NORDIC UNMANNED

CAPITAL MARKETS UPDATE
SECURITY

A CHANGING MARKET

- Annexation of Crimea in 2014.
- Escalating tension in Europe.
- 24. February 2022 – Russia invaded Ukraine.
- Several European countries have increased defence budgets since the invasion to meet NATO's 2% recommendation.
- Situation expected to change the short- and long-term defense spending in Europe for years to come.
- A significant increase in requests for drones as a result.

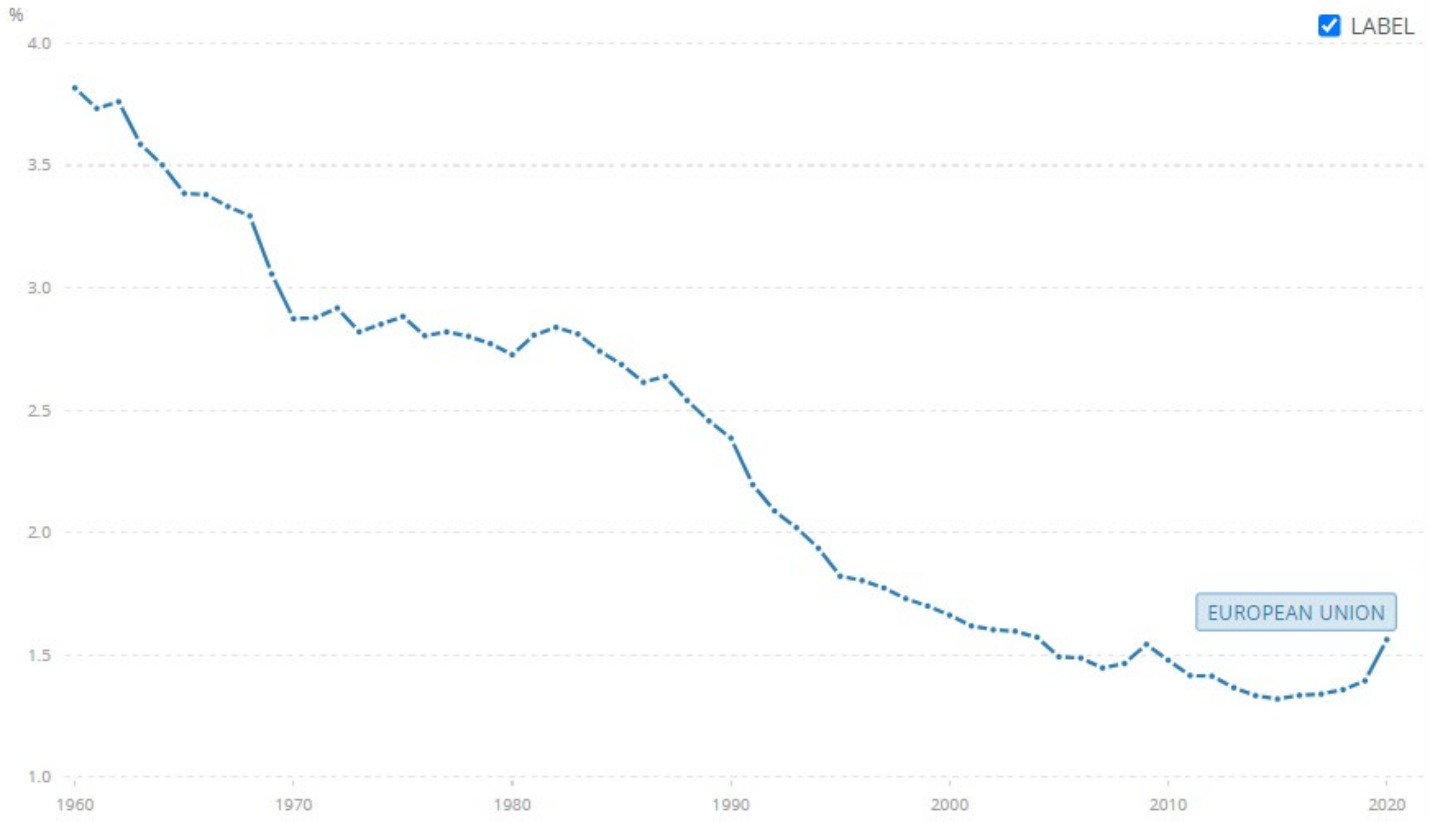
NORDIC UNMANNED

Military expenditure (% of GDP) - European Union

Stockholm International Peace Research Institute (SIPRI), Yearbook: Armaments, Disarmament and International Security.

