounds for testing purposes. After our rounds are judged safe to use and qualified on the weapons, the team will be qualified to bid on the remaining deliverables. The testing of

the rounds should begin in May 2010 and conclude at the end of the year.

The Nammo LIAB Lindesberg and Karlskoga teams should be commended for their efforts in setting up a new manufacturing line, building and testing rounds and finally completing the assembly of the deliverable rounds. Of particular interest is the creation of a new semi-automated fuze line to assemble and test the LI-465 fuze used in the 40mm L/60 round. The customer was quite impressed with the design and function of the fuze assembly line.

Infantry shoulder-launched munitions training

By Wayne Dillon, Weapons Trainer, Nammo Talley

Nammo Talley's shoulder-launched munitions (SLM) training teams provide critical training to U.S. Army and Marine Corps units prior to their combat deployments to Iraq and Afghanistan. The Nammo Talley training team concept was conceived in 2006 with the idea of assisting both services with restoring SLM proficiency with Nammo Talley products. These products have seen an expeditious increase in use in the Iraq and Afghanistan theatres of operation.

The standard training team is typically composed of two trainers, and one armorer specialist. The SLM training teams have trained over 25 Army Infantry Brigade Combat Teams and numerous Marine infantry battalions in multiple locations to date in the United States, as well as overseas in Okinawa, Japan and South Korea.

U.S. Army units are trained on the M141 Bunker Defeat Munition (BDM), formerly known as SMAW-D. The 83mm M141 BDM incorporates a dual-purpose, self discriminating fuze to allow optimal penetration of

bunkers, walls, light armor and caves. The M141 BDM is a single shot, disposable munition. Selected Army units are also trained on the M72 A7 LAW, a 66mm rocket, classified as a light anti-armor weapon, which defeats light armor, and is also effective against structures. Like the BDM, the M72 is a single shot, disposable munition.

U.S. Marine Corps units are trained on the M72 A7 LAW, and in the near future, will be trained on the M72 A9 ASM, an anti-structure munition.

A typical training event consists of a three-day training package including classroom and live fire on the range. Students receive classes in the morning, followed by hands-on familiarization, during which they must perform several tasks and must receive a "go" evaluation before moving to the next step, range firing. Each student fires three 21mm sub-caliber rockets per system at a variety of targets. After completing the sub-caliber firings, selected students fire the tactical rockets to demonstrate the effects on targets.

With the emphasis on combat operations shifting to the mountainous Afghan theatre, units are expressing increased interest in training on the M72 A7 LAW, because of its light weight (7.9 lb/3.6 kg).

The training teams will be instrumental in the preparation and fielding of the U.S. Marine Corps' new crew-served infantry assault weapon, the SMAW II/Serpent. Along with its new Fire From Enclosure ammunition, it will provide Marines with automated fire control and an enhanced target acquisition capability.

In addition to providing increased marksmanship skills with the currently available M141 BDM and M72 LAW weapons, a key aspect of the Nammo Talley training is to provide detailed information on the target defeat capabilities of each system. This important information assists Soldiers, Marines, and Unit Commanders in selecting the best available shoulder-launched munition to meet their mission operating requirements.





Research and development

By A. Erland Paulsrud, Vice President Business Development, Nammo Group

An important aspect of technology development in Nammo is to successfully introduce new technologies to existing and new products in order to develop products and solutions to meet the customers' needs.

Technology push – market pull

The modification of existing and development of new products must be based on a very fine balance between market pull and technology push. The art of this fine balance is reflected in the balance between lagging behind and overpromising in a very competitive market. Both can be disastrous to business success. Time-to-market in the defense business and other safety-critical areas is normally very long, often up to a decade or even more. Failure to keep up in the area of technology development is not likely to surface until years after. Nammo's

focus on technology, including applied research, is based on the understanding of the importance of technology development related to business success in a long-term perspective.

Novel technologies and driving forces

In the search for new technologies, it is important to understand the combination of the major driving forces that define the direction of the development of product performance and the confinements imposed of a legal or regulatory nature. The latter can be exemplified by the need for intrinsic properties such as insensitive munitions and the recycling of materials. This requires new solutions for energetic compositions, as well as a new design for the products. Environmental requirements to protect the user, nature or manufactur-

ing personnel are other examples. The direction of product development and market pull is to a large extent defined by experience from the operational theatres in Iraq and Afghanistan, or by the need for the effective training of troops within the limits of cost, time and available training areas. For Nammo, this has led to increased use of materials such as plastic and composite structures, in addition to product solutions from training ammunition to missile propulsion, as well as the acquisition of a highly competent composite company in the US. Other products have been realized through combining existing technologies with new technologies. One good example is the 40 mm AGL ammunition, where electronics based on in-house competence has resulted in a serial manufactured product.



Firing of a hybrid demonstration rocket motor. (It is totally safe. Not an explosive device, just a controlled flame).

Nammo participation in the International Year of Astronomy 2009

By Jan-Erik Ronningen, Technical Responsible Hybrid Rocket Propulsion, Missile Products Division

The International Year of Astronomy 2009 (IYA2009) was a global effort initiated by the International Astronomical Union (IAU) and UNESCO.

In 2009 it was 400 years since Galileo Galilei aimed his new invention, the telescope, at the sky. Through his telescope, Galileo could observe that the earth was not the focal point of the universe, as "taught" by Christian leaders. He observed a cratered moon, the planet Venus's phases, that Jupiter had moons and that the sun had mysterious black spots. Even 400 years later, we have so much more to learn about the nature of our universe. Why is it so important? Well, you and I are all part of it whether or not we like it or care about it in our every day life. By understanding and studying the cosmos, you will in fact start to discover more about yourself! The cosmos is by all means within you!

