

MEDICAL EVACUATION

PATIENTS TO DOCTORS



DOCTORS TO PATIENTS



PATIENTS BETWEEN OR TO HOSPITAL



NODIN AVIATION AS

INNOVATIVE MEDICAL EVACUATION SOLUTIONS

SEARCHING FOR THE SOLUTION

Tony Hall, Defence Journalist, outlines the latest developments from the Norwegian Ministry of Defence for their search and rescue requirements

In November 2013, the Norwegian government began final negotiations with helicopter manufacturer AgustaWestland for the delivery and through life support of its AW101 aircraft, answering a requirement issued by the Norwegian All Weather Search and Rescue Helicopter (NAWSRH) project.

The choice of the AW101 came at the end of a process that began in 2007. In that year, Norway's Ministry of Justice and Public Security began preparatory work to replace the ageing fleet of Westland Mk43b Sea King Search and Rescue (SAR) and medical evacuation helicopters, which had been in operation since 1973.

Management of the project was a collaborative one from the beginning, reflecting the cross-agency funding of search and rescue operations in Norway. SAR is regarded primarily as a police responsibility, with a lead being taken by the Ministry of Justice. The helicopters also act as air ambulances and as such are part funded by the Ministry of Health. Norway's Ministry of Defence provides personnel and operational support from the Royal Norwegian Air Force (RNoAF), and the Norwegian Defence Logistics Organization (NDLO).

The RNoAF's 330 Squadron has been the unit responsible for providing SAR and medical evacuation services since their introduction in the 1970s, and will be the unit introducing the NAWSRH helicopters into service when they begin delivery as scheduled from 2017.

The squadron currently operates around 12 Sea Kings in 4 flights from 5 bases across Norway, enabling a helicopter to reach almost any part of the country in 90 minutes. The importance of the RNoAF bases in providing a support infrastructure to the NAWSRH project was emphasised during the procurement process. All candidate companies for the new contract were informed that it would be vital for them to familiarise themselves with each base as part of the bidding.

The need for this breadth of coverage is due not only to size of the country - Norway is 1800 km north to south - it also reflects the fact that SAR has to be able to respond to emergencies off the coast and beyond the Arctic circle, encompassing both the increasingly important oil and gas fields, and the fisheries within Norway's economic zone which extend out to sea for a distance of up to 400 nautical miles.

These challenges were detailed in a concept study completed by the Ministry of Justice in 2010, which assessed specific requirements of the NAWSRH project in preparation for the acquisition that began formally with an offer of bids in October 2011.¹

The study found that since the SAR service began, demand had doubled every 10 years, with an estimated increase of up to 50 call-outs per year by 2030. Given this acceleration in demand, increased levels of economic activity expected in the oil and gas industries off shore,



and the age of the existing Sea King fleet, it was recommended that life of the Sea Kings not be extended any further and that new fleet of all-weather rescue helicopters be acquired, to operate into the 2050s. The helicopters would be large, between 10-20 tonnes, long range, capable of operating in mountains and as fast over sea as they were over land.

The acquisition cost would be around NOK 12bn, with total life cycle costs of up to NOK 39bn over 30 years. As the project began there was an expectation that costs would be mitigated through a joint procurement agreement with Iceland, which was also looking to acquire at least 3 new SAR helicopters. The agreement had been signed in 2007, but in September 2012 Iceland was compelled to withdraw due to domestic financial problems, leaving the NAWSRH as a Norwegian-only project.

From the beginning of the bidding process there was a requirement that NAWSRH would provide a commercial off-the-shelf solution. Pre-qualification information stated that the aircraft type submitted should have been in operation for at least 5 years, having logged 15,000 flying hours. Candidate companies could present both military and civilian types.

In December 2012 4 bids had been received from Eurocopter, NHIndustries, Sikorsky, and AgustaWestland.

By July 2013 the Ministry of Justice announced that AgustaWestland's AW101 Merlin and Eurocopter's EC225 Cougar had been shortlisted. In September Kongsberg Defence Systems added weight to AW101 bid, signing an agreement with AgustaWestland to provide long-term maintenance and testing support to ensure up to 50 jobs and up to NOK 200m a year for Kongsberg, a Norway-based company.

On November 13th the Ministry of Justice announced that the AgustaWestland had been chosen as the preferred bidder. It's statement read: 'The aim is that the contract following final negotiations will be concluded by the end of the year. The contract includes 16 new SAR helicopters with an option for further 6, and ensures that the Sea King will be phased out across the country by the end of 2020'.