License : Use and distribution of these data are subject to Stockholm International Peace Research Institute (SIPRI) terms and condi

Line Bar Map Also Show Share Details



CHANGE IN 2022 DEFENCE BUDGET

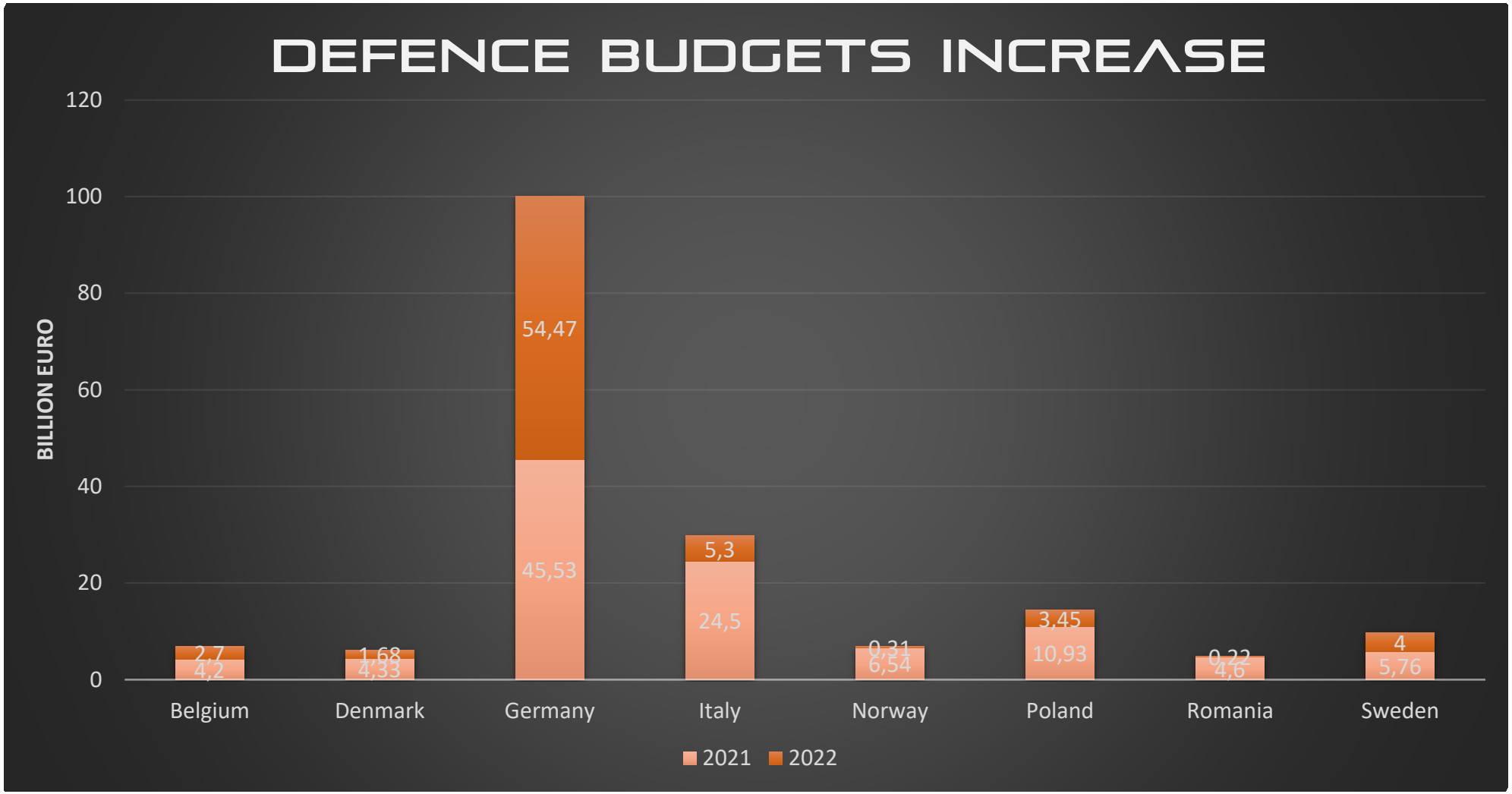
Defence budgets represented in percentage of GDP following the invasion of Ukraine.