So, in December 2007 the United Nations decided that 2009 should be the Year of Astronomy, not only to honor Galileo Galilei, but to direct the attention of ordinary

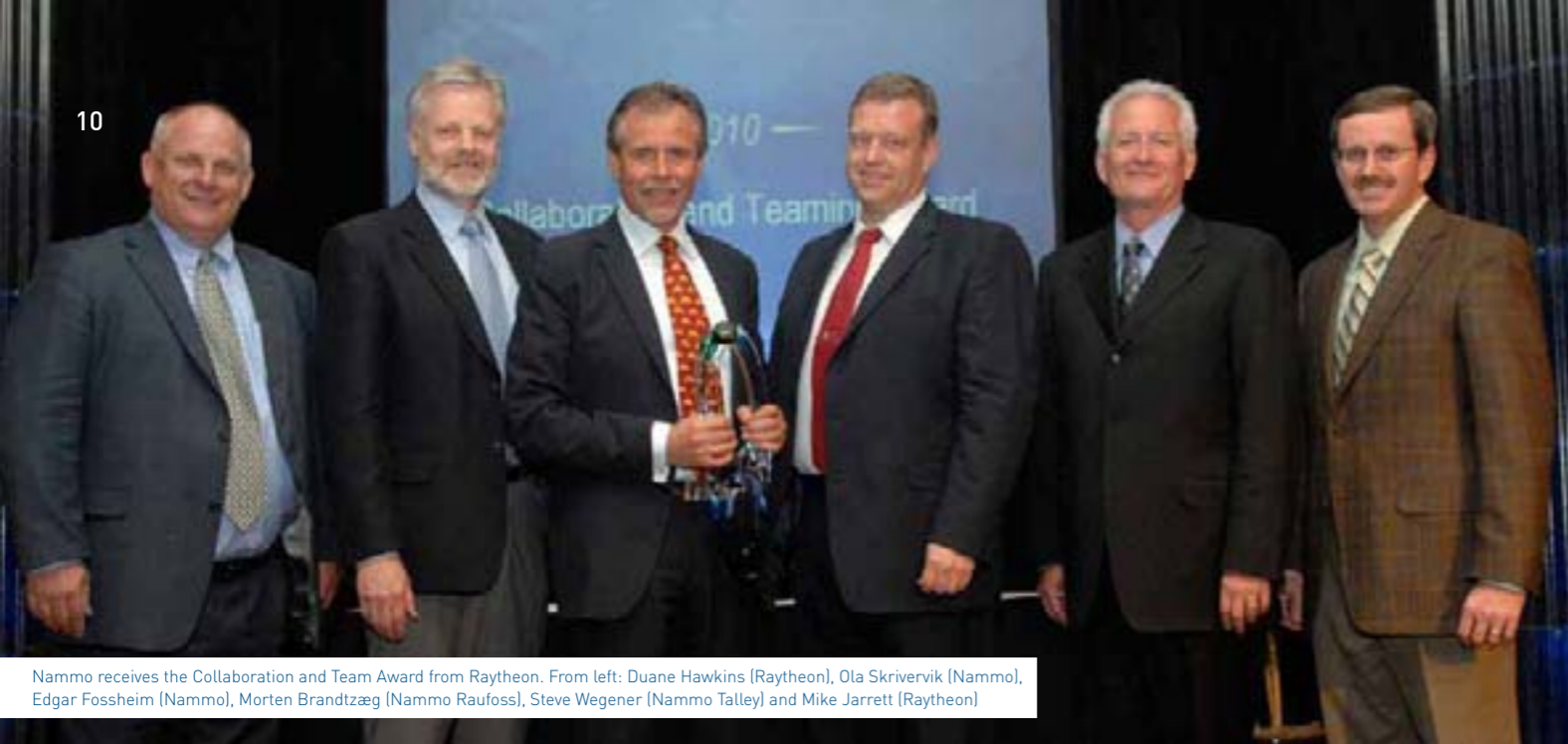


The audience are preparing for a hybrid rocket firing demonstration in the streets of Lillehammer. Note the white bucket-like object: it is a full scale display rocket motor of the Ariane 5 separation rocket booster.

people, like you and me, to the meaningful purpose of astronomy and science through global events carried out by locals in many nations!

The IYA2009 also got its own telescope. It was designed by experienced telescope builders as a very low-cost (only NOK 100/USD 15 per telescope) instrument, but with high-quality optical performance. The telescope was a big success and about 1 million of them were delivered worldwide nearly free of charge.

Late in 2008, Nammo Raufoss was invited to join the preparation and support of the planned activities to be carried out in Oppland County, Norway. Nammo supported the activities by demonstrating spectacular live hybrid rocket motor firings on the streets of several cities (Gjøvik, Lillehammer, and Hamar) and launching small rockets containing instruments. The activities were a big success and inspired many to simply: "look to the sky, start asking question and be amazed"!



