

NEWS & EMERGING TECHNOLOGY



SIMACTIVE SOFTWARE USED FOR SENSOR CALIBRATION AND VALIDATION

SimActive, a developer of photogrammetry software, announced the use of its Correlator3D product by **Midwest Aerial Photography** to calibrate and validate the quality of their fleet of sensors. Using a site sprinkled with control near their main airport, the crews collect imagery at various altitudes and directions of flight. The most recent calibration is then imported in Correlator3D to perform **aerial triangulation**. Then, a comparison is made with the control in the validation field to confirm the stability of the camera and even the quality of the data coming from the IMU. "Although we are a data acquisition company as opposed to a mapping services one, we still need to perform photogrammetry", said Ken Scruggs, owner of Midwest Aerial Photography. "We use Correlator3D's **advanced workflows** to calibrate and continuously validate our mapping cameras". www.simactive.com

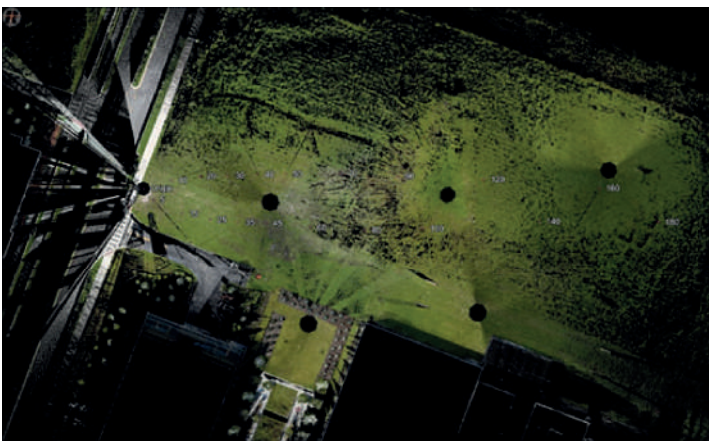
EOS POSITIONING SYSTEMS ANNOUNCES MDM SUPPORT FOR IOS USERS

Eos Positioning Systems (Eos) announced its release of Mobile Device Management (MDM) support for iOS. The new MDM capability enables organizations to push to field crews standardized setting parameters for Eos Tools Pro, a **GNSS monitoring and solution-enabling app** that runs in the background of third-party mobile apps during high-accuracy field data collection. The MDM functionality was built at the request of **several mid- to large-sized utilities**, but can be deployed by organizations of any size. The Eos Tools Pro MDM is compatible with any existing commercial off-the-shelf (COTS) MDM solution(s) that a customer might already be using. The feature works by allowing a systems administrator to create sets of parameters for Eos Tools Pro. The standardized configuration can then be pushed en masse to all desired groups of mobile devices. www.eos-gnss.com



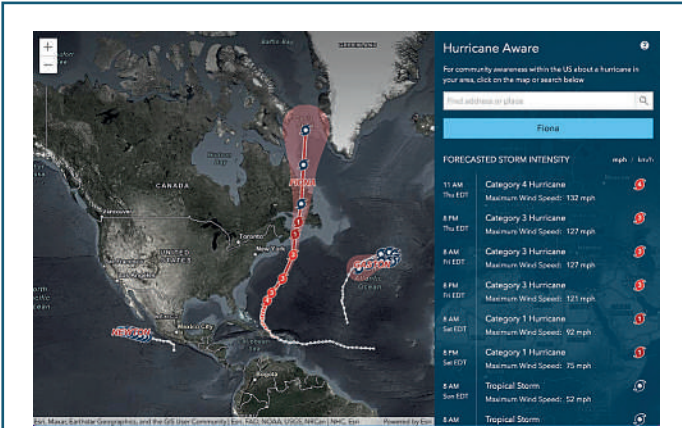
SECURE DATA SUPPLY CHAINS WITH 1DATA GATEWAY 2.7

1Spatial, the global provider of geospatial software and solutions for improved data governance, announced improvements to their data submission portal, 1Data Gateway, to further simplify and minimise data handling within their solutions. Continuing 1Spatial's dedication to data protection, many enhancements to 1Data Gateway 2.7 focus on **enhanced security**. This latest release adds support for **2-Factor-Authentication** to secure user accounts while using external identity providers, and virus scanning of uploaded data. Additionally, support has been added for **GML and GeoJSON data formats**, and Geopackage and FileGDB files can be downloaded post-processing. 1Data Gateway 2.7 supports all improvements made in 1Integrate 3.4. www.1spatial.com