	Before		After
Belgium	0.99%	→	1.54%
Denmark	1.44%	→	2%
Germany	1.53%	→	2%
Italy	1.4%	→	2%
Norway	1.8%	→	1.9%
Poland	2.1%	→	3%
Romania	2%	→	2.5%
Sweden	1,3%	→	2%

Increase amounts to:

€106.39 Billion Euro → €178.52 Billion Euro

NORDIC UNMANNED



NORDIC UNMANNED

SECURITY VERTICAL

MARKET VERTICAL TARGETS

We have arranged our company according to major existing market verticals that are domains prone to disruption, optimization, or innovation of drone services.

MARITIME

Sea related operations

SECURITY

Actionable insight for X and Y

INFRASTRUCTURE

Critical infrastructure monitoring and analysis

LOGISTICS

Urgency and convenience

Key market metrics est. 2021-2025

Our 2025 Target: 800 mNOK

21 % Large Rotary wing
36 % Large Fixed wing
43 % Small Rotary or Fixed wing

40 % Emission monitoring

Our 2025 Target: 1.100 mNOK

Own IPR
Reseller
Life Cycle Support
Operations

Our 2025 Target: 600 mNOK

70 % Rail services
60 % Rail maintenance
40 % Intelligence
30 % Telecom and others

65 % Own IPR based services

Our 2025 Target: 1.500 mNOK

85% System integrator
15% Operations B2B and B2G

SECURITY VERTICAL – PRODUCTS & SERVICES

System integrator

- Delivery of drone systems.
  - AirRobot 100-H and Staaker BG series (Own IPR).
  - Textron Aerosonde, Lockheed Martin products.
  - Maintenance, Repair & Overhaul (MRO).
  - Training.
  - Life cycle support and upgrades.

Operator

- Tactical UAV*

		MARITIME	SECURITY	INFRASTRUCTURE	LOGISTICS
INTELLIGENCE (Operator)	ENVIRONMENTAL	✓	✗	✓	✗
	SAFETY	✓	✓	✓	✗
INTEGRATIONS	OWN AND PARTNER PORTFOLIO	✓	✓	✓	✓
DELIVERY	LONG RANGE SHORT RANGE	✓	✗	✗	✓

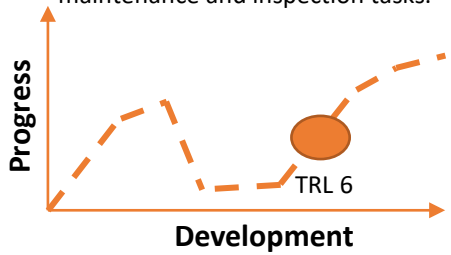
*Tactical UAVs are unmanned aerial vehicles, typically with weight from 50-1500kg, maximum flight altitude between 3000-8000 meters, endurance of 4-12 hours, and with a range of more than 80 range

FLEET INTEGRATOR

The Railway Drone

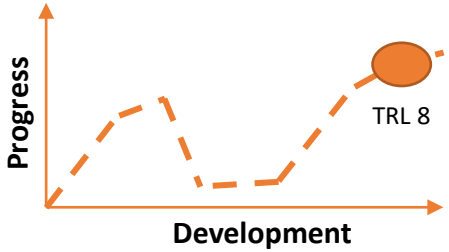
The Staaker Railway Drone, a version of our Staaker BG-300, specifically made for the railway industry to enhance maintenance and inspection tasks.

Technical Readiness Level



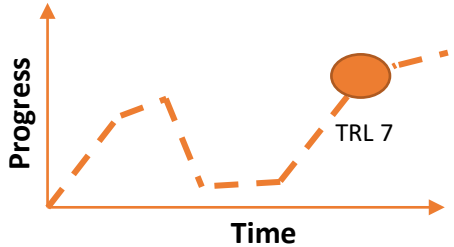
AR100-H

The AR100-H is a foldable UAV, designed for the German Armed Forces.



Staaker BG-200 Logistics

Our own Norwegian-made, weather robust drone which will simplify drone cargo services.



Textron Aerosonde

Fixed wing for long-range maritime surveillance.

Lockheed Martin Indago

European reseller of the world-wide leading UAV in the Defense & Security sector.

CAMCOPTER® S-100

The CAMCOPTER® S-100 is a world leading, proven capability for military and civilian applications.