¹ www.regjeringen.no/en/dep/jd/agenda/helicopters/nawsarh.html?id=737609

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CASEVAC

Casualty Evacuation:

The non-medicalised evacuation of patients without qualified medical escort.

CASEVAC assets are combatant platforms - good firepower, good armor, no Red Cross, designed to go into the fight. You will need CASEVAC assets if you have to evacuate casualties from a tactical situation where the threat level is high.


NODIN CASEVAC KIT (Role change equipment)

The NODIN Medevac Stretcher combined with front line armoured vehicles prepared with anchoring points for the NT-620 shock and vibration damped stretcher rack will:

- increase evacuation capacity at scene when needed
- enable role change within minutes
- increase total Forward Evacuation ground capacity dramatically
- increase patient comfort and reduce transport induced patient pain and stress
- simplify stretcher logistics
- improve inter operability with NATO Stanag 2040 compatible nation/vehicle/vessels/equipment



NODIN AVIATION AS
INNOVATIVE MEDICAL EVACUATION SOLUTIONS

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“ Can a single stretcher or device be used for continuity of care from Role 1 through to Role 3 without the need for repeatedly changing - with the inherent risks to clinically unstable casualties both in terms of unnecessary movement and in time delays?



MEDEVAC

Medical Evacuation:

The medically supervised process of moving any person who is wounded, injured or ill to and/or between medical treatment facilities as an integral part of the treatment continuum.

NODIN Field Stretcher

(NATO Stock No: NSN-6530-25-160-2914)

To enable continued transport of patients throughout the chain of evacuation, from point of wounding to the role 3 field hospital, or all the way back to homeland hospital, we have developed the NODIN MEDEVAC Stretcher (NT-820MV1) designed according to NATO STANAG 2040 and STANAG 3204.

The Stretcher is four folded and has telescopic handles to reduce storage volume. It is designed with pinch free hinges and equipped with a 5+2 point harness to improve the comfort for the patient and the safety of the rescue people.



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TACEVAC

Tactical Evacuation:

The term "Tactical Evacuation" includes both CASEVAC and MEDEVAC.


In 1919, the British Royal Air Force first transported casualties during the war against the Mad Mullah in Somaliland. Stretchers were placed inside the fuselage of a DH-9 aircraft.

NODIN is a Norwegian company specialized in developing innovative MEDEVAC solutions for our customers.

Together with our customers, suppliers and partners we dedicate ourselves to find the best possible solution to the customer's need of CASEVAC and MEDEVAC equipment or concepts.

NODIN is part of an industrial MEDEVAC CLUSTER aiming to offer customers a "one-stop-shop" for equipment, solutions and concepts within the Medical Evacuation and Treatment sector. (From a single stretcher to sophisticated Aeromedical Evacuation Units, and from a simple tent to a complete Field Hospital).



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STRATEVAC

Strategic Evacuation

...is categorised as the repatriation of the patient out of the Joint Operational Area. The intent is for the patient to be ultimately returned to the home nation, but the category includes the concept of Intermediate Evacuation Facilities (IEFs) which can act as care-staging facilities on the routing back to home nation.

From an ordinary passenger aircraft to an Aeromedical Evacuation Unit within hours. (role equipment for role change)



The Norwegian military in collaboration with Scandinavian Airlines (SAS) has given Norway the unique capacity of two Boeing 737 platforms for 22 stretcher patients on each aircraft, equipped for intensive medical care.

Nodin Aviation in collaboration with Marshall Aerospace have designed, manufactured and delivered this concept. An Aeromedical Role Change Concept certified in accordance with EASA requirements.

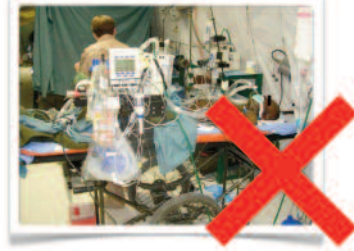


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INTENSIVE CARE UNIT



Stretcher
in bag



Folded
stretcher



The most compact
ICU solution for all
platforms at
land, sea and air.



MOVES
PORTABLE LIFE SUPPORT SYSTEM

Snaps on to
MEDEVAC
Stretcher

Complete portable
ICU (monitor, oxygen
concentrator,
ventilator, suction)

NODIN
MEDEVAC
Stretcher
designed
according to
NATO
Standards



Continuous Monitoring and Treatment
through the whole MEDEVAC chain



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