RIEGL CONTRIBUTED TO GROUNDBREAKING MULTI-ENTERPRISE LIDAR BENCHMARKING STUDY

RIEGL recently contributed to the first large-scale field test to benchmark auto LiDAR performance using calibrated targets with the intent of making the results public, and was implemented as part of the **SPIE Defence + Commercial Sensing** meeting in Orlando held earlier this year. By providing the use of a **VZ-400i Terrestrial Laser Scanner**, RIEGL was used as the reference dataset for the site and targets. This project is planned to be a multi-year endeavour and will help pave the way for additional comparative research and testing, ideally contributing to the development of industry-recognized standard measurements for LiDAR performance. www.riegl.com



ESRI UK ANNOUNCES NEW TEACH WITH GIS RESOURCES

Esri UK announced a major refresh of its flagship teaching resources and support for teachers, **Teach with GIS**, to help them improve how they teach with GIS across major curriculum areas. Consisting of lesson plans, teaching tools such as videos, interactive maps, mobile apps and dashboards, events and training, the updated website aims to be the 'go to' GIS destination for those teaching ages 7 to 18. Esri's GIS software is currently used by over **3,500 schools across the UK**, helping students learn about geography and gain new geospatial skills. www.esriuk.com

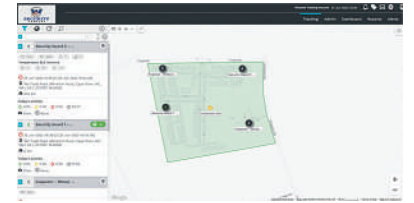


MAXAR'S HIGH-RESOLUTION VIVID BASEMAPS ENHANCES ESRI ARCGIS LIVING ATLAS OF THE WORLD

Maxar Technologies, provider of comprehensive space solutions and secure, precise, geospatial intelligence, announced that Esri, the global provider of geographic systems (GIS) and location intelligence, will enhance the World Imagery layer with **higher resolution Maxar Vivid basemaps** in the Living Atlas. With the new, multiyear agreement, Esri will use Maxar's Vivid basemaps to upgrade nearly half of the global landmass in Living Atlas from **1.2 m** resolution to **60 cm** resolution. This enhancement reflects a continued investment from the Esri Living Atlas team to bring the best quality, highest resolution imagery basemaps to ArcGIS Online users for creating more accurate maps and making better decisions. www.maxar.com

UAVOS DEMONSTRATES OPPORTUNITY OF AUTONOMOUS TECHNOLOGY IN FORESTRY

UAVOS, a developer and manufacturer of security and commercial solutions based on advanced Unmanned Systems, has completed a drone-based forest inspection project to assess the **general timber environment**. Combining digital data and UAVOS's customized software has provided **innovative analysis of forestry data**. UAVOS's methodology is an advance for forestry, allowing foresters not only to optimize and improve the way data is collected and analysed on a daily basis but also helping to reduce environmental risks and to generate economic wealth in the sector. The project has been carried out under partnership with a forestry and land management company. www.uavos.com



3DTRACKING LAUNCHES NEW PERSONAL TRACKING SOLUTION

3Dtracking, a global provider of white-labelled telematics platforms, announced the company has launched a new personal tracking solution. 3Dtracking's new personal tracking solution provides the framework for **telematics service providers** to offer new tracking services for individuals, including staff and mobile workforces, children, senior citizens and even pets. The functionality includes several options for value-added offerings, such as check-in, panic, fall detection and geo-fencing alerts and reporting. These personal tracking features can be connected to either the **3Dtrack mobile app** or third party personal GPS trackers. With the 3Dtracking platform, telematics service providers can offer personal tracking services as a standalone offering or bundled with other fleet management and asset tracking packages. www.3dtracking.com

PHASE ONE ANNOUNCES SUCCESSFUL OPERATION OF 150MP CAMERA ON SMALLSAT EARTH OBSERVATION MISSION

Phase One, a developer of digital imaging technologies, has announced the successful launch and orbital deployment of an imaging sensor based on the **Phase One iXM Series 150MP frame camera**. Launched into low Earth orbit (LEO) earlier this year by a U.S. customer, the Phase One sensor system is performing as planned aboard a smallsat Earth observation mission. The Phase One iXM Series is a **commercial off-the-shelf (COTS) 150-megapixel camera** commonly used for high-demand mapping in the globally deployed line of Phase One aerial imaging systems. The client selected the Phase One camera for its groundbreaking technology. With a single large-format CMOS sensor composed of 3.76 micron pixels, the iXM camera provides high-resolution imagery over a large field of view. www.phaseone.com