AR100-H

- The AR100-H is the latest drone system from AirRobot.
- The design is based on customer feedback and experience from the German army, deploying the system worldwide since 2005.
- The new AR100-H is foldable, designed in modular construction, and is fully glove-compatible for operational purposes.
- The development, design and production of the air vehicle, payload, Ground Control Station (GCS), power supply and software is done by AirRobot.
- The man-portable drone system represents a state of the art, NATO produced, ITAR free, rapid deployable solution, designed for intelligence, surveillance and reconnaissance (ISR).

AR 100-H DIGITAL SPARE PARTS CONCEPT

Optimizing design for additive manufacturing

More than 20% of all part used for the product is digitally printed and can be sold as digital and/or physical parts.

Reduction in lifetime cost

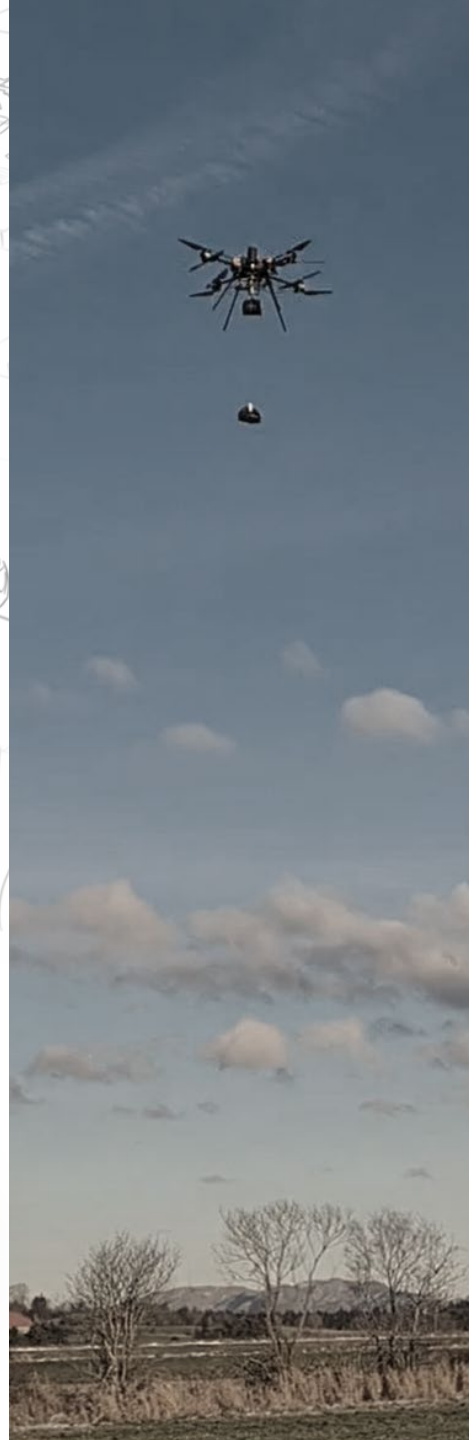
Minimize physical warehouses with less static cost.

Dynamic Product Updates

Always the latest version of parts, without risk for outdated components.

Printing of new spare parts in-field

Adapted to the future logistical concepts.



The AirRobot AR100-H being folded into its backpack

AIRROBOT SCALIBILITY

Commercial status

- Increased commercial traction over the last month.
- Awaiting decision on Bundeswehr MIKADO contract latest mid-May.
- Launch of product in the USA end of April.
- Integration of the AirRobot Heimdal sensor with Lockheed Martin Indago 3 completed.

Production status

- Production facility of 1500 m^2
- Current production capacity of 50 units per month.
- Maximum production capacity of 200 units per month.
- Ongoing assessment of starting production to fulfill expected future demand in Europe.

LOCKHEED MARTIN INDAGO

- Robust, backpackable, and rapidly deployable
- The Lockheed Martin Procerus Technologies Indago possesses vertical takeoff and landing (VTOL) and small unmanned aerial system (UAS) which brings expeditionary intelligence, surveillance, and reconnaissance (ISR) applications.
- The Indago system weighs less than 4.5 kg., fits within a small backpack, and deploys in approximately 2 minutes.
- Indago provides tactical situational awareness and intelligence collection capabilities for military and government customers in Europe.

RAILWAY DRONE - STAAKER BG300

- The Staaker Railway Drone utilized the extreme versatility shown by the Staaker BG300 to create a groundbreaking, innovative solution for the railway industry.
- Need of reconnaissance of railway infrastructure and military geodata collection along railways has led to a sudden military interest in this product.

