



ANNUAL REPORT AND SUSTAINABILITY REPORT 2022



OUR VISION

To be at the forefront of connecting Space and Earth for exploration, communication and increased understanding of our planet while enabling decision support.

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We are just an advanced breed of monkeys on a minor planet of a very average star. But we can understand the Universe. That makes us something very special.

– Stephen Hawking

PRESIDENT'S MESSAGE

We are experiencing changing times. Environmental changes, war in Europe, transformation to sustainable energy, increased focus on the climate to mention some key trends. A common denominator for all of the above is space-based observations and communication. This is again clearly illustrated by the increasing number of satellites in orbit. 2022 was a record year. 178 successful launches brought the total number of satellites orbiting the Earth till 8261, out of which 4,852 satellites are active. 1719 new ones in 2022 alone tells the story.

KSAT is an important contributor to this development. We supported 98 launches and a significant number of satellite LEOP's. Once in orbit, we are supporting the satellites from our global network of antennas that now counts more than 260 in 26 different locations. This resulted in an unrepresented 1,040,969 passes supported from KSAT antennas in 2022.

Our focus on constantly improving internal processes ensures a streamlined organisation with efficient and integrated operations. We call it ONE KSAT and it is an important component of this success. We have, over the years, integrated satellite data reception with tasking and scheduling, we have added rapid tasking and cloud-based data storage. Furthermore, satellite operation and mission control is included in the same equation and the world's most efficient and integrated solution for satellite operation is being developed. It is not developed for fun; it is developed because it is needed. A dedicated network for satellite data reception and control is fine, but it also creates a need for rapid tasking. Look where there is something to look for. Collect information and take an image where it's worthwhile to spend satellite capacity. The Norwegian MicroSar project is the driver for this. We look forward to shape ourselves around the demands of such a demanding satellite.

Our Earth Observation (EO) efforts continue. New initiatives and enhanced ship and oil spill monitoring services using multiple data sources in near real time positions us as the marked leader. The fact we were selected as the main supplier to the European Maritime Safety Agency (EMSA) for the coming years proves this. The multi-source dark target detection service currently being developed, is a combination of our legacy service empowered by machine learning and cloud based as well as edge computing. It will be a key tool to ensure efficient maritime surveillance.

Our services are of critical importance to all our customers. Timely and reliable delivery of data and information is crucial for their services. Consequently, focus on security in general and cyber security in particular is stronger than ever. In 2022 we continued our strong focus ensuring KSAT compliance with required national and international standards for security. We are in close dialogue with relevant Norwegian authorities to ensure compliance in this important area.

Another milestone in 2022 was the opening of KSAT satellite operation Center (TSOC). For the first time we will actually operate satellites on behalf of our customers. We are ready for the launch of the Arctic Satellite Broadband Mission (ASBM) as well as a couple of commercial satellites where we will provide integrated services including satellite and mission control as well as data reception and dissemination from our global set of ground stations. This will allow us to further develop our integrated ground segment architecture where the goal is to shorten the time from satellite tasking till cloud-based delivery of relevant time critical information.

Our focus on sustainability continued in 2022. Establishing and maintaining a strong focus on UN sustainable Development goal is important for the continued development of KSAT. The organization is

actively working towards a set of science-based targets that will help us conduct our daily operations in a sustainable manner. KSAT is in a very fortunate position. Our core activity in itself is contributing to a more sustainable future through supporting many of the global efforts. Satellite imagery is collected to stop deforestation of rain forest. Satellite imagery is used for continuous monitoring of the deforestation of the rain forest, information from multiple satellites is used to combat illegal and unreported fisheries, and rapid delivery of meteorological data is improving the weather services for disaster monitoring and control.

Our mission is to connect Space and Ground. My goal is to further enhance and improve what we're doing today through ONE KSAT. ONE KSAT is about working together, seeking a common integrated approach in how everybody at KSAT collaborate in all aspects ranging from administration, technical and commercial activities to develop and deliver services to our customers.

- **ONE KSAT** means actively adopting our joint policies and procedures to be a professional and efficient organization
- **ONE KSAT** means a unified system architecture that supports both SOP, EO and GovProg services
- **ONE KSAT** means that we develop One-Stop-Shop solutions spanning upstream and downstream

When fully implemented, we can continue our journey and even modify our slogan to Connecting Space and Ground efficiently, securely and in sustainable manner.

Rolf Skatteboe
KSAT President and CEO

SECURE SERVICES FROM SPACE TO EARTH



The world and geopolitical situation has changed, and KSAT is adapting. The annual threat reports from Norwegian authorities show nation state threats and cybercrime activities are still on the rise.

Satellite based information is a critical component in any country today and satellite operations is often referred to as crucial to a modern society. Protecting and securing these functions is a main task for KSAT, and we operate and monitor the threat landscape in close collaboration with the Norwegian National Security Authority (NSM) and the Police Security Service (PST).

As a world leading company in the satellite industry, security is an essential aspect of all our services. Our security strategy supports our main objectives and shall ensure that we continue to be a trusted and preferred partner for all our customers and stakeholders. We are

also committed to maintain and develop our security architecture as a provider of national critical functions.

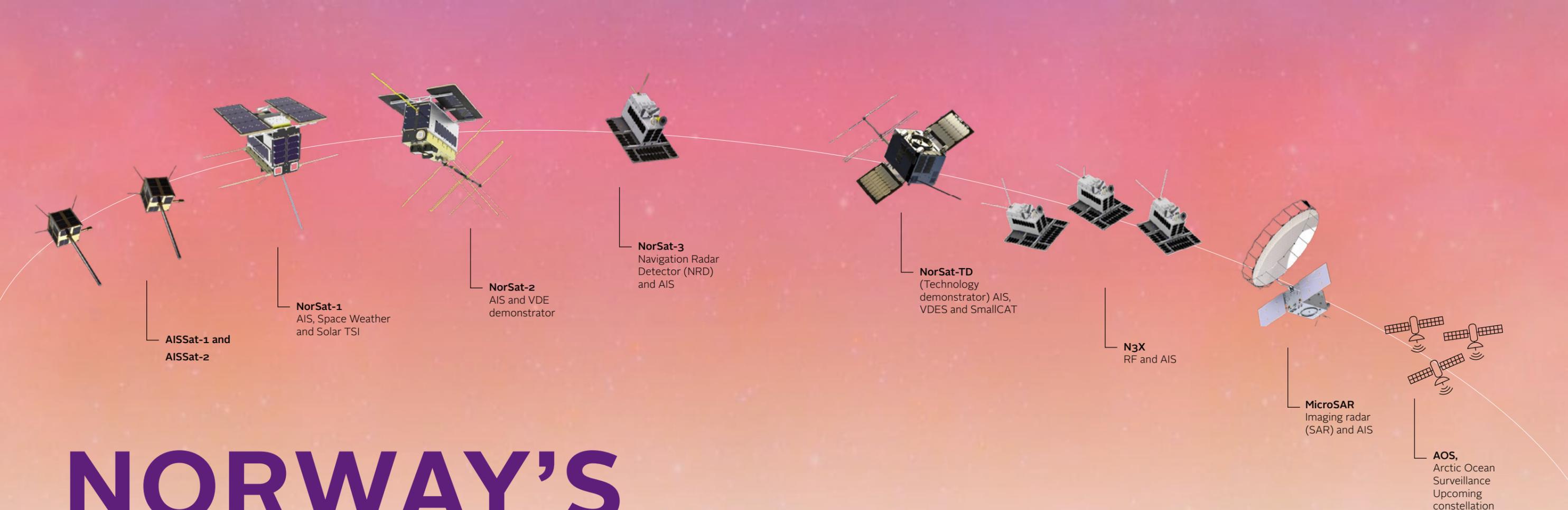
We use industry recognized standards in our work and have implemented an Information Management System (ISMS) and security controls from the National Institute of Standards and Technology (NIST) 800-53 framework. This provides a comprehensive set of controls that cover all aspects of security, including access control, risk management, incident response, and business continuity. This is a continuous effort, and the ISMS and security controls are regularly reviewed to ensure that we remain compliant with the latest industry requirements and best practices.

