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Dutch Defence Industry: Competencies, The "Triple Helix"

and Exports



Dutch Aerospace and Defence (A&D) industry features high-tech production, frequent innovation and highly skilled personnel. Dutch defence industrial base includes a few manufacturers of complete weapon systems (mainly within the maritime sector, which is able to provide a wide range of platform) and a bigger number of small and

medium-sized enterprises (SME) as suppliers of sub-systems and components. Many companies are niche-oriented and are active in both the civil and military domain. According to official estimations the Dutch defence industry exports goods worth approximately 1.5 billion Euros every year. It is worth mentioning that Dutch arms exports are rather diversified in their geographical structure, as approximately 30 countries have imported



defence equipment from Netherlands in 2015.

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The Dutch A&D industry is mainly gathered in two areas, the Maastricht Aachen Airport (MAA) and the Province of North Brabant at South Netherlands. At the Maastricht airport several hundreds of employees work for aerospace MRO companies, such as Hamilton Sundstrand, Samco Aircraft Maintenance (base maintenance) and MAAS aircraft Several Aerospace and painting. Defence companies (mainly involved in the production of military vehicles as well as military and civil aviation), with an excellent reputation and international portfolio have their industrial bases at the province of Brabant.

In order to further enhance local defence industry, Dutch authorities created a cooperative pattern including the government, indigenous Defence and Security Related Industry (NL DTIB) and knowledge institutions. This "Triple Helix", as it is called, has as a purpose to reinforce the

innovative capability and independent position of the entire defence and security sector. In this context, government refers to the Ministries of Defence and Economic Affairs, the NL

DTIB consists of small, medium-sized and large companies that are active in the defence market and the knowledge institutions are universities, semi-public institutions and knowledge institutes.

In an institutional level The Netherlands Industries for Defence and Security (NIDV) Foundation plays an important role in the Dutch defence industry, as it facilitates the sustainable positioning of the Dutch Defence and Security-related Industry (NL-DVI) in national and international orders (from the government and elsewhere) and in national and international supplier chains.

Netherlands is the home of several aerospace companies, such as the Fokker, CAE and Aeronamic and P-M Aerotech. According to official estimations provided by the Netherlands Aerospace Group (NAC) in 2014 the Dutch aerospace and airport industry recorded a total turnover of 3.9 billion Euros and generated 16500 jobs. Maintenance Repair and Overhaul (MRO) activities generated the majority (50%) of the industry's turnover, followed by manufacturing (22%), logistics (13%) and airport development (15%) activities. Several Dutch companies have provided components for the commercial aerospace industry such as tooling and aircraft interiors for the Airbus A380, wing flaps and engine harnesses for the Airbus A350 and floor covering as well as thermoplastic laminates for the Boeing 787.

The Dutch A&D sector is also involved in the development and production of the F-35 fighter aircraft, as the Benelux country is a key contributor to the development, production, and sustainment of the F-35 program. Currently, 27 Dutch companies have been awarded work, and 10 have active contracts for a total contract value of US\$750 million. Among others Fokker provides in-flight opening doors, flaperons, titanium engine parts and arresting gear, Fokker's sister company Fokker Elmo has been awarded the contract for the complete JSF wiring and inter connection systems. Additionally, Aeronamic B.V. signed a contract for the manufacturing, production, final assembly and testing of the forward Module as part of the F-35 Power & Thermal Management System, which will take place in the company's main facility in Almelo. Other companies that have already signed contracts for the delivery of parts for the F-35 Lightning are Thales, Aeronamic and KMWE.

It is expected that the program will generate in total more than 5 billion Euros in framework contracts, 8-10 billion in production contracts, 15-20 billion in maintenance contracts and up to 5000 long-term and high-quality jobs.

As it already mentioned the Dutch defence industry has a viable and well-established maritime sector. Damen Schelde Naval Shipbuilding (DSNS) is one of the most important "components" of this sector, as it manufactures a wide variety of vessels, used by Netherlands' and by several other navies around the world.