MILITARY LOGISTICS DRONE - STAAKER BG200

- Product is ready for commercial operation.
- We now aim to explore how this product could be relevant for military use over land and sea.
- The identified usage is in-field logistical supply and re-supply.
- The business model will be acting as a system integrator and not as an operator.

TEXTRON AEROSONDE TACTICAL UAV

- Targeting all markets in Northern Europe
- Full training capacity build-up
  - Pilots & technicians
  - Access to training assets secured
- Spare parts inventory established.
- Only LUC-approved Tactical UAV in Europe
- Full flexible commercial model

Variant	Mk4.7-FW *Fixed Wing*	Mk4.8-FW *Fixed Wing*
MGTOW	93 lb	120 lb
Empty Weight	52 lb	65 lb
Max Payload	25 lb	31 lb
Max Endurance	18 hr	24 hr

Variant	MK4.7-HQ *VTOL*	MK4.7-HQ *VTOL*
MGTOW	109 lb	190 lb
Empty Weight	81 lb	128 lb
Max Payload	17 lb	35 lb
Max Endurance	13 hr	18 hr

THE TUAS MARKET IN NORTHERN-EUROPE

Sweden

Operates 3 Shadow TUAS from 2010

Finland

Operates Orbiter TUAS from 2012

Denmark

Ongoing TUAS project of up to 135 mill EUR

Germany

Operates LUNA TUAS from 2000

UK

Ongoing Navy TUAS project for around 50 mill GBP

Latvia

Awarded TUAS contract of 8 mill EUR

Norway

Ongoing P7637 and P6380

NORDIC UNMANNED

4 BILLION EUR TACTICAL UAV MARKET FOR THE NEXT 10 YEARS

Target market	Estimated TUAS spendings 2022-2032
UK	1 778 mEUR
Germany	1 583 mEUR
Sweden	210 mEUR
Norway	202 mEUR
Denmark	135 mEUR
Finland	65 mEUR
Lithuania	31 mEUR
Latvia	20 mEUR
Estonia	19 mEUR

OPERATOR - TACTICAL UAV

- The only European operator of multiple types of tactical UAV.
- Organization build-up have given us full short-term scalability for future contracts.
- Current sensor capability comes after several years of U.S export approval processes

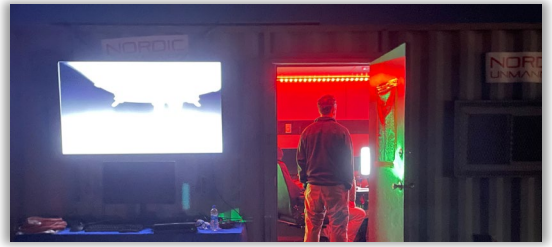
FLEET OPERATOR

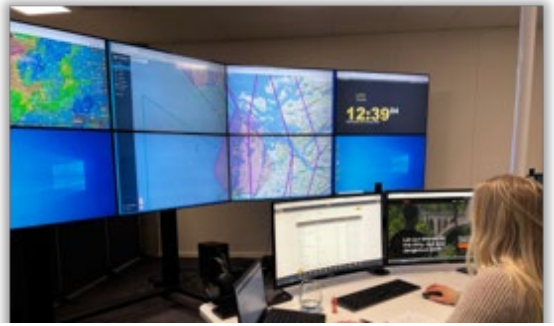
CAMCOPTER® S-100

The CAMCOPTER® S-100 is a world leading, proven capability for military and civilian applications

Textron Aerosonde

Fixed wing for long range maritime surveillance





NORDIC UNMANNED

CAMCOPTER® S-100

- Mini helicopter with a MTOW (max take off weight) of 200kg and payload capacity of 50kg
- Needs no prepared area or supporting launch or recovery equipment
- It operates day and night, with a range of 200km, both over land and sea with a flight time of up to 10 hours
- Sensor capacity
  - Electro-Optical/Infra-Red (EO/IR)
  - Laser range finder
  - Automatic identification system (AIS)
  - Emergency position-indicating radio beacon (EPIRB)
  - Emission monitoring sensor

Camcopter S-100

(75.000 + flight hours)

NU Flight hours: 1 412

NU Flights: 606

NU Fleet size: 5 air vehicles

Max. Endurance: 6 hours

175x

Less CO^2 emission from the CAMCOPTER than its manned alternatives

TEXTRON AEROSONDE

- Designed for expeditionary land- and sea-based operations and equipped for simultaneous day/night full-motion video, communications relay, signals intelligence and a customer-selected payload in a single flight.
- Can take-off in one location and land in another
- We can handle two air vehicles flying simultaneously
- Sensor capacity
  - Electro-Optical/Infra-Red (EO/IR)
  - Synthetic Aperture Radar (SAR)
  - Automatic identification system (AIS)
  - Additional payload bay for future development

Aerosonde Mk. 4.7

(500.000 + flight hours)

NU Flight hours: 101

NU Flights: 32

NU Fleet: 3 + (2) air vehicles

Max. endurance: 15 hours

Screengrab from Flightradar24 | Registration number: LN-0310-UA

Spoke location
GCS location
Copenhagen

NORDIC UNMANNED

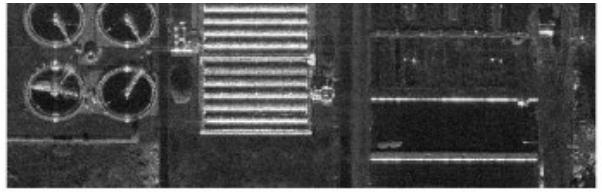
IMSAR AT A GLANCE: MULTI-MODE RADAR

CONOPS Supported

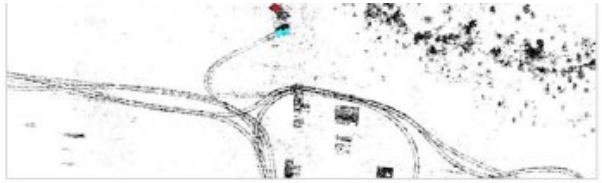
- Intelligence, Surveillance Reconnaissance (ISR)
- Maritime Patrol
- Counter Unmanned System (C-UAS)
- Battle Damage Assessment (BDA)
- Counter Improvised Explosive Device (CIED)
- Long Range Precision Fire Targeting (LRPF)
- Cruise Missile Defense (CMD)

System Modalities and AI functionalities

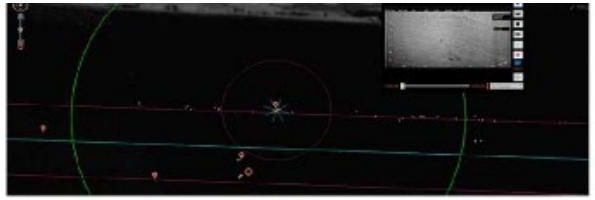
- Synthetic Aperture Radar (SAR)
  - Onboard Automatic Target Recognition (ATR)
  - SAR Motion Video (SMV)
- Coherent Change Detection (CCD)
- Moving Target Indicator (MTI)
  - Dismount (DMTI)
  - Vehicle (GMTI)
  - Maritime (MMTI)
  - Cruise Missile and Small UAS (AMTI)



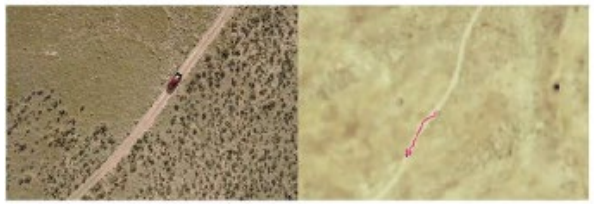
SAR



CCD



MMTI



GMTI/DMTI

SECURITY VERTICAL

Significant growth and market development expected

Outlook

- Market growth has already had affect in Q1 2022.
- Stock on shelf is expected to be sold out very quickly.
- NATO countries will in the short-term compete for products and services as defense spending is increased.
- The CONOPS and strategy for drone usage will have to be upgraded very quickly.
- The new drone strategies, combined with increased budget is expected to considerably increase the demand in the medium- and long-term.
- NATO produced drones will be favorized over non-NATO produced drones.
- Chinese produced drones will disappear from the NATO military market.
- Defence industry will have to work closer with the end-users in order to speed up adaption of technology
- Sales processes will be sped up considerably compared to current format.
- Approval and certification processes for new technology will become more dynamic

ABOVE ALL, GUARDING THE LIVES OF THE MANY

Nordic Unmanned will do our part in defending freedom and democracy in Europe through our Security vertical's solutions.

NORDIC
UNMANNED

Q&A