We conduct a company-wide security awareness program that provides our employees with the necessary knowledge and skills to identify and respond to security threats effectively. This year's main focus was insider threat and identifying phishing attempts. It's important that our employees are aware of any insider activities and remember that they could be targeted even though they don't have direct access to sensitive information. Unauthorized insight is about putting together the bits and pieces of information over time.

All KSAT's services are dependent on our global ground stations and network communication. Securing our facilities and network thus is central to our overall

security posture. Our communication and network security architecture is a traditional best practice design, where we segment office networks, operational systems, and externally exposed systems.

Delivering and protecting customer data is what we do every day. Our mission is to provide the most reliable end-to-end services for actionable space derived information. Since the threat landscape is constantly evolving, we recognize the need to remain vigilant against emerging threats and continue to invest in improving our security measures.



NORWAY'S EMERGING SATELLITE PROGRAM

No one can envisage life without satellite-based information. Reflect a little on what you do every day and where the information you are dependent on is coming from GPS based information, communication services, maps virtually any piece of information you use, are dependent upon or derived from satellite-based information.

An area of special interest for KSAT is Maritime Situational Awareness. Efficient surveillance with near real time access to satellite-based information is for example crucial for maritime surveillance services. This is another area where satellite-based information is essential. KSAT has established a largest network of ground stations to collect information from satellites. To ensure access after a careful analysis of the satellite operations value chain, KSAT decided to expand its service offering to include satellite and mission control. The driving factor has been the importance of integrating satellite operations, scheduling, tasking- and data collection. The strategic decision from KSAT is now supporting the emerging Norwegian satellite program.

It started with AISSat-1, a CubeSat collecting Automatic Identification System (AIS) information from maritime vessels. AIS information, originally an anti-collision system, is used to identify ships, and it can easily be collected by satellites. Hence, a satellite could fly over vast ocean areas and find all the ships using AIS tracker. If the ships wanted to be seen. The AIS system has a flaw. It can be turned off or even deliberately modified (spoofed). Thus, AIS signal detection has become an important piece of information, and companies like Spire and formally Exact Earth together with the Norwegian Satellite AIS Sat-1 and 2 and Norsat 1 is collecting AIS routinely.

The vulnerability of existing satellite systems and the request for additional information has initiated several initiatives in Norway. AIS satellites are augmented with VDES, a more robust messaging system, which will be flown on a Norsat satellite. Furthermore, the Norwegian Defense Research establishment (FFI) has developed and is flying a RF-detector that is detection signals from ship-radar on Norsat-3. This is an important enhancement of the existing sources of information. Very few ships will turn their radar off, and as long as it is on, they are detectable and recognizable through a distinct radar signature. Kongsberg Defense and Areospace (KDA) has invested in a satellite program where they will launch 3 RF-satellites and provide this service commercially and to government entities. The N3X program will be a significant source of information.

In addition to passive sensors, active radar payloads are needed to establish the full picture. The Norwegian MicroSar project will contribute significantly in this respect. With unprecedented resolution in a wide swath, it will be able to detect small vessels very efficiently and really improve the satellite-based capabilities of Maritime Situational awareness. Together with radar data from traditional radar satellites, the actual area of interest (AOI) will be covered in much more detail than before.

Satellite based information is now available everywhere, and it has become an integral part of our everyday life.

The final element in the Norwegian small satellite initiative is the new program launched by the Norwegian Space Agency. Arctic Ocean Surveillance Constellation (AOS) will define the next generation of satellite based maritime monitoring and is designed to augment the flying satellites.

KSAT is the common denominator for the Norwegian satellite program. Through our integrated ground segment, KSAT is operating and receiving data from all the satellite systems introduced here. The information is fused together in a common maritime situational awareness picture and delivered to our customers.

The key part of the KSAT system is its multi-mission capability. And the ONE KSAT philosophy. As long as KSAT is operating the satellites, providing mission- and satellite control, the satellites can be tasked, scheduled and operated through one single system. Integrated with the KSAT network of ground stations, the information can be provided within 10 minutes after tasking.

The elements in the ONE KSAT chain:

- KSAT TSOC: The KSAT satellite operation and mission control center. TSOC is flying the satellites and is receiving data and information
- KSATlite and the KOGS system supervised by the Tromsø Network Operation Center (TNOC) and the KSAT is controlling the KOGS database
- The distributed ground network for data reception and control, and
- The scheduling and processing chain where data is extracted and fused into a domain awareness picture

KSAT is developing an integrated ground system to serve the emerging set of Norwegian maritime surveillance satellites. It's optimized for Norwegian conditions and is designed to deliver near real-time dark target information. Integrating the tasking and the scheduling and linking it to the data reception and processing chain, allows a very efficient data collection system. A cloud-based interface also opens for a flexible and dynamic implementation in a combination of remote cloud-based application and local on-prem, edge-based systems.

Satellite-based information is now available everywhere, and it has become an integral part of our everyday life. KSAT supports this by developing an integrated, optimized ground segment for the Norwegian emerging satellite systems.

EVENTS 2022

JANUARY

- KSAT designing ground network for Lunar relay satellites as a part of the SSTL-led consortium under the ESA Moonlight Initiative.
- The NICFI Satellite data program nominated for Norway's better state award.
- ESAs Copernicus data acquisition transitioned to the cloud successfully supported by KSAT.
- Supported the launch of HYPPO-1, a Norwegian University student satellite.
- Minister visit at Svalbard.
- Supported the local "culture-light walk".