UP42 TEAMS UP WITH TRIMBLE FOR FASTER INFORMATION EXTRACTION FROM GEOSPATIAL DATA

UP42, a geospatial developer platform and marketplace, is collaborating with Trimble to offer automated Trimble eCognition software object-based image analysis and change detection solution. The unique, object-based image analysis technology within **Trimble eCognition** dramatically enhances the accuracy and quality of information extracted from geospatial data. This enables eCognition developers to become UP42 partners, create **enriched processing capabilities**, and commercialize their algorithms on the UP42 marketplace. These extensive capabilities allow UP42 partners to extract accurate geospatial information for a wide range of applications, from forestry and land cover sustainability mapping to utility transmission vegetation management and temporal analysis. www.up42.com



TRIMBLE AND CLAAS STRATEGIC ALLIANCE DEVELOPS NEXT-GENERATION PRECISION FARMING SYSTEM FOR CLAAS AGRICULTURE EQUIPMENT

As part of a strategic alliance, Trimble and CLAAS have developed a next-generation precision farming system for CLAAS tractors, combines and forage harvesters. The precision farming system includes the new CLAAS CEMIS 1200 “smart” display, GPS PILOT steering system and the SAT 900 GNSS receiver. The CEMIS display utilizes **Trimble’s new embedded modular software architecture for positioning, steering and ISOBUS technology** for a seamless connection to control and monitor implements in the field. Trimble’s new architecture accelerates the development of a customized precision agriculture system by linking CLAAS’ machine interface and Trimble’s guidance capabilities into one common in-cab user experience. www.trimble.com



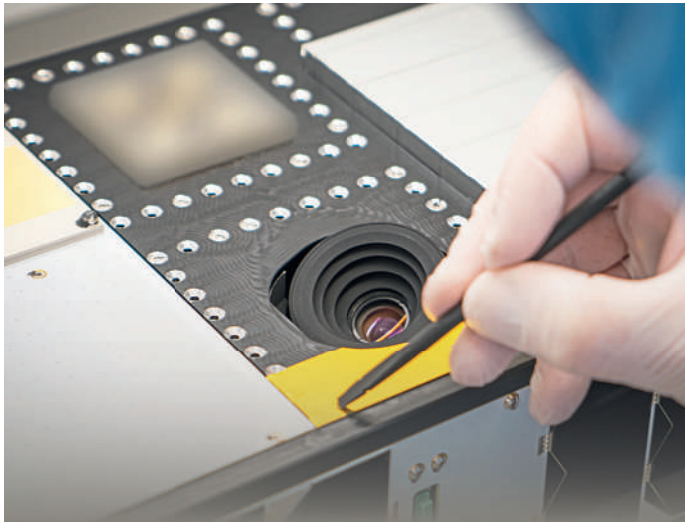
FARO ACQUIRES GEOSLAM

FARO Technologies, a global provider 4D digital reality solutions, announced the acquisition of UK-based GeoSLAM, a provider of mobile scanning solutions with proprietary **high-productivity simultaneous localization and mapping (SLAM) software** to create 3D models for use in Digital Twin applications. Founded in 2012, the addition of GeoSLAM is expected to significantly expand and accelerate FARO’s market growth opportunity in the mobile scanning space. Under terms of the agreement, GeoSLAM shareholders received a cash payment of £22.0 million and 495,562 shares of FARO stock that is subject to customary lock-up provisions. FARO expects the acquisition to be accretive to Non-GAAP EPS in 2023. www.faro.com



BLUESKY TAKES TO THE SKIES TO CAPTURE MORE OBLIQUE VIEWS OF UK CITIES

Aerial mapping company Bluesky International, is using one of the world’s most advanced hybrid sensors to expand its library of **high-definition oblique photographs** of UK cities to reveal more detail than ever before of building facades and street level furniture, providing a 360-degree view of buildings, structures, or sites. With 20 cities already acquired Bluesky plans to expand this further in the second half of 2022, including Irish cities like **Dublin** and **Belfast** and the UK cities of **Leeds** and **Sheffield**. The cities have been captured using a **Leica CityMapper camera**, which as well as capturing oblique images, also simultaneously captures vertical images and LiDAR. The oblique imagery is a valuable tool for an increasing number of applications such as insurance risk assessment, asset management for utilities and telecommunications plus environment and urban planning. www.bluesky-world.com