Kyriazis Vasileios,

Epicos Newsletter Head Editor

Sources:

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Interview with Mr. Jochem Frudiger, Managing Director of the Dutch Company GTM Advanced Structures





Mr. Jochem Frudiger, Managing Director of the

Dutch company GTM Advanced Structures gave an exclusive interview to Epicos. Among others, he stated that: "Within the Space market, GTM is qualified for manufacturing structural

Aluminium honeycomb panels, Flexprint panels and small solar panels populated with GaAs triple junction solar cells for CubeSat's".

Mr. Frudiger, can you please depict the current position of GTM Advanced Structures in the national and international markets?

GTM provides R&D support in the process, from material development, testing & inspection up to the manufacturing of the final product.

By taking an integrated approach, we meet all the requirements of the product, which includes mechanical & environmental performance and manufacturing at low cost.

GTM manufactures hybrid parts (bonded, FML and composite laminates) for the Aerospace market, as well as Cubesat structures and solar panels for the Space market.

Can you please provide us a short description of your company's history?

Jan Willem Gunnink founded GTM in 2004. From the start the company developed new FML combinations e.g. Central, and demonstrated an improved FML solution for the A400M frames.

- In 2009 the company acquired the quality management system in accordance with AS9100 revision C.
- In 2011 two new clean rooms were built, one for hybrid parts and one for cubesat solar panels (soldering and bonding GaAs solar cells on substrates).

Company's Facilities





MTS 100kN Mechanical Test Bench for Both Static and Dynamic



MTS 500kN Mechanical Test Bench for Both Static and Dynamic

- In 2016 both GTM and Surface Treatment Netherlands became partners.
- In 2016 GTM acquired a new 3-axis CNC machine and a new ultrasonic inspection method, by means of Airscan in addition to the existing C-scan method.
- 3. Which are the main business sectors GTM Advanced Structures is active in?

The main sectors we are active in is Aerospace.

Occasionally we work with knowledge institutes like technical universities.

4. Can you please give us some information on the main projects?

GTM is currently developing a High Velocity Impact shield for space applications with ESA, the shields are being tested at 7km/s, the project will be completed by the summer of 2017.

GTM has started developing a new smallsat platform, which will be completed in 2018.

Within the Aerospace market, GTM is developing a structural FML demonstrator part for single aisle aircraft.

5. Can you please mention some projects in which GTM Advanced Structures has been used?

Within the Space market, GTM is qualified for manufacturing structural Aluminium honeycomb panels, Flexprint panels and small solar panels populated with GaAs triple junction solar cells for CubeSat's.

GTM completed the development for a FML crackstopper for single aisle aircraft.

We manufacture parts by autoclave cure, or vacuum oven, according to the mechanical requirements of the customer.

6. What are the next steps and priorities of your company?

Next steps will be series production for FML products for single aisle aircraft and 12U CubeSat platforms.

Company's Facilities

Overview



Autoclave



New 3-Axis CNC Machine



Figure 2Clean Room



Ultrasonic Inspection by C-Scan Method



Aluminium in Stock

7. Is there a specific country or region where GTM Advanced Structures would like to expand its activities to in the near future?

GTM is developing FML products, and will manufacture FML parts for single aisle aircraft manufacturers.

For additional information please visit GTM's website at:

http://www.gtm-as.com

Or contact the company by the following:

Email: info@gtm-as.com

Telephone: +31-70-319-50 30

GTM Advanced Structures



GTM Advanced Structures is an independent technology based company, located in the



Netherlands, providing complete support to aerospace companies in the development and

realization of advanced structures. The combination of the company's manufacturing capabilities and its in-depth knowledge of advanced structures and the aerospace industry enables GTM Advanced Structures to manufacture parts and components meeting the customers' requirements according to industry's standards. <u>More</u>

Epicos "Industrial Cooperation and Offset Projects"

Cpicos.com Epicos "Industrial Cooperation and Offset Projects" provides a unique set of online tools enabling the structure, identification and implementation of comprehensive Offsets programs, through a searchable database. By introducing different offset projects and ideas proposed by local A&D industry it ensures the optimum cost for Prime Contractors and reassures that the priorities of local industry are fully met...