JAN



JAN



FEB

FEBRUARY

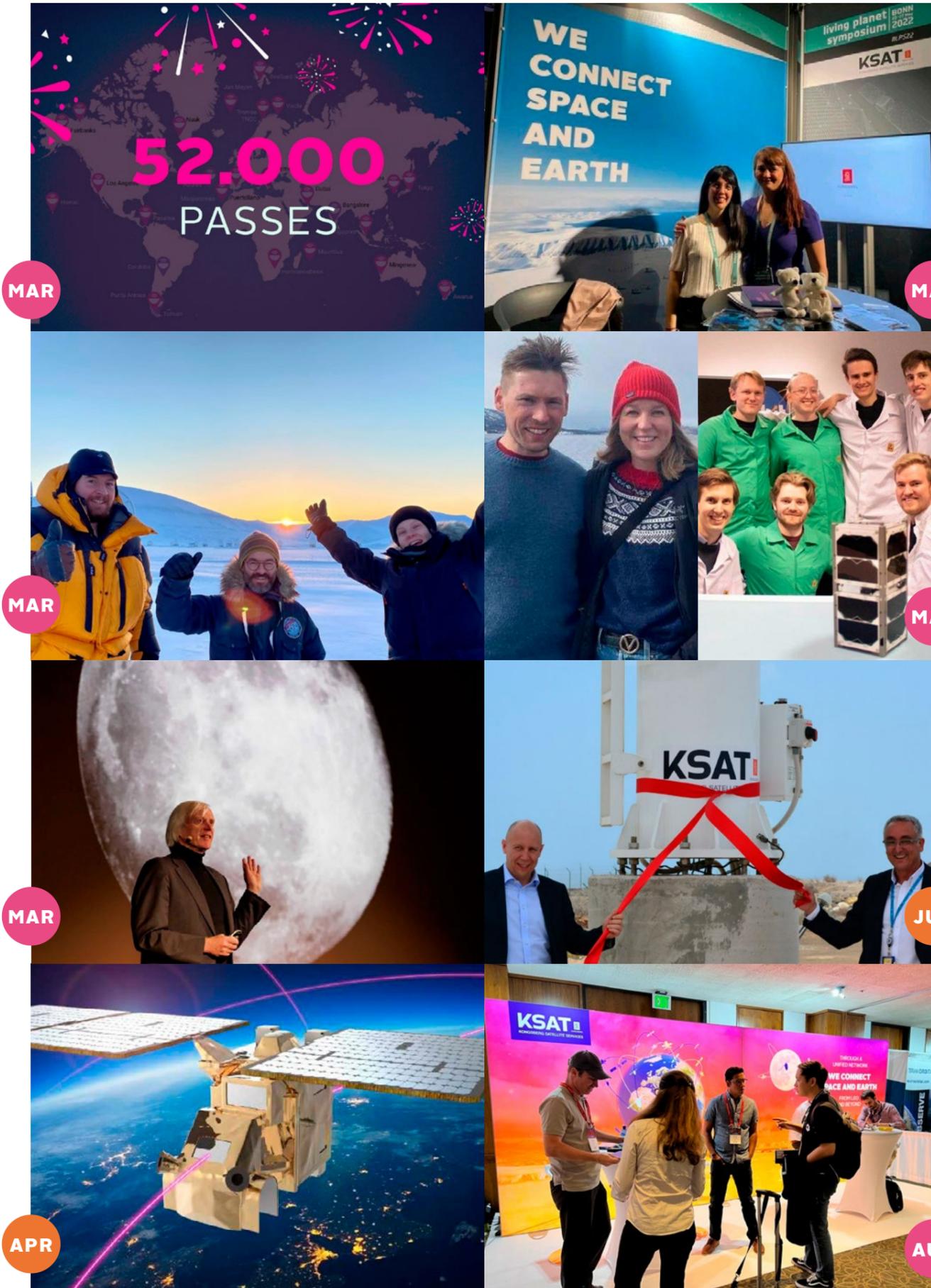
- KSAT will add Satellite and Mission Control as a service to their portfolio, becoming the one-stop solution for all ground operation needs.
- At StartSpace, a student event at NTNU in Trondheim, Norway
- KSAT 20 years! We have grown from 40 to 300 employees and over 260 antennas worldwide, and still growing!
- Back at Smallsat Symposium in Mountain View, California.

MARCH

- All-time high for the KSATlite ground network with 52.000 passes in March.
- KSAT celebrating 15 years at the Antarctic Troll station, first ever signal was received 1st of March 2007.
- Officially the sun is back in Longyearbyen, Svalbard!
- KSAT to invest in a dedicated antenna network for lunar missions.

APRIL

- KSAT leads ESA study to enable safe and clean management of hydrocarbons.
- To mark KSATs 20th anniversary as a company we will provide free ground station services to all Norwegian University Satellites.
- KSAT to provide satellite operations for ESA's Arctic weather satellite, as a part of the consortium with ESA, OHB Sweden and Thales Alenia Space.
- KSAT has finalized and commissioned dedicated antennas for Satellogic at our ground station in Antarctica and at Svalbard.
- Booth at Space Symposium in Colorado Springs, USA.



MAY

- KSAT showcasing new technologies at Living Planet Symposium in Bonn.
- KSAT joining emerging leaders at Arctic Frontiers, looking into how satellite data can be used for improved decision making in the Arctic.
- Supporting the launch of SelfieSat a university student satellite from NTNU Orbit.

JUNE

- Inauguration of the new antenna in Maspalomas, Spain.
- KSAT @ Interspill 2022 showing how both SAR and optical can provide improved forecast on oil spill and drift.

AUGUST

- KSAT supports webinars on the NICFI satellite data program, showing how the program help monitor and combat deforestation.
- KSAT adds the new satellite MicroSAR to its multi mission vessel detection service (scheduled early 2025).
- The KSAT network optimized for small satellites has demonstrated a record high proficiency of 99.7 % over the past year!
- Attending Small satellite Conference in Utah.

SEPTEMBER

- KSAT ground network enabling Pixxels Newspace take-off for their future constellation of 30 hyperspectral Satellites.
- Microsoft and KSAT announcing general availability of cloud partnership
- Minister of Trade and Industry, Jan Christian Vestre, visiting our HQ in Tromsø.
- Our Svalbard team supported the annual national charity, this year raising money to Doctors Without Borders / Médecins Sans Frontières
- Attending the Norwegian version of Relay for Life, a fundraising event dedicated to saving life from cancer.
- KSAT booth and event at The International Astronautical Congress 2022 (IAC) in Paris



NOVEMBER

- KSAT selected by NASA to develop capability studies for future space communications services.
- Proud to support the Artemis-1 mission to the moon from our ground stations in Svalbard, Antarctica and Chile
- KSAT is teaming up with Kongsberg Digital and Kongsberg Norcontrol at the ADIPEC conference in Abu Dhabi
- Attending Space Tech Expo Europe in Bremen, Germany.
- KSAT at Girl-tech in Svalbard and Tromsø, to inspire and motivate girls to choose science and technology.
- Attending Clean Gulf, New Orleans. USA.
- Participating at Asia Pacific Regional Space Agency Forum (APRSAP) in Hanoi, Vietnam.

OCTOBER

- KSAT and Nara Space to partner on GSAAS to support their first commercial Earth Observation Satellite constellation in Korea.
- KSAT will provide Ground station services to NOAA's polar operational environmental Satellites (POES)
- Meeting students @ Spaceport Norway and hoping we will see some of them in the future at KSAT.
- The northern light season is for sure ON at our HQ in Tromsø!
- Tradition to Support Pink Ribbon race from all our locations!
- Attending the Shallow and deep water conference in Mexico.