Nammo receives the Collaboration and Team Award from Raytheon. From left: Duane Hawkins (Raytheon), Ola Skrivervik (Nammo), Edgar Fosheim (Nammo), Morten Brandtzæg (Nammo Raufoss), Steve Wegener (Nammo Talley) and Mike Jarrett (Raytheon)

AMRAAM: Development contract and award from Raytheon

By Tor Arne Skjervheim, Program Manager, Missile Products Division

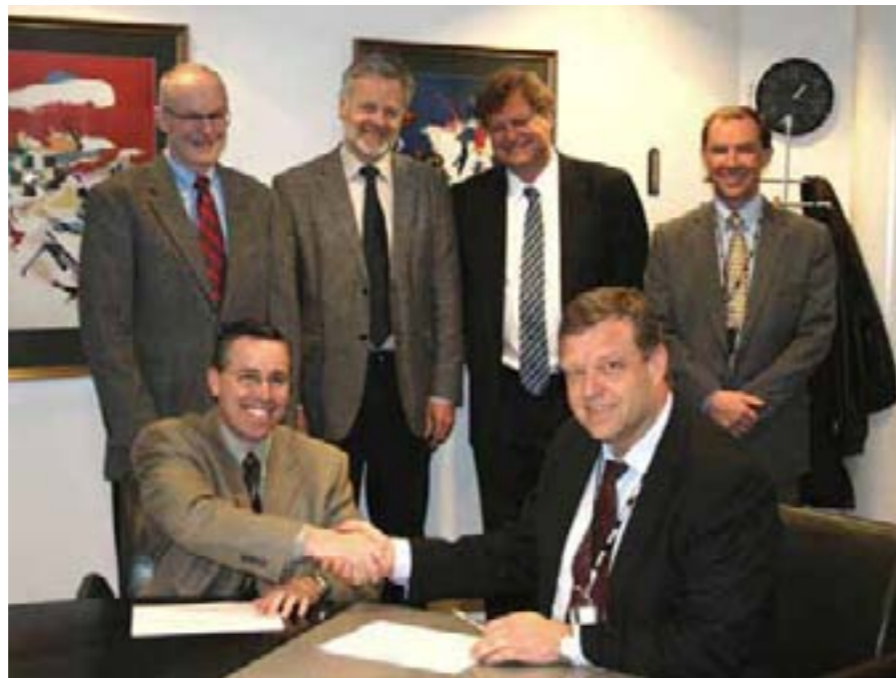
AMRAAM, acronym for Advanced Medium Range Air-To-Air-Missile, is made by Raytheon Missile Systems in Tucson, Arizona, and used by more than 30 countries around the world. The missile has been used by the Norwegian Air Forces on the F16 fighter since 1995, and has also been acquired for the Norwegian Advanced Surface-to-Air Missile System; NASAMS. Nammo has for many years tried to get a role on the AMRAAM program, and in 2010 we finally succeeded! An agreement was made between Raytheon and Nammo to develop and qualify a new rocket motor, interchangeable with the existing motor, and thereby establishing a second source for Raytheon.

Financing of the program is shared between the Norwegian Ministry of Defense, Innovation Norway, the US Government, Raytheon and Nammo. The program started up in September 2009, and the goal is to have the rocket motor qualified by the 3rd quarter of 2011. Among the major activities in the program are development and qualification of a steel motor case in cooperation with the German company Winkelmann MSR, and extensive Insensitive Munition (IM) and safety testing. The propellant is a reduced-smoke HTPB propellant. Among the highlights in the program so far are:

- Successful static firings of prototype full scale motors (with thick-walled motor cases)
- Contract signature at Nammo Raufoss on March 25th 2010 (See picture)

- Achieved the 2010 Collaboration and Team Award from Raytheon for the effort so far on the AMRAAM program. The award was handed over to Nammo by

Raytheon Missile Systems Supply Chain Management at a ceremony in Tucson, Arizona, on April 8th 2010.



AMRAAM contract signature between Raytheon and Nammo. From left (standing): Russel A. Mc. Curdy [Senior Program Manager, Raytheon], Ola Skrivervik [Nammo], Kai Fossumstuen [Nammo] and Tor Arne Skjervheim [Nammo]. From left (sitting): Ted Roos [Int. Subcontractor Manager, Raytheon] and Morten Brandtzæg [Nammo]



Celebration of Ariane 5 Launch no. 50

By Turi Royne Valle, Program Manager, Missile Products Division

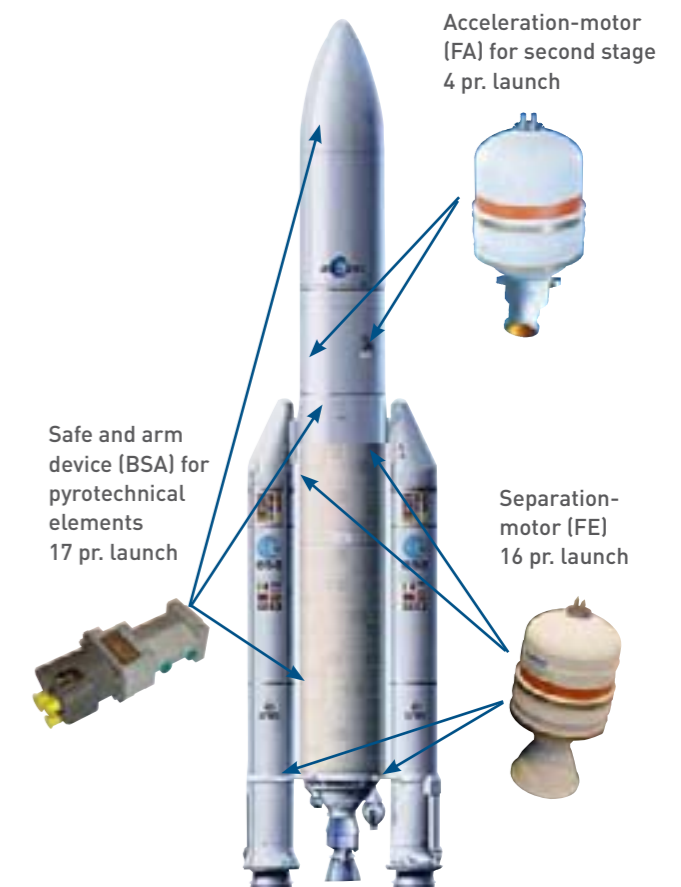
The launch vehicle and workhorse Ariane 5 is now going through the last preparations in the European space harbor in Kourou, French Guyana. Onboard are the telecom satellite built by EADS Astrium and the German military satellite built by Thales Alenia Space. Ariane 5 has been used for launching satellites since 1997. The Ariane launch vehicle is developed for placing satellites (one or more) in different orbits around the earth. Arianespace can boast 35 successful launches in a row prior to this launch No. 50. The first generation launch vehicle, Ariane 1, developed by the ESA organization, was launched in December 1979. Since then, the Ariane launch vehicle has been under continuous development as shown by the history:

Ariane 1:	First launch: 24 Dec. 1979
	No. of launches: 11
	Payload: 1.8t
Ariane 2:	First launch: 21 Nov. 1987
	No. of launches: 6
	Payload: 2.2t
Ariane 3:	First launch: 04 Aug. 1984
	No. of launches: 1
	Payload: 2.7t
Ariane 4:	First launch: 15 June 1988
	No. of launches: 116
	Payload: 4.9t
Ariane 5:	First launch: 30 Oct. 1997
	No. of launches: 42
	Payload: 10.0t

Nammo has been involved in Ariane 5 since 1991. The first project was the development of the separation motor FE and safe-and-arm device BSA. Nammo became qualified for production and delivery of these two

products in 1995, and have since been a regular supplier to Ariane 5. In 2000, Nammo was engaged in the development of the acceleration motor FA, which was qualified in for delivery in 2004. Today Nammo delivers the products Separation motor FE, Acceleration motor FA and safe-and-arm device BSA to all the Ariane 5 launches. The location of these Nammo products on the Ariane 5 launch vehicle is shown in the drawing below.

As of April 2009 Nammo had delivered 1,000 ea FEs, 1,000 ea BSAs and 100 ea FAs to the Ariane 5 launch vehicle. Also in April 2009, Nammo signed a new contract with EADS Astrium Space Transportation for delivery of FE, FA and BSA for 35 new launches with a value of 150 MNOK, the largest contract ever awarded to a Norwegian company in the space industry.



18th Global Demil Symposium & Exhibition

By Ola Pikner, Vice President Marketing, Demil Division

The "Global Demil", as it is called in the demil community, is an annual symposium and exhibition event in the US. Most visitors at the event are Americans, and the exhibitions and speeches are mostly aimed at the US market and situation. However, it is the only one of its kind and size in the small world of demilitarization and accordingly attracts visitors from all over the world. The visitors include people from the industry, government officials as well as organizations, laboratories and universities etc. The venue rotates, and in 2010 the event was held in Tulsa, Oklahoma, from 10th to 14th May. Originally organized by the US NDIA, the event has for a number of

years now been organized by the US Army itself. This year 423 people attended from 16 countries.

The program includes speeches from the categories Solutions to Munitions Demil, Disposal Challenges, Safety/Environmental Related Initiatives, Technology Developments/Emerging Technologies, Innovative Use and Sale of Reclaimed/Recycled Material, Component Reuse Initiatives and Design for Demil. Anyone can apply to give a speech. Next to the lecture hall was an exhibition area, which was open to everyone attending the event.

Nammo has been represented at the "Global Demil" since the company was formed, and normally we participate both in the exhibition and with a speech. 2010 was the first year we exhibited as Nammo Demil LLC and we also gave a speech entitled "Nammo Demil – An environmentally responsible supplier of disposal and recycling services". The Nammo booth was well visited and we met with both existing and potential future customers as well as partners, subcontractors and competitors.

Change in Nammo's position in the US after establishing Nammo Demil LLC

By Reijo Bragberg, Executive Vice President, Demil Division

The US is by far the largest demil market in the world, spending well over 100m USD on demil every year, which is more than all the European demil markets that are open for competition combined.

Nammo has held a very strong position in the US market for more than 10 years. In 1999 we established PB-Nammo Demil LLC, in which Nammo owned 49%, together with Parsons Brinckerhoff (PB)/US. In 1999 PB-Nammo also managed to win the first US multi-year "ID/IQ" contract for demil. PB-Nammo was the prime contractor and system integrator for the US Army, which subcontracted the actual demil work to both private industry and US Army installations. Nammo's demil companies in Europe were all subcontractors to PB-Nammo under this contract, which ran until 2006. In 2006 a new, five-year, contract was awarded, whereby PB-Nammo secured a major subcontract with GD-OTS, which won the contract and became the prime contractor for the US Army. This contract is

still ongoing and we expect to complete our final work there by mid-2011.

As a result of PB being sold to a UK company in 2009, Nammo decided to buy also the PB shares in PB-Nammo. This purchase has been completed, making Nammo as of 2010 the sole and 100% owner of the company, now renamed Nammo Demil LLC. Nammo Demil LLC is part of the Demil Division in Nammo and is located in Arlington, Virginia, with a branch office at Rock Island Arsenal, Illinois, where the US Army organization managing the demil contracts has its offices. Pete Sioma is the President of Nammo Demil and Col. (Ret.) Dave Emling is the Vice President running the Rock Island office.

Nammo Demil is currently working on a new 5-year solicitation from the US Army, expected to be released in May 2010. Through Nammo Demil, Nammo now has a US company with a very strong position in the US market and the necessary "past

performance/experience" (important criteria in a US solicitation) to be bidding as a prime contractor towards the US Army. The contract, expected to be awarded around September/October 2010, will decide the future of Nammo Demil LLC. Should Nammo Demil manage to win this upcoming 5-year demil contract, Nammo will become one of the major demil contractors in the US and significantly increase its staff and presence at Rock Island Arsenal.



Rock Island Arsenal

Nammo's role in the world market of demil today

By Reijo Bragberg, Executive Vice President, Demil Division

I would like to address the subject of environmentally responsible disposal and recycling of conventional ammunition and explosive products (no NBC ammunition or weapon systems/platforms), hereinafter referred to as the "demil market", and try to give a picture of what Nammo's position is in that market.

How can today's demil market be described?

Although environmental concerns and awareness are growing everywhere in our society, the demilitarization of ammunition and explosives is not yet a mature requirement in most countries. It is easy to understand that demil is not a priority among our main customers – the world's armed forces – since it doesn't contribute to military capabilities and costs money that the armed forces are generally lacking. Accordingly, demil is at best seen by our customers as a "necessary must". What is harder to understand is that many countries still allow their armed forces to demil ammunitions and explosives through open detonations or open burning, which causes severe and long-term damage to our environment, especially in Europe with its numerous EU Directives and regulations that should apply also to the armed forces and demil.

What does the future market hold for demil?

The above means that there is a future market potential for demil, since many armed forces don't address the demil issue and keep on storing their obsolete and outdated ammunitions and explosives, but also that the present market is limited. The market is further limited by countries openly supporting their national industry or at least not allowing open competition. The most mature demil customers are BWB/Germany, NAMSA (NATO), FMV/Sweden, MoD/UK and US Army (in alphabetic order), which all have long experience purchasing demil services and have a repeating budget in place for that purpose.

Are there many competitors in the market?

Since the market is limited, so is the industrial competition. Typical enterprises are small companies specializing in demil,

with either a monopoly or at least a very strong position in their domestic market.

The limited market for open competition, combined with a nationally supported industry that tries to market its spare capacity on export, also means that the few procurements that are open for competition receive a lot of attention and consequently many low price offers. This also means that companies without national support operate in a very tough market, making it hard to develop long-term sustainable capabilities and a reasonable level of profits.

How is Nammo positioned in the world market?

In Nammo we have concentrated our resources on the few mature demil markets and customers, while trying to develop new "home markets". Along with this, we have also been working on "projects" to establish new demil companies and facilities in upcoming market areas.

Although competition is and has been tough, Nammo has managed to position itself as the market leader in Europe and

one of the market leaders worldwide. This is not based alone on our more than 40 years' experience in the demil industry and in-house-developed technologies and equipment, but on our position in the mature demil markets:

- We are the market leader in Sweden
- We are one of the main suppliers in Germany and to NAMSA and the UK
- We are one of the main subcontractors to the US Army
- We have 5 companies in 4 countries, with 3 totally different and flexible main processes/technologies (full recycling, incineration and environmentally controlled underground detonations)
- We have invested in new and modern automated equipment for demil of sub-munitions/bomblets, which will be in major demand in the international market (as a result of approx 110 nations signing the Oslo Convention)

I also think that Nammo's position will increase significantly with growing customer demand for eco-friendly, safe, high-performance and larger and more complex ammunitions.



Photo: Werner Andersson

Demilitarization of cluster munitions.

Ethical conduct an obvious part of Nammo's core business

By Sissel Solum, Senior Vice President Communication, Nammo Group

Continuous implementation of the Ethical Code of Conduct goes on, and has had high priority in 2009. A representative from both HR and Communication has visited the majority of the Nammo sites. The purpose of these visits has been to present the ethical guidelines and realistic examples of dilemmas. It has been important to communicate the understanding of the Ethical Code of Conduct throughout the management level of the organization.

To handle ethical questions, if any, Nammo has an Ethical Committee that meets

regularly during the year. The committee shall be updated on ethical issues and shall evaluate and assure the implementation of the company's ethical standards. The committee has three members nominated for a period of two years and reports directly to the President and CEO of the Group.

In addition to supporting the UN Global Compact, the Nammo Group has committed to the Global Principles of Business Ethics established by the European Association of the Aerospace and Defense Industries.

The actions set forth by the defense associations in Europe and USA show that the entire defense and aerospace business is ready for a future with considerably more transparency and openness towards the public than evidenced earlier. Nammo supports these actions.

"Integrity is doing the right thing, even if nobody is watching."

Corporate Social Responsibility through sponsorship

By Marit Flågen Amundsen, Manager Marketing Services, Nammo Group

Why are we involved in sponsorships and what do we want to achieve?

Sponsoring is one of the most effective communication tools related to both branding and profiling of a company. "Visibility builds preference for what is visible, even if the recipient does not know what it is about", proves a Norwegian research report.

In addition, corporate social responsibility moves further up the agenda, and there are growing opportunities for Nammo to associate the company with activities that create a positive reputation and goodwill. Nammo has been socially responsible by sponsoring culture and sports in most of the local communities where the company is represented.

Every site in Nammo has a sponsorship program, but the objective is more than just supporting positive activities in the community. Activities that benefit our employees and core-business are prioritized. Nammo encourages employees to take part in community activities, to be engaged in health actions, sport clubs, social programs, cultural events and humanitarian aid. It is also important to choose sponsorship



partners that employees can identify with, that make the employees proud to be a part of Nammo and that create an arena for internal culture building. An important aim

of our sponsorship activities is of course to communicate our values to customers, employees and the public.



Biathlon sponsoring – The great challenge to go forward and reach successes

By Heiko Weidner, Ltr. Service, Small Caliber Division

Snowfall, strong winds and temperatures down to -12 degrees Celsius posed a major challenge to all the athletes, coaches and fans. The over 100,000 spectators at the Biathlon World Cup weekend in Oberhof set a "new" world attendance record – and the event also marked a new record for Lapua. All medals in the single races, sprint and mass start events for women and men were won with Lapua ammunition. The best shooting result with zero penalties was made by Swedish athlete Carl Johan

Bergman using selected Polar Biathlon ammunition.