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Climbing training simulator for special operations forces



A company is proposing the development and installation of a complete climbing training simulator, to be used for simulating training on individual climbing skills and methods. The climbing training simulator will be used by Special Forces, as well as emergency rescue teams, supporting reliable and secure simulation of several different operational scenarios.

For Further Information Contact our ICO Department Mail at: a-kintis@epicos.com

Design and prototyping of wrist-top/wearable computer for specialized Future Soldier applications



A leading technology provider, designer and manufacturer of hands-free communication solutions for demanding use, is proposing the design and prototyping of a unique and energy efficient wrist-top/wearable computer that can be used in several Future Soldier (FS) applications.

For Further Information Contact our ICO Department Mail at: a-kintis@epicos.com

News from our A&D Business Network



Patria wins contract to perform on-aircraft maintenance for the Norwegian NH90 helicopters



Norwegian Defence Logistics Organisation (NDLO) has selected Patria to supply on-aircraft maintenance for the Norwegian NH90 helicopters. The scope of the contract covers phase and calendar inspections, associated

repairs and maintenance for the Norwegian NH90 NFH Helicopters. The agreement is for two years with option for additional two years and its value is estimated to be up to 100 million NOK. "This agreement is an important milestone for us in Norway to show Patria's capability in supporting military programs with cost effective solutions in long-term. Our solid experience with the helicopter type from Finland and Sweden as well as the high number of experienced employees specialized in NH90 gives us a very good base to handle this contract", says Dan Nordheim, Managing Director and Country Manager of Patria Helicopters in Norway.

Patria Helicopters' location in Bardufoss, Norway is in close proximity of the customer's operations. "With this arrangement we are able to build highly competent local capability to support the life of the Norwegian NH90 fleet. This will also provide us with a strong foundation to further develop and grow our operations in Bardufoss", continues Nordheim.

"Six years ago, in March 2011, we decided to set our foot in the area of aviation support in Norway by acquiring a Bardufoss based aircraft maintenance company, NAC Maintenance – the current Patria Helicopters AS. Our vision was to become a key partner in supporting the Norwegian NH90 fleet which started to ramp up its operations at Air Wing 139. Now, almost exactly six years later we are able to witness this contract as a great milestone in fulfilling the vision. Now we have a chance to prove ourselves and give also the Norwegian customer confidence in all conditions and become their #1 partner for critical operations, as Patria's mission statement and vision promise", celebrates Lassi Matikainen, President of International Support Partnerships Business Area at Patria.

Patria Helicopters Norway has already served the Norwegian Air Force and civil customers over many years at Bardufoss by maintaining their training aircraft fleets. Patria is providing large scale of military and civil helicopter life-cycle support services also in Sweden and Finland. Patria is OEM-certified service center for Airbus, Bell and Leonardo helicopters. Patria has also the NH90 Nordic Service Center status from NHI and did the final assembly of 29 Finnish and Swedish NH90 helicopters related to the Nordic Standard Helicopter Procurement Programme.

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SAAB Selects NAUTA for Swedish Navy's SIGNIT Ship



Defence and security company Saab has selected the Polish Nauta Shiprepair Yard based in Gdynia, a part of the Polish Armaments Group (PGZ), to build the ship platform for the special purpose Signal Intelligence (SIGINT) vessel for the Swedish Navy. 11 April 2017 Saab communicated that Saab and the

Swedish Defence Material Administration (FMV) had signed a contract for design, construction and delivery of a Special Purpose Ship. The order covers the period 2017–2020, with a total value of SEK730 million.

The ship platform will be constructed, launched and tested at the Polish shipyard Nauta in Gdynia. The ship will then sail to Saab's shipyard in Karlskrona, Sweden for fitting of the signal intelligence equipment and final Sea Acceptance Test (SAT). Nauta has a long experience of ship building and represents a good strategic and geographic fit for Saab's business expansion in the naval domain. The contract is a result of a Memorandum of Understanding (MoU) between Saab and Polska Grupa Zbrojeniowa (PGZ), the biggest Polish defence company, which was signed in October 2016.