DECEMBER

- GHGSat is partnering with KSAT to provide Satellite operations and control of their constellation of greenhouse gas monitoring spacecraft.
- KSAT on Instagram! @ksat_kongsberg
- Christmas outdoor cinema in our backyard for the second year in a row, in collaboration with Tromsø International Film Festival, TIFF Junior.
- Our traditional Christmas lunch before we take a well deserved holiday.

About KSAT

Kongsberg Satellite Services AS (KSAT) is a company owned equally by Kongsberg Defence & Aerospace AS and Space Norway AS.

KSAT was established in 2002, but our journey began already in 1967 when Tromsø Telemetry Station was inaugurated.

After decades of business in a high-pressure, extremely challenging environment, with ground-breaking achievements, we can now celebrate more than 50 years of delivering excellence.

Vision

To be at the forefront. For connecting Space and Earth. For exploration, communication and increased understanding of our planet while enabling decision support.

KSAT's four core values

Quality, Pride, Responsibility, Thriving.

- We create satisfied customers
- We deliver the right quality at the right time
- We show courage
- We create engagement
- We are proud of working at KSAT

Mission

To provide the most reliable end-to-end services for actionable space derived information.

Ground Network Services

KSAT's global network currently consists of more than 250 antennas. They are in over 25 selected locations and are continuously being developed to meet new customer demand. KSAT is always adding more capacity, more antennas, and new sites.

KSAT provides high-value services to customers, utilising our outstanding heritage, resilient capabilities, and unique locations. The KSAT Global Ground Station Network sites have been specifically selected to provide optimised connectivity for satellites in polar and inclined orbits.

Earth Observation Services

KSAT specialises in using satellite data in operational monitoring services to provide information and decision support. KSAT has invested heavily in people and infrastructure over many years. Our customers benefit from the world's fastest available acquisition and processing chain, Near Real-Time services, such as oil spill and vessel detection, and rapid data delivery.

KSAT offers access to satellite information through one point of contact. KSAT's expertise can be relied on to provide availability anytime, via the unique 24/7 manned operations centre for analysis and emergency support.



SUSTAINABILITY REPORT

This chapter covers 2022 and describes our work and priorities within sustainability that are important for KSAT and our stakeholders.

This year we are for the first time including the KSAT sustainability report with our annual report.

The purpose of this report is to provide our stakeholders with information on how KSAT works on sustainability, and corporate social responsibility.

We are committed to implement the UN Sustainable Development Goals and Principles.

As a customer you will notice how we carry the UN sustainable development goals with us in all our projects.

Giving back – social responsibility and stewardship

We use our resources and competence to make a positive difference for the environment and the community we live in. We support sports and cultural activities locally and aim to increase interest in science among children, youth and students with Space as the inspiration.

KSAT complies with the following Certifications for quality and security

- ISO 9001:2015 certified
- Achilles certified
- NIST 800-53 compliancy





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Ambitions and goals

KSAT supports the UN Sustainable Development Goals, focusing on six of these in particular.

The goals shall reflect KSAT as a responsible company, a respectful workplace with a focus on human rights, corporate social responsibility, protection of the environment and technological innovation. KSAT is continuously working to provide innovative and efficient end-to-end services. Through building resilient infrastructure, the KSAT Global Ground Network reliably delivers data and global satellite communication services.

Science-Based Targets (SBTi)

In 2022, KSAT focused on Science-Based Targets. We are cooperating with KONGSBERG on how we will succeed in adapting to the Science-Based Targets initiative. It is important for us, and for our customers, that we have

ambitions and goals for how we can contribute with the rest of the world in reaching the 1.5-degree target. KSAT's ambition is to establish science-based climate targets during 2023.

EU Taxonomy

KSAT has started categorisation and analysis of our services, to prepare the organisation for reporting to EU Taxonomy. We aim to identify the proportion of the company's activities that correspond to the EU's six climate objectives.

KSAT is also focusing on the circular economy, especially within value chain activities.



Climate and Environment

KSAT is working on improving the energy efficiency of our buildings in Tromsø, Bardufoss and Svalbard.

In Tromsø and Bardufoss, we are implementing industrial control systems to help monitor and optimise power distribution. This enables us to reduce power consumption and minimise our scope 2 emissions. In addition, are we using the profit heat from telemetric halls as district heating for the rest of the buildings. Standard cooling systems have high emissions of greenhouse gases (FCF gases). Therefore we are changing our refrigerant system to water, which is one of nature's most powerful refrigerants with CO₂ and zero ozone-depleting emissions, in both Tromsø and Svalbard. The change of the refrigerant in Svalbard is as a part a of an extension project, where we are building a new energy efficient telemetry hall.

Testing solar panels at Svalbard, together with the renewable energy company Store Norske Energi, we are working towards green energy solutions. The goal is to build a solar panel park in Svalbard, to provide 100% of the station with renewable energy during the light season. We installed, tested and operated panels on the first antenna fundamentals in 2022 and are continuing to install operational panels on relevant bases. We will build test rigs as the early phase for the planned full-scale solar park on the site and are planning for other sites.

Other activities:

- We monitor the amount of paper, cardboard and residual waste that is recycled
- We report annually on waste, use of electricity and calculated CO₂ emissions
- We want to work with suppliers that share our values and standards regarding responsible business conduct. This is specified in our "Supplier Conduct Principles", which we seek to integrate as a part of our supplier agreements
- Digitalisation of tools, such as ServiceNow - a platform that will serve as a unified and efficient system for IT Service Management
- Chemical mapping to assess risk and substitute chemicals hazardous to health and the environment



↑ Satellite monitoring is the best available tool for detecting oil slicks on the sea surface.

Sustainable Services

Forestry

In 2020, the Norwegian International Climate and Forest Initiative (NICFI) awarded KSAT and its partners Planet and Airbus with a multi-year contract to provide an unprecedented volume of satellite data free of charge for anyone wishing to use it, to help stop global deforestation, conserve biodiversity and facilitate sustainable development. The primary objective of the NICFI program is to reduce and reverse the loss of tropical forests. The program is designed to be as broad as possible to ensure it is useful to as many groups as possible. The data is available for use by any commercial and non-profit organisations, provided the purpose is in line with the initiative's goals and not for financial gain. Under the program, datasets are available for a vast continuous area of 45 million square kilometres of tropical forest covering 64 countries.

Monitoring sea ice

Using KSAT, enterprises operating in the Arctic can receive access to up-to-date satellite information from radar satellites for risk analysis and decision-making support, increasing operational efficiency and ensuring safe operations. KSAT offers sea ice monitoring, iceberg

detection and classification services based on machine learning techniques. This provides rapid access to actionable information that can increase safety and reduce risk for vessels navigating in or close to sea ice.

Oil spill monitoring

KSAT delivers fully analysed oil spill detection results globally every day. Detecting pollution as early as possible, reducing both clean-up costs and environmental impact, is the primary objective of the service. Whether slicks originate from vessels, installations, or natural seepage, satellite monitoring is the best available tool for detecting oil slicks on the sea surface, in terms of both cost and operational effect.

Vessel Detection

The KSAT Vessel Detection Service is designed to locate ships and boats that are engaged in illegal activity, harming the environment, and making the seas unsafe. KSAT can utilise all operationally capable satellites, allowing for rapid decision-making cycles, so our customers can act on suspicious behaviours and quickly and effectively deploy scarce law enforcement resources.