FOR THE FIRST TIME NANOAVIONICS HAS SOLD ONE OF ITS ORBITAL SATELLITES

Mission integrator and smallsat bus manufacturer NanoAvionics has sold, for the first time, one of its operational satellites in low Earth orbit (LEO) including ongoing mission operations. Launched last year, NanoAvionics's shared 6U satellite mission "D2 / Atacom-1" includes one of the world's first 1U-sized hyperspectral imager for remote sensing, which will be used by a yet unnamed Earth observation company to provide orbital imagery services. Prior to selling the satellite, all intended missions, none of which included the buyer, had been accomplished and fulfilled. Orbital imagery is one of the most sought-after markets of the new space industry. www.nanoavionics.com

REVENTEC FUEL MEASUREMENT SENSORS ADOPTED BY MARITIME SURVEILLANCE UAS

Reventec Limited, a sensor technology manufacturer, has supplied Alpha Unmanned Systems' Alpha 900 with its LS200 capacitive fuel level sensor for ultimate fuel volume sensing. The Alpha 900, one of Alpha Unmanned Systems renowned **Uncrewed Aerial Helicopters**, is a fuel-powered aircraft geared towards maritime security and surveillance. With quick deployment and VTOL capabilities, the **Alpha 900 platform** is well-suited for launching from moving vessels and boasts autonomous landing functions for additional ease. Designed for critical naval reconnaissance missions, maritime security and surveillance, search and rescue operations and environmental surveying, the aircraft is a small military-grade UAV with all the operational agility required to complete a mission. The LS200 sensor allows for a longer, optimised flight time through instantaneous fuel monitoring. Offering up to 4 hours of continuous flight, surveillance teams are able to extract more intelligence data. www.reventec.com



Join the FIG Working Week 2023 on 28 May – 1 June 2023 in Orlando, Florida, USA

You have the possibility to take active part in the technical programme with your abstract and paper.

The overall theme of the Working Week is

“Protecting our World, Conquering New Frontiers”



which refers to the importance of preserving what works well today, while also looking ahead and discovering what will be needed in the future for our profession.

Deadlines:

- Peer review papers: 15 November 2022 (abstract AND full paper)
- Regular papers: 15 January 2023 (abstract)

www.fig.net/fig2023



FIG Working Week 2023

Orlando, Florida USA 28 May – 1 June

Protecting our World, Conquering New Frontiers



HEXAGON ANNOUNCES HxGN NETWORKS, REBRANDS UTILITIES AND COMMUNICATIONS OFFERINGS

Hexagon's Safety, Infrastructure & Geospatial division announced the rebrand of its portfolio of infrastructure solutions to **HxGN NetWorks**. The new name signifies the cohesive, integrated offerings within the portfolio and symbolises Hexagon's continued dedication to advancing technology that supports critical infrastructure across the globe. Used by over 600 customers around the world, HxGN NetWorks is a **geospatial asset management solution** with **lifecycle management capabilities** spanning all phases - from planning and design to maintenance. It enables organisations to design, build, manage and maintain physical networks for electric, gas, water, wastewater, multi-utility and telecom. Utilities and telecommunications providers can use HxGN NetWorks to build digital twins of their physical networks, topology and assets. A flexible, integration-ready solution, it provides a single source of accurate, up-to-date information and a full spectrum of tools for various roles and users across an organisation. www.hexagon.com

SEPTENTRIO GPS/GNSS NOW SUPPORTS PX4 AUTOPILOT

Septentrio, a provider of high-precision GNSS positioning solutions, announces compatibility of their single and dual antenna AsteRx-m3 and mosaic receivers with PX4 Autopilot, opening the door to reliable and resilient **RTK positioning for UAVs**. PX4 Autopilot is one of the largest commercially adopted open-source navigation control stacks, enabling an innovative community to build and maintain drone hardware and software in a scalable way. Drones and robots, which operate autonomously or where a high level of safety is required, now benefit from Septentrio's **accurate positioning receivers** known to be secure against **GPS jamming and spoofing** with built-in AIM+ Advanced Interference Mitigation technology. PX4 is supported by Septentrio's GNSS boards and modules with both single antenna and dual antenna configurations, which offer either heading and pitch or heading and roll angles on top of accurate GNSS positioning. www.septentrio.com