- For the Nauta Shiprepair Yard participation in construction of this ship will represent an opportunity for further dynamic growth by increasing our shipbuilding portfolio, not only on the domestic arena. As Nauta we have access to a skilled workforce, needed infrastructure and have accumulated long term experience in maritime projects. We are a company which is experiencing dynamic growth, places emphasis on innovation, and has forged ahead with adoption of new technology – we are very well prepared to participate in a project like the production of a special purpose vessel, explains Slawomir Latos, the chairman of the Nauta Shiprepair Yard.

- I am very pleased how we have turned the initial intentions in the MoU into a tangible business with PGZ. Special Purpose Ships of this kind require both high availability and reliability. In Nauta we have found a partner who can contribute in delivering a modern solution to our customer, says Gunnar Wieslander, head of Saab business area Kockums.

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319 Griffon and 20 Jaguar Vehicles Ordered From Nexter, Renault Trucks Defense and Thales by the DGA as Part of the Scorpion Programme



The French Procurement Agency (DGA) placed the first production order with Nexter, Renault Trucks Defense and Thales for 319 GRIFFON and 20 JAGUAR vehicles as part of the Multi-role Armored Vehicle contract. This contract includes logistic support and the associated training.

A crucial stage in the SCORPION programme, the awarding of this conditional tranche will thus launch the production of these new vehicles after only 27 months of development.

The GRIFFON Multi-role Armored Vehicle and the JAGUAR Armored Reconnaissance and Combat Vehicle, both of which benefit from a high level of protection, respectively replace the VAB and the AMX10RC, the SAGAIE ERC and the VAB Hot, used intensively by the Army for over thirty years. They will enable the French Army to have a state-of-the-art combat tool with the best protection technologies and the best possible use to be made of digitized data on the battlefield.

The Nexter, Renault Trucks Defense and Thales teams are perfectly aligned in order to achieve the contractual milestones and to meet the qualification and production commitments, with the first deliveries of the GRIFFON in 2018 and of the JAGUAR in 2020. Pooling of know-how and innovation capabilities creates the strength to design "connected" vehicles for tomorrow's collaborative combat, featuring a high level of protection, optimum adaptability by means of the vehicles' ability to be reconfigured according to the operational requirements, great mobility, and leading edge weapon systems.

The SCORPION programme provides for the delivery by the Temporary Business Grouping of 1,668 GRIFFON vehicles and 248 JAGUAR engines to the French Army, as well as the associated logistic support facilities.

Jean-François Pellarin, Director of the SCORPION programme within the Temporary Business Grouping and the representative for the EBMR contract, stated "We are proud of this new sign of confidence on the part of the French Procurement Agency and can't wait to start producing this new equipment, which will project the operational capabilities of the Army to the future ".

For Further Information Click Here

Source: Epicos, Thales

F-35As Deploy to Estonia for the First Time

Two F-35A Lightning II aircraft and approximately 20 supporting Airmen arrived at Ämari Air Base, Estonia, today, from RAF Lakenheath, England.

The F-35As are participating in their first-ever training deployment to Europe. The aircraft and total force Airmen and are from the 34th Fighter Squadron, 388th Fighter Wing, and the Air Force Reserve's 466th Fighter Squadron, 419th Fighter Wing, Hill Air Force Base, Utah.

The deployment has been planned for some time, has no relations to current events, and was conducted in close coordination with Estonian allies. It allows the F-35A to engage in familiarization training within the European theater while reassuring allies and partners of U.S. dedication to the enduring peace and stability of the region.

This deployment maximizes training opportunities with our allies and partners and serves as a visible demonstration of the United States' resolve to support NATO assurance measures.

This is the first overseas flying training deployment for the F-35A, signifying an important milestone and natural progression of the joint strike fighter program. It is the perfect opportunity for the combat-ready aircraft to train alongside U.S. and allied aircraft in a realistic training environment while demonstrating its operational capabilities. Also, it helps to integrate with NATO's infrastructure and enhance 5th generation aircraft interoperability.

The aircraft and Airmen began arriving in Europe on April 15, and are scheduled to remain in Estonia for a brief period of time before returning to RAF Lakenheath to continue their training deployment.