Social

Social responsibility is important to KSAT. Compliance and business ethics are key components of KSAT operations and constitute, together with our social responsibility focus, important pillars within the organisation. The company's Corporate Code of Ethics and value platforms are important for KSAT's corporate governance.

KSAT will contribute to sustainable development through responsible best business practices. To KSAT, this also involves creating business opportunities while contributing to solving social and environmental challenges.

Education and recruitment

KSAT wishes to promote interest in the sciences in relation to earth observation and satellite technology among children, youth and students. We contribute via various activities, by;

- Participating in career days and business-related activities at universities in Norway
- KSAT is a member of several projects, together with UiT the Arctic University of Norway, NTNU and other organisations
- Arranging visits from various schools, with guided

tours and lectures

- Acting as a mentor for Master's degree students
- Offering summer internships
- Student engagement
- Trainee program, Sustainability
- Cooperation with Northern Norwegian Science Center (Vitensenteret)
- SPONSORSHIP@KSAT is a sponsorship program for sporting and cultural activities aimed at children and youth in the Tromsø and Longyearbyen areas

HSE

KSAT shall be a challenging, interesting and attractive workplace. KSAT shall have a working environment in which everyone assumes responsibility, demonstrates commitment and contributes to good interaction between management, employees and customers. KSAT has a strong focus on the well-being of our employees. Our systematic HSE activities ensure a working environment that is health-promoting and provides a meaningful job situation. Employees shall be protected from adverse physical and psychological effects, and KSAT facilities working conditions to accommodate individual employees.



↑ All KSAT employees gathered in Tromsø september 2022

In 2022 there has been an increase in visibility and focus on HSE through various channels:

- An increase in the number of health and safety representatives both in Tromsø and Svalbard
- HSE training of KSAT managers in all departments
- Change of occupational health services to a national service that shall provide equal services to everyone
- Fire safety is of great importance for our co-workers, our environment and the reliability of our services
- Increase in awareness and HSE-reporting

In 2022, 22 HSE non-conformities were reported, an increase in the number of non-conformities from 9 in 2021. The increase in reported non-conformities is partly because there have been more incidents of personal injury that have required reporting, and partly to increased visibility and focus on HSE.

The level of absence due to illness for 2022 was 3,0%, an increase from 2021 (1,8%).

Harassment

We will treat people with respect and dignity. We will not accept discrimination of any kind, whether based on gender, race, family situation, sexual orientation, ethnicity, culture, trade union membership or religion. We will conduct ourselves with integrity and show respect for colleagues and others we meet in the course of our work. Bullying, harassment, and similar conduct will not be tolerated.

KSAT has for many years focused on maintaining a healthy work environment - physically, mentally, and socially. KSAT does not tolerate any verbal or physical conduct that harasses others, disrupts work performance or creates a hostile work environment.

KSAT has established a system for raising concerns. The system handles all kinds of concerns.

	Gender distribution		Salary – Women's share of men's salary in percentage			
	Women	Men	Women (percentage)	Agreed salary / Base salary	Salary Supplement	Benefits in kind
Total	63 **	203 **	24 %	94 %	61 %	92 %
Group 1		1	0 %	*	*	*
Group 2	1	5	17 %	*	*	*
Group 3	28	74	27 %	93 %	W71 %	94 %
Group 4	34 ^w	123 ^v	22 %	92 %	59 %	89 %

* Insufficient number of participants in the group to post a percentage

** Does not include employees in international subsidiaries

Human rights

KSAT strives to respect and promote all internationally recognised human rights. KSAT shall meet the requirements of the Transparency Act and conduct human rights due diligence in line with the OECD Guidelines, in addition to applicable legislation in all countries in which KSAT operates. We shall continuously identify and assess human rights impacts. Where adverse impacts are identified, we will take action to cease, prevent and/or mitigate these.

We are currently working to identify and manage human rights risk in our supply chain, and further developing and implementing human rights due diligence for our business partners.

Gender equality and discrimination

As of the end of December 2022, KSAT has 360 employees. This includes 325 permanent employees and 35 hourly paid temporary employees.

KSAT is an international company. As of 31 December 2022, we have employees from Norway, Sweden, USA, Canada, France, Iceland, Mexico, Spain, United Kingdom, Argentina, Brazil, Hungary, Denmark, Germany, the Netherlands and Italy.

The personnel turnover rate for 2022 was 7.7 %. KSAT had 77 new permanent employees and 22 terminated employments.

Of the total number of employees, 27.5% are women. In addition, we have 16 part-time employees. KSAT works actively to promote gender equality and works on the principle of "equal pay for equal work". Our personnel policy shall ensure equal rights and opportunities and prevent discrimination on the grounds of, among other things, gender.

Even though the proportion of women in the company has increased, it is still challenging to recruit women to this industry. This is therefore an important part of our recruitment strategy.

The salary survey above was carried out in 2021. A new survey will be carried out during 2023 in line with the requirements of the Equality and Anti-Discrimination Act.

KSAT has divided the salary survey into 4 groups:

- Group 1: CEO**
- Group 2: Management group**
- Group 3: Managers, project managers and specialists**
- Group 4: Other employees**

The main difference between women's and men's salaries in KSAT is due to seniority in the company. 45.7% of part-time positions are women. These are mainly students who do not have the opportunity to work 100% of full-time. These are often recruited into permanent positions after completing their studies.



↑ Our Quality Policy governs day-to-day operations to ensure quality, continuous improvements and compliance with laws and regulations.

Governance

Quality Management

KSAT is ISO 9001:2015 certified and has a strong focus on quality management and continuous improvement. KSAT's vision is to be at the forefront. For connecting Space and Earth. For exploration, communication and increased understanding of our planet while enabling decision support. KSAT shall be an attractive workplace, with a challenging, safe and pleasant working environment. KSAT shall also deliver quality in accordance with the expectations of the recipient, whether this is a colleague or a customer. Our Quality Policy governs day-to-day operations to ensure quality, continuous improvements and compliance with laws and regulations:

- Customer focus is the number one priority of the KSAT organisation. Satisfied customers are essential to achieving our strategic goals. An open dialogue and a problem-solving approach to challenges shall ensure good customer relations and continual improvement

of our products and services

- Each one of us is responsible for the quality of the work we do. Our Quality Management System is developed and implemented based on our experience and internationally-recognised principles to ensure the delivery of products and services according to customer requirements
- New developments and operational services shall be governed by guidelines in our Long-Term Strategic Plan and our competent and motivated employees
- Priority is given to Health, Safety and the Environment to meet the needs of our employees and requirements imposed by the authorities. A good working environment is an important to meet our goals.

KSAT Security

KSAT's mission is to provide the most reliable end-to-end services for actionable space derived information. Availability is therefore critical. Confidentiality and integrity

are also key elements of KSAT's service delivery, as customers may rely heavily on the accuracy of their satellite information - as well as the fact that the information may be highly sensitive. All our security decisions are therefore risk-based and reflect the current threat and risk landscape.