The Swedish team, one of the most successful in the IBU World Cup series with the strong ladies Helena Jonsson (World Cup winner 2008/09) and Anna Carin Olofsson-Zidek, is supported by Lapua. This marked the start of a partnership between Lapua and the Swedish Biathlon Federation that will help them reach success and create new developments in the Biathlon sport.

The new man in the yellow vest, symbol of the overall World Cup, is Tim Burke from the US Biathlon Team, also supported by Lapua. With the new shooting coach Armin Auchentaller from Italy, we have an excellent partner. Fifteen out of sixteen podium places at a single World Cup event attest to the success of our partnership with the US and Swedish teams and to their confidence in shooting with Lapua ammunition.

Manuel Krüger, member of the German Paralympics Team

By Heiko Weidner, Ltr. Service, Small Caliber Division



As part of his preparations for London 2012, Manuel Krüger, member of the German Paralympics Team, conducted an ammunition test for the third time in Schönebeck (Elbe). "Time is short and planning for the upcoming season is under way," says Manuel, who starts each spring by checking his sporting equipment.

Batch testing is one of the most important things, and each athlete must be sure how the selected ammunition works in his pistol or rifle. Along with Andreas Schnit-

zeler, range officer from Lapua .22 Service Center, Manuel Krüger conducts the test shooting while Andreas helps him select the best shoot groups.

Manuel's main event, the World Championships, will be held in Zagreb (CRO) from 16 to 25 July 2010. He will be well prepared and supported by Lapua for the World Championships in Croatia and also for his next steps on the long way to the next Paralympics in London 2012.



Welcome to the XXI Olympic Winter Games in Vancouver 2010

By Heiko Weidner, Ltr. Service, Small Caliber Division

The XXI Olympic Winter Games commenced in Vancouver 12 February 2010. One of the first competitions and medal opportunities was the biathlon events in Whistler Olympic Park.

For Lapua, the preparations for the Olympic winter season 2009/10 began the summer before. In July and August, the first teams, especially those from Norway, Russia, Germany and Austria, came to the Lapua .22 Service Center to select ammunition. The service center in Schönebeck (Elbe) has facilities for testing at temperatures down to -20 degrees year-round. Most of the national and international biathlon teams come and select at room temperature and re-shoot under extreme conditions in the low-temperature chamber.

The first 6 IBU World Cup events were a success and the teams using selected Biathlon ammunition won over 80 per-

cent of all medals at these events. The Olympic Games 2010 in Vancouver had exciting races with surprising results by the medalists. Anastazia Kuzmina from Slovakia, using Lapua X-Act, won the Olympic title, 1.5 seconds ahead of Magdalena Neuner (GER), who used Lapua Polar Biathlon, and Marie Dorin (FRA), with Lapua Midas+. Anastazia was behind Magdalena after the second shooting, but her strong performance and perfect material on the last lap were vital to winning her first Olympic Gold Medal.

The young lady from Slovakia missed the first World Cup 2010 events in Oberhof and Ruhpolding and had to drop preparations for the Olympics after a training accident. During this time, Anastazia's coach came to the Lapua .22 Service Center for a re-test and selected the ammunition for the later Olympic champion.



Activities on the world market

By Jörg Melcher, Marketing, Lapua Rimfire team, Small Caliber Division

Following up our vision to be the global leader in the rimfire market, it is necessary to fulfill our role in all areas relating to rimfire target shooting ammunition. The name "Lapua" is well known throughout the competitive shooting world. Lapua stands for Precision and Accuracy.

Lapua rimfire ammunition is exported to over 50 countries and sold through our international distribution channels to wholesalers, retailers, national teams, clubs and shooters. We have forged long-term, solid cooperation with our partners. For the Lapua rimfire segment it is very important to get direct feedback from the market. Lapua personnel continuously identify the activities of our competitors – the quality of their ammunition, special marketing activities and even market share. This boosts our motivation to improve and maintain leadership in the rimfire target ammunition market. For that reason, Lapua's rimfire segment participates in numerous activities both home and abroad.

Each year, we participate in the world's major weapons and ammunition exhibitions. We are present with a representative Lapua booth at the Shot Show and NRA Show in the USA and the IWA Show in Germany. During these shows, our wholesalers and dealers visit Lapua and get the latest information on Lapua ammunition and activities. In addition to attending shows, Lapua sales managers visit our key customers at least once a year to discuss

the business and agree on new actions to win more shooters for Lapua high quality cartridges.

Lapua rimfire Service Teams attend the main international competitions including world cups, international championships, and the Olympic Games to show our support. Our sales and service managers use the opportunity to speak with top shooters, trainers and representatives from the national shooting federations about success with Lapua ammunition and to obtain new business and suggestions. At shooting competitions organized by our wholesalers and dealers, the Lapua sales and service team represents Lapua rimfire ammunition.

One important tool in the rimfire sales strategy is our Lapua Service Center in Schönebeck. Lapua offers shooters the opportunity to test different production lots of Lapua ammunition and select the best lots for their weapons. Shooters can be sure the selected ammunition is 100% matched to their rifle or pistol. Each year, shooters from Norway, Sweden, Germany, USA, UK, Australia and other countries from all over the world take advantage of this Lapua service.

Looking at our successes in the biathlon competitions at the recent Winter Olympic Games, we proudly observed that 88% of all Olympians used Lapua ammunition. Lapua is on the right path and we are preparing

the next steps to get our products to top shooters in Germany, UK, France and other countries.



Report on the US Market

By Adam Braverman, Sales & Business Manager, Small Caliber Division

Sport shooting and reloading activities in the USA have been growing rapidly for Lapua and VihtaVuori the past 18 months. Improved product availability in all areas of the Lapua Centerfire and Rimfire categories, coupled with new distribution channels, have led to record sales in the USA. Importing partners Graf and Son's and Kaltron-Pettibone have both achieved record levels of sales for the Lapua Centerfire, while our importer, Sports Shooting International (SSI), has taken the Lapua rimfire sales beyond prior results.

Aggressive new product development, including the .308 Winchester Palma and .22-250 Remington cartridge cases, should keep Lapua on top of a very competitive market.

The members of Team Lapua continue to perform at the top of their respective disciplines. Fifteen-year-old Tyler Rico has captured almost all of the Junior National Championships since joining the team and has added rimfire competition to his already impressive resume of centerfire accomplishments.

Finally, the addition of experienced ballistician and competitive shooter Kevin Thomas to our US marketing team adds a new level of technical expertise that serves our customers even better.



Team Lapua sponsored shooter, 15-year old Tyler Rico



International financial network

By Kathrin Sondershausen, Financial & Personnel Manager, Small Caliber Division

I have been working at Nammo since March 2006. One of the most important reasons I like my job is that I can work with people of many different nationalities. Communication is vital when we cooperate on year-end closing of accounts, budgets and forecast. The total experience is very positive when work and communication go hand in hand. Then you can support your colleagues or get help from them.

The most recent example of major international cooperation is the implementation of the Cognos program. The financial people at Nammo keep in touch; we learn from and help each other. Even though we all speak different languages, I have learned by being open to communication.

Increased control with Cognos Business Intelligence

By Tone Skogbakken, Manager Business Intelligence, Nammo Group

Reporting and analysis requirements are increasing as Nammo is growing in both size and turnover. Good decision-making processes are based on trusted information. Trusted information is based on data quality. In order to measure Nammo's performance and support decision-making processes, it was decided in 2007 to implement a Business Intelligence (BI) solution across the Nammo group.

Being that Nammo did not have a common data warehouse and a master data strategy, cross-divisional and cross-country reporting has been difficult. In addition to that, no details from Corporate or Division level have been available to end users. As master data structures have been defined and built, reporting with IBM Cognos BI will provide sufficient information to make reporting and analysis easier at all levels of the organization. This will enable report users to focus more on analyzing the data and using the information in daily work processes, and spend less time making the reports.

The first phase of implementation will soon be released following a long process of collecting and modeling data from all companies in Nammo. The first release will cover corporate financial reporting, including a budget model and tool for consolidation of group and divisional results. Today's web solution will be replaced by the new Cognos reporting portal, which will be taken into use after the release. Subsequent implementations will cover other areas of reporting within different departments as well, like HR, HESS, Sales, Marketing, Operations, etc. There are in theory no limits to what can be included in this type of "reporting data warehouse" as long as the information exists, in addition to available resources and time.

As Nammo is operating in a competitive and challenging market, the focus for BI strategy ahead should move from a reporting and ad-hoc querying point of view to a more analytic and predictive approach – modeling applications that tell us where we are going and what actions need to be taken in order to achieve our goals.





XIIth Multipurpose (MP) Symposium 2009

– A success story for demonstration of Nammo capabilities

By Jan Hasslid, Vice President Marketing, Medium and Large Caliber Division

I remember my first MP symposium as if it were yesterday. It was back in 1997, and I was presenting the penetration dynamics of a 30mmX173 APFSDS-T based on a 3D simulation in DYNA3D. It was the world premiere of an animation of a tungsten long rod penetrator penetrating the hull of a BMP3 at 60 deg NATO. First, I thought this was going to be a tough one for the 100 people strong audience, but we followed up with a live demo of the actual target at the afternoon live firings. To all attending, it was an eye opener about the capabilities of 30mm ammunition.

Today, 30mmx173 is a success story for Nammo Raufoss and for all our customers that have selected 30mm cannon systems with new combat vehicles.

Since then, we have moved on to display capabilities of ammunition products ranging from 5.56mm to 155mm with focus on Urban Operation Solutions, investing in a new firing demonstration range: the Urban Warfare Test range - UWT.

The main purpose of the MP symposium remains unchanged since 1986.

–“Providing an attractive symposium for presenting novel solutions and demonstrating capabilities to our customers and partners”

The Xth MP Symposium in 2007 was a record breaker, with more than 250 delegates from 25 nations. With the introduction of the In Field Symposium in 2009, the level of information exchange and perfection of impression reached even greater heights. A number of world premieres were introduced with small,



medium and large caliber products, and the presentations made by our international customers reflected the need for new solutions on ammunition and weapon systems.

Nammo will move on, introducing a symposium encompassing the challenge for the

21st-century warfighter and the need for scalable effects in the engagement zone.

The next symposium will evolve into a Mission Performance Symposium, addressing the capabilities of Nammo to develop new solutions that enable safe and precise operations for the Joint International Forces.

Nammo Talley celebrates “50 Years of Excellence” in Mesa, Arizona

By John F. Hill, Vice President Business Development and Advanced Programs, Nammo Talley

This year marks the 50th anniversary of Nammo Talley operating as a corporation in Arizona. This milestone anniversary demonstrates Talley’s commitment to integrity, customer satisfaction, collaboration, innovation and financial values. It serves as a testament to the dedication and spirit of its past and current employees.