The KC-135 is from the 100th Air Refueling Wing, RAF Mildenhall, England, and is providing refueling support for the deployment to Estonia.

For Further Information Click Here

Source: Epicos, F-35 Lightning II

MBDA Awarded £323 Million Deal for Next Batch of CAMM Air Defence Missiles for UK Armed Forces

The next-generation Common Anti-air Modular Missile (CAMM) is designed for use both at sea and on land. It has the capability to defend against anti-ship cruise missiles, aircraft and other highly sophisticated threats.

Designed and manufactured by MBDA in the UK, CAMM will be deployed using the Sea Ceptor and Land Ceptor weapon systems that will protect the Royal Navy's Type 23 and future Type 26 warships, as well as enhancing the British Army's Ground Based Air Defence system.

Sea Ceptor and Land Ceptor use innovative radar and datalink technology to guide the CAMM with incredible accuracy. CAMM's associated radar system tracks the maritime or land based threat and uses the datalink to update the missile with the location of the threat. The CAMM's own active radar seeker can then take over the missile guidance. The missiles are designed to provide 360 degree coverage and high degrees of manoeuvrability.

The Sea Ceptor weapon system incorporating CAMM will replace the Sea Wolf weapon system on the Type 23 Frigate and provide the anti-air defence capability on the new Type 26 frigates for the Royal Navy. Similarly, the Land Ceptor weapon system will replace the Rapier weapon system in service with the British Army and contribute technology to the replacement of ASRAAM in service with the Royal Air Force.

For Further Information Click Here

Source: Epicos, MBDA

US Air Force Awards Harris Corporation Cryptographic and Information Assurance IDIQ Contract

Harris Corporation has been awarded a five-year, \$875 million ceiling, multi-award IDIQ contract by the U.S. Air Force for cryptographic and information assurance products, including support throughout their lifecycles.

The contract, which consists of a five-year base term with an additional five-year option, was awarded to seven companies during the third quarter of Harris' fiscal 2017. Orders may include a broad range of work for the different phases of the contract, such as material solutions analysis; technology development; technology maturation and risk reduction; preliminary design, engineering and manufacturing development; and production and sustainment.

"Secure communications on the battlefield is a critical element in keeping our warfighters safe and ensuring mission success," said Chris Young, president, Harris Communication Systems. "This award reflects our advanced technical capabilities and proven ability to deliver secure communication solutions."

For Further Information Click Here

Source: Epicos, Harris Corporation

FBI Awards ManTech \$220 Million Contract to Protect Mission-Critical Information Systems for Law Enforcement Community

The Federal Bureau of Investigation (FBI) has awarded ManTech International Corporation a contract to provide enterprise IT infrastructure support to the FBI's Criminal Justice Information Services (CJIS) division. CJIS equips law enforcement, national security, and the Intelligence Community with the criminal data and information systems needed to protect the United States, while preserving civil liberties.

Valued at \$220 million, this cost-plus-award-fee contract ensures the continuation of many years of successful support to the FBI's CJIS division as an incumbent and expands ManTech's expertise to aspects of work previously supported by another contractor.

"This win increases ManTech's footprint and continued commitment to quality infrastructure support at the CJIS division in West Virginia," remarked L. William Varner, president of ManTech's Mission, Cyber & Intelligence Group. "We look forward to providing the best possible resources to one of our largest FBI programs. Ultimately, ManTech will help CJIS meet its key requirement of processing and sharing mission-critical information with members of the law enforcement community in the United States and abroad."

ManTech will provide essential and mission-critical services to the CJIS portfolio of Justice and Public Safety Systems, collectively known as Systems of Services (SoS). These systems are largely responsible for supporting daily public safety and intelligence functions by delivering information on demand.

According to Varner, this business growth is a testament to the talented team that ensures that the latest technologies and systems are interoperable, integrated, and protected from both internal and external threats.

Since 2012, ManTech has invested significantly in growing the talent base necessary to support these critical systems from the customer's facility. ManTech is committed to continued investment, economic development, and job growth in this region.

For Further Information Click Here

Source: Epicos, ManTech International Corporation