We receive data from customer satellites at all of our 25+ ground stations. These are globally distributed; however, they are covered by our centrally-managed security approach, both when it comes to physically securing sites and protecting the IT systems and communication between them. KSAT's security posture is governed by our Information Security Management System (ISMS). It is based on NIST's cyber security framework (CSF) and the controls defined in NIST SP 800-53. NIST is the U.S.-based National Institute of Standards and Technology. NIST SP 800-53 is a set of best practice security controls categorised into different families and is equivalent to ISO 27001.

Our ISMS scope includes our ground station services, Earth Observation (EO) services and supporting infrastructure, and consists of the overarching Information Security Program Plan.

Privacy data

KSAT focuses on how we handle private data. We follow KONGSBERG's Processing and transfers of Personal Data (Binding Corporate Rules). KSAT has procedures and routines for how we process, store, delete and raise concerns about private data.

Responsible Tax

KSAT's international presence means that we must comply with a wide variety of tax systems in many countries. In our opinion, a responsible approach to taxation is essential for our long-term activities in the countries in which we operate. This includes identifying and complying with current tax legislation, disclosing all necessary information to the relevant authorities and taking prudent tax positions where tax legislation allows different interpretations or choices. Our objective is to comply with tax laws responsibly and to have open and constructive relationships with tax authorities in the countries in which we operate.

Ethics, Integrity and Compliance

Our stakeholders expect KSAT to work in an ethical, sustainable, and socially responsible manner and to comply with applicable laws and regulations. We follow KONGSBERG's code of ethics and compliance.

Employees at KSAT are responsible for contributing to a solid and robust culture of ethical conduct. Everyone is responsible for raising concerns in the event of any suspicious conduct or observation. Leaders in KSAT are ethical role models and shall demonstrate intolerance for unethical conduct.

- Our staff have completed KSAT's e-learning training program on ethical issues
- All our staff have received a copy of KONGSBERG's Code of Ethics & Business Conduct.

Anti-corruption

KSAT has a clear anti-corruption policy, with zero tolerance for bribery and corruption in any form. We will not request, receive, or accept any improper advantage to obtain or retain business. KSAT believes in the social benefits of competition, its importance for our reputation and that our systematic approach to anti-corruption reduces our overall business ethics risk.

Supply Chain

The customers and public expect KSAT to work in an ethical, businesslike and generally accepted manner. We expect the same from our suppliers. KSAT works with a range of suppliers in numerous countries who help make an important contribution to our value creation. KSAT follows KONGSBERG's "Supplier Conduct Principles". These principles have been established to ensure safe working conditions throughout the KSAT supply chain, ensuring that workers are treated with respect and dignity, that business operations are environmentally sound, and that business is conducted in accordance with internationally recognised principles for business ethics. Our policy and procedure is to work together with the supplier to find opportunities for improvement, not to terminate the business relationship.

We are working to further develop our due diligence, risk management and follow-up of the supply chain.

ANNUAL REPORT 2022

About KSAT

Kongsberg Satellite Services AS (KSAT) supplies services for the operation of and acquisition of data from satellites, as well as for the applications of satellite-based information in global services.

KSAT has four wholly owned subsidiaries, KSAT Global, CSGSI (Canadian Satellite Ground Station Inuvik), a Canadian company, CSGSP (Chilean Satellite Ground Station Punta Arenas), a Chilean company and KSAT Inc., a US company. In addition, KSAT has activities at permanent establishments in several countries. Financial statements are consolidated numbers for the KSAT Group. KSAT Global owns the infrastructure at KSAT ground stations outside Norway. KSAT also has an ownership interest of 33,33% in Jordobservasjon Tromsø AS.

KSAT is a world leader in its markets and has three business segments. Ground Network Services (GN) is the largest business segment constituting a significant proportion of revenues, while Earth Observation Services (EO) based on satellite information and the business segment Government Program (GP), constitute the remaining. KSAT activities comprise operation of ground stations for communication with satellites, reception and processing of earth-observation data in near real-time, and services associated with operative use of these data. KSAT focuses especially on marine applications.

KSAT headquarters are in Tromsø. KSAT operates 26 ground stations in various countries. Operations are controlled at the Tromsø Network Operations Center (TNOC), which is affiliated with group headquarters. KSAT has local offices in Svalbard, Oslo, Stockholm, and Denver.

During the year, the KSAT staff expanded by 65 to 360 employees at the end of 2022.

KSAT is owned 50/50 by Space Norway AS, a State-owned enterprise (SOE) of the Ministry of Trade, Industries, and Fisheries, and by Kongsberg Defence & Aerospace AS (KDA), part of the Kongsberg Group ASA.

Status

KSAT is the world's largest supplier of services for controlling and acquiring data mainly from polar-orbit satellites. The war in Ukraine has led to a changed geopolitical situation. This change has so far not had a direct impact on the company's operations, but the development is closely monitored. KSAT focuses especially on ensuring all national critical functions, and safety requirements are increased. Sanctions against Russia did not impact the Group's operations as KSAT neither has Russian customers or suppliers.

Despite continued restrictions as a result of the Covid-19 pandemic at the beginning of the year, KSAT has nevertheless continued to build extensive new capacity, as well as performed necessary technical maintenance and customer visits in 2022.

Antenna capacity increased in 2022, and by the end of the year, KSAT operated around 300 antennas and conducted 1,040,000 satellite contacts during the year. Around 81% of group revenues is from customers outside Norway. Initiatives in the small satellite market have achieved good results and KSAT Lite has become important for the Group's total activities. KSAT routinely delivers operative, near real-time maritime products relevant for ship, iceberg, and oil spill detection. Throughout 2022, KSAT has provided high-resolution satellite data for monitoring the world's rainforest through a contract with the Ministry of Climate and Environment. Surveillance of illegal fishing is an area of potential growth. KSAT has through 2022 continued development of ground network for lunar relay satellites.

KSAT continues with a strong growth in both revenues and profit in 2022 compared to the previous year. Group revenues were MNOK 1,471, compared to MNOK 1,232 in 2021, an increase of about 19%. Parent company revenues were MNOK 1,434 compared to MNOK 1,202 in 2021, an increase of about 19%. Order Income was MNOK 2,195 in 2022. Sound and unique infrastructure, greater demand for services, and an effective organization are among the reasons for the positive development.

KSAT has long-term contracts with most leading space agencies as well as with key commercial actors. This stable client base ensures long-term operational capability. Consequently, KSAT can focus on continued growth, innovative improvements, and establishing new business segments.

Activities focus on expansion of the ground network with more ground stations, and the establishment of global, multi-mission, near real-time monitoring. KSAT's international leading position builds on its long operating experience, technical expertise, and cost-effective infrastructure, combined with unique geographic locations. Moreover, KSAT draws upon 20 years of experience in developing and supplying satellite-based services focused on maritime applications.

Work continues to improve the accessibility of data from both national and external satellites. KSAT seeks innovative solutions for establishing new services, focusing on the High North in general and on environmental monitoring in particular. Cloud-based solutions are therefore becoming increasingly important. KSAT cooperates with UnoSat, the United Nations satellite agency, and contributes to the use of satellite data in disaster and emergency aid activities.