The 50-Year Celebration commenced on Thursday, April 8 at Nammo Talley’s Mesa, Arizona facilities. Over 300 employees

gathered in the warm Arizona sunshine to commemorate this special event with a company sponsored picnic lunch at Plant 1. The celebration was an opportunity for all the employees to come together to reflect on the past and to look toward the future.

Steve Wegener, Nammo Talley President & CEO, congratulated employees on 50 years of growth and progress. He stated that the dedication of past and present employees to Talley’s customers, products and each

other paved the way to this accomplishment. These same values will carry Nammo Talley on to continued success in the future.

As the world’s economy struggles to recover from a global recession, Nammo Talley’s 50-year celebration serves as a reminder that stability and growth are highly achievable when your goals are clear and your workforce is dedicated.

Congratulations to Nammo Talley!





Marketing communication through exhibitions

By Marit Flågen Amundsen, Manager Marketing Services, Nammo Group

In addition to a number of small exhibitions that various parts of Nammo's business units attend, the entire Nammo group is presented as a whole at four to five major events throughout the year. It takes a lot of resources, both money and time, to plan, carry through and follow up an exhibition. Therefore, our participation must be carefully thought through.

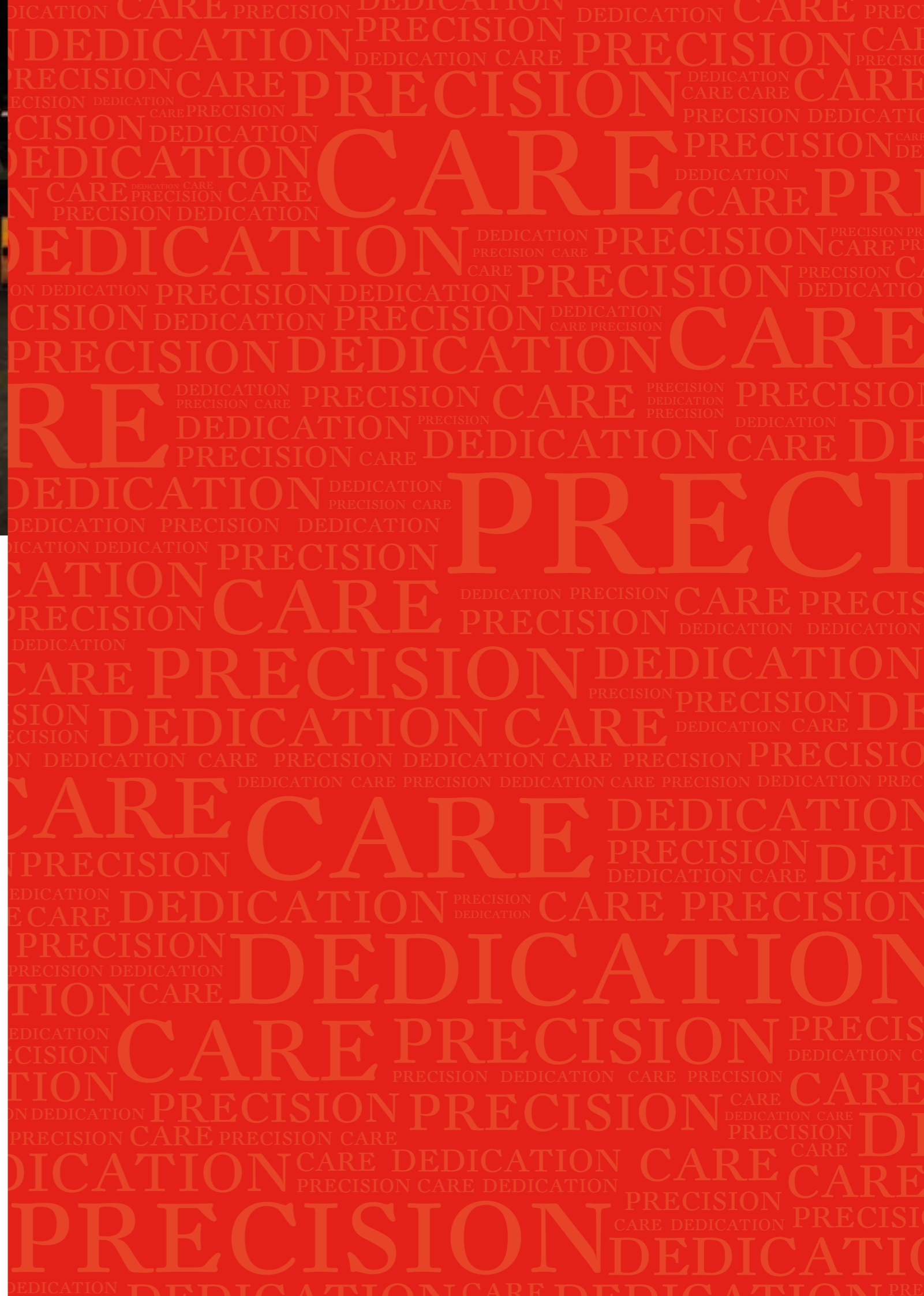
The main reason why we participate is to build the Nammo brand and to effectively promote our business to give our custo-

mers and partners a significant positive comprehension and understanding of Nammo. We believe that a strong brand, based on our products, services, social responsibility and ethical standard, creates and communicates an image of high quality.

An exhibition is an ideal platform for launching new products/technologies and allows us to do some research and evaluate our competitors.

The defense industry is small, and most of the players in the market are present at these large events every year. That means we are also using the exhibitions as an efficient meeting place, where our management, marketing people and engineers meet with customers and partners from far and near.

For a complete list of participation by the Nammo Group throughout the year, see www.nammo.com/Nammo-Group/Events/



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