KSAT has an active focus of the UN Sustainable Development goals, with specific follow-up of six goals: (9) Industry, Innovation and Infrastructure, (13) Climate Action, (14) Life Below Water, (7) Affordable and Clean Energy, (12) Responsible Consumption and Production and (15) Life on Land.

Financial risk

An appreciable part of KSAT's revenue is in US Dollars (USD) and Euro (EUR), which incurs exposure to exchange risk in ordinary business activities. The group aim for a minimal risk exposure, so that contracts is hedged against fluctuations in exchange rate through forward currency exchange contracts.

KSAT has limited interest risk as the greater part of group debt is non-interest bearing, as well as because it has a corporate account arrangement that incurs only net interest for the group. This gives the group ample liquidity and freedom of action. KSAT established a long-term bank loan of MNOK 150 in 2022 with completion of the new office building in Tromsø. KSAT has entered into an interest rate swap agreement associated with half of this loan and which extends over 5 years. This reduces the interest rate risk associated with the interest-bearing debt.

KSAT evaluates the credit rating of each new client and takes precautions if necessary. The credit risk is small for KSAT's largest clients. Clients and suppliers are evaluated to ensure that all activities comply with relevant rules for business ethics, anti-corruption, and general social responsibility.

Operational risk

KSAT is a service provider that depends on operational satellites and other technological equipment to download and process data from satellites. Failed launches, orbiting satellite malfunctions, or faults in KSAT antennas and other facilities may affect development. The same applies to loss of fiber communication to Svalbard, which was established to ensure data transfer for KSAT. Operational income from TrollSat in Antarctica is particularly vulnerable to equipment breakdown and the like.

Business risk

Business risk is associated with changes in the primary market, significant technological changes, escalating competition, and complete access to data from various satellites.

Continued operation

Continued operation is a presupposition for the Annual Accounts.

Evaluation of cash flow

In the cash flow analysis, cash and cash equivalents are entered as the net of bank deposits and short-term debt to credit institutions in that these accounts are included in the corporate accounting system.

In 2022, the net cash flow from operational activities was MNOK 345, compared to MNOK 312 last year. For the parent company, net cash flow from operational activities in 2022 was MNOK 280, compared to MNOK 276 last year. The difference between the cash flow from operational activities and operating profit is mainly due to ordinary depreciations and increased accounts receivables.

In 2022, total group investments amounted to MNOK 359. Of that total, MNOK 312 were investments in antenna systems and related equipment, which contributes to increased ground network capacity. MNOK 47 is property investments, which mainly relates to the completion of the new office space at the head office in Tromsø. Parent company investments amounted to MNOK 248 in 2022, of which MNOK 206 was investments in antenna systems and MNOK 42 property investments.

Net cash and cash equivalents of the group increased by a modest TNOK 150 in 2022.

The parent company net cash and cash equivalents decreased by MNOK 61 in 2022.

Group cash and cash equivalents were MNOK 151 as of 31.12.22.

Group cash flow and liquidity are assessed as strong, and the equity rate is at solid 60% (59%). Group working capital is MNOK 26.8 (-217.5) by the end of the year. Entering into the long-term loan (MNOK 150) when completing the office building in Tromsø has contributed to an improvement of the working capital in 2022. The group has available a credit facility of MNOK 100 which has not been utilized through 2022.

Cash and cash equivalents for the parent company amounted to NOK 169 as of 31.12.22. The parent company cash flow and liquidity are assessed as strong, with a positive working capital of MNOK 41.3 (-252.9). The parent company has a solid equity ratio of 62% (57%).

Research and development

Innovation and development are central to the development of the company. About 7% of the annual turnover is used for internal and externally funded development of new services and technological solutions. Research and development costs are expensed in the profit and loss statement as incurred.

Future development

Demand for KSAT services is good, and growth is anticipated in all business sectors.

KSAT aims to secure existing and new data sources as well as to expand access to its own and other ground stations.

The Board anticipates continued KSAT growth. Focus will be on diversifying activities, globalizing services, and supporting maritime monitoring in the high north. Competition is increasing, and there's price pressure in the market.

Sustainability

KSAT shall represent a sustainable development with balance between economic results, value creation and environmental, social and governance (ESG) aspects. Sustainability are integrated into KSAT's strategy processes. KSAT strive to support the UN Sustainable Development goals to help achieve a sustainable planet by 2030. KSAT has selected 6 Sustainability Development goals where we believe the

company can contribute the most. The goals shall reflect KSAT as a responsible company; a respectful workplace with focus on human rights, corporate social responsibility, protection of the environment and technological innovation. Among other things, the group contributes to acquiring satellite-based earth observation data that is important for meteorology, resource monitoring and climate research in general.

KSAT emphasizes that values and ethical guidelines must be an integral part of the business. The employees and partners must have high ethical standards and comply with applicable regulations.

KSAT has, and will continue to have, a focus on anti-corruption and social responsibility. KSAT always strive to comply with applicable laws and regulations where business is conducted.

Reference is also made to the company's annual report and sustainability report for 2022, available at ksat.no.

Climate and the environment

KSAT is actively working to establish alternative green solutions energy, particularly at the ground stations on Svalbard and Troll. These are the principal places where group environmental impact may be reduced the most. In 2022, KSAT has, among other things, installed solar panels at the ground station on Svalbard, which is now being tested.

No reported incidents related to environmental pollution in 2022.

Work environment

In 2022, the Working Environment Committee (AMU) held two meetings, of which corporate health services attended one. AMU consists of representatives of daytime workers and of shift workers in Tromsø and on Svalbard. It has 3 representatives from the management and 4 from the employees, of which 1 has observer status.

The AMU in KSAT deems the working environment to be safe, sound, and ensured. One workplace accident with minor personal injury was registered in 2022. The injury did not result in sick leave, but the employee's work was adapted for a few days. Sick leave amounted to 3.4%, of which 2% was short-term and 1.4% long-term.

KSAT have experienced a flexible and responsible staff who have contributed to good infection prevention during the pandemic, while the company has delivered good results.

Gender equality and discrimination

KSAT actively works to promote equality and prevent discrimination. The KSAT personnel policy aims to ensure equal possibilities and rights, and to hinder discrimination based on ethnic background, national origin, sexual preference, skin color, language, religion, beliefs, age, or gender.

The headquarters offices are facilitated to support people with disabilities.

KSAT management comprises of six men and one woman. The Board consists of one female and eight male directors. The employees have three representatives on the Board. The Board and management are aware of the expectations and measures for furthering gender equality within the company and on the Board. KSAT wishes to be seen as an attractive workplace and hence aim for arrangements that increase the proportion of women in technical positions as within management. By the end of 2022, 27.5% of KSAT employees were women, against 24.4% at the end of 2021. The proportion of women in part-time or temporary positions were 46% in 2022, against 45% in 2021. KSAT has a low share of part-time employees, so the gender-proportion naturally fluctuates. Of totally 270 weeks parental leave in 2022, against 426 weeks in 2021, 85% (42%) are used by men and 15% (58%) are used by women.

Mapping of gender equality and involuntary part-time work was carried out in 2021 and is presented in the company's annual report and sustainability report for 2022, available at ksat.no. An updated mapping of gender equality and involuntary part-time work will be carried out in 2023.

Human rights and decent working conditions

KSAT undertakes to respect and uphold all internationally recognized human rights, no matter where we are in the world. KSAT must meet the requirements of the Transparency Act and carry out a due diligence assessment in line with the OECD's guidelines for multinational companies. KSAT has started the work with identifying and assessing actual and potential negative consequences for basic human rights and decent working conditions in our supply chain and will publish a statement of the due diligence assessments in accordance with the Transparency Act on ksat.no within 30 June 2023.

Corporate Governance

KSAT is constantly working to improve systems and reporting processes to ensure a high level of transparency and to meet new reporting requirements. KSAT has established board liability insurance on behalf of the members of the board and Chief Executive Officer (CEO).

Statement of Annual Accounts

The Board believes that the financial statement satisfactorily describes the group position at the end of the year. Financial position and liquidity of the group are strong, and the Board considers the group's equity to be satisfactory.

The Board is unaware of any situations not included in the financial statement that may affect the appraisal of the group's position.

Allocation of profit in the parent company

In 2022, the group profit after tax was TNOK 320,591. The parent company 2022 result showed a profit after tax of TNOK 302,183.

The Board recommends the following allocation of profit for KSAT AS:

	TNOK
Dividend to owners	40,000
To other equity	262,183
Total allocation of profit	302,183

Tromsø

31 December 2022

14 April 2023

The Board of Directors of Kongsberg Satellite Services AS

Eirik Lie Chairman	Dag Hugo Stølan Deputy chairman
Even Aas Board Member	Tore Olaf Rimmereid Board Member
Harald Aarø Board Member	Knut Myrvang Board Member
Marius Sørgård Hansen Board Member	Gøril Bjørkmo Board Member
Ole-Johan Mikalsen Board Member	Rolf Skatteboe President

NUMBERS AND FIGURES

INCOME STATEMENT 1 JANUARY–31 DECEMBER

	1000 NOK	1000 NOK	Exch. rate 9,86 1000 USD	Exch. rate 9,86 1000 USD
	2022	2021	2022	2021
Operating revenue	1 471 425	1 232 423	149 273	125 026
Raw materials and consumables	277 152	248 147	28 116	25 174
Personnel expenses	344 543	279 572	34 953	28 362
Other operating expenses	288 284	229 407	29 246	23 273
Depreciations	178 895	137 595	18 148	13 959
Operating profit	382 551	337 702	38 809	34 259
Net financial items	3 344	(4 845)	339	(492)
Earnings before tax	385 895	332 857	39 148	33 768
Tax expense	65 304	58 674	6 625	5 952
Net profit for the year	320 591	274 183	32 523	27 815

STATEMENT OF CASH FLOW

	1000 NOK	1000 NOK	Exch. rate 9,86 1000 USD	Exch. rate 8,86 1000 USD
	2022	2021	2022	2021
Earnings before tax	385 895	332 857	39 148	33 768
Taxes paid	(59 173)	(59 682)	(6 003)	(6 055)
Profit / loss sale of fixed assets		-100	0	(10)
Depreciation and amortisation	178 895	137 595	18 148	13 959
Change in accounts payable/receivables	(158 324)	(7 623)	(16 062)	(773)
Change in pension plan liabilities	6 220	2 882	631	292
Change in other accrual items	(8 512)	(94 428)	(864)	(9 579)
Net cash flow from operations	345 001	311 501	35 000	31 601
Sale of tangible fixed assets	0	232	0	24
Payments for acquisition of fixed assets	(359 101)	(456 999)	(36 430)	(46 361)
Payments for acquisition of shares in affiliated companies	(750)	0	(76)	0
Loan to Group Company	0	0	0	0
Paid dividend	(130 000)	(125 000)	(13 188)	(12 681)
Loan	145 000	0	14 710	0
Change in overdraft	0	0	0	0
Cash and cash equivalents at 1 January	150 861	421 128	15 304	42 722
Cash and cash equivalents at 31 December	151 011	150 862	15 320	15 305

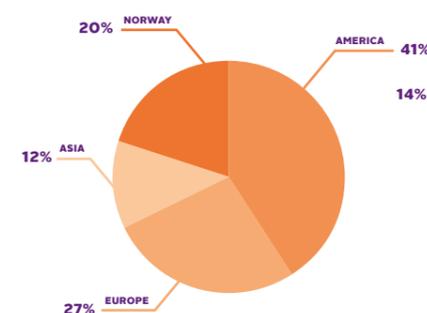
BALANCE SHEET AT 31 DECEMBER

	1000 NOK	1000 NOK	Exch. rate 9,86 1000 USD	Exch. rate 9,86 1000 USD
	2022	2021	2022	2021
Assets				
Deferred tax asset	41 054	30 938	4 165	3 139
Operating Assets	1 528 852	1 351 305	155 098	137 087
Financial Fixed assets	46 979	56 093	4 766	5 691
Total fixed assets	1 616 885	1 438 336	164 029	145 916
Receivables	642 244	386 927	65 154	39 253
Bank deposits and cash equivalents	151 011	150 862	15 320	15 305
Total current assets	793 255	537 789	80 474	54 557
Total assets	2 410 140	1 976 125	244 503	200 473
Equity and Liabilities				
Share capital	2 000	2 000	203	203
Other equity	1 455 146	1 170 574	147 621	118 752
Total equity	1 457 146	1 172 574	147 824	118 955
Other long-term liabilities	186 551	41 736	18 925	4 234
Other short term liabilities	766 443	761 815	77 754	77 284
Total liabilities	952 994	803 551	96 679	81 518
Total equity and liabilities	2 410 140	1 976 125	244 503	200 473

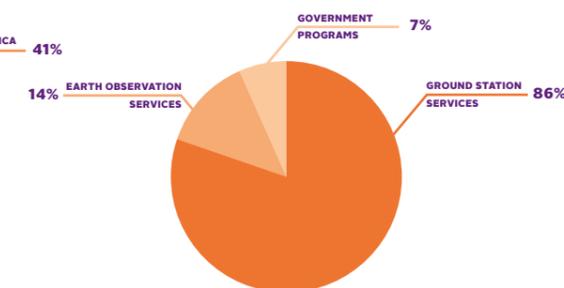
SHAREHOLDERS 31 DECEMBER 2018

Kongsberg Defence and Aerospace AS	50 %
Space Norway AS	50 %
	100 %

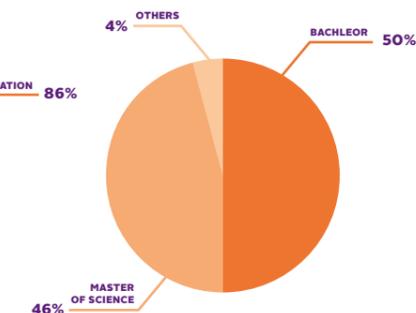
REVENUE GEOGRAPHICAL DISTRIBUTION 2022



REVENUE DISTRIBUTION BUSINESS AREAS 2022



EMPLOYEES BY LEVEL OF EDUCATION 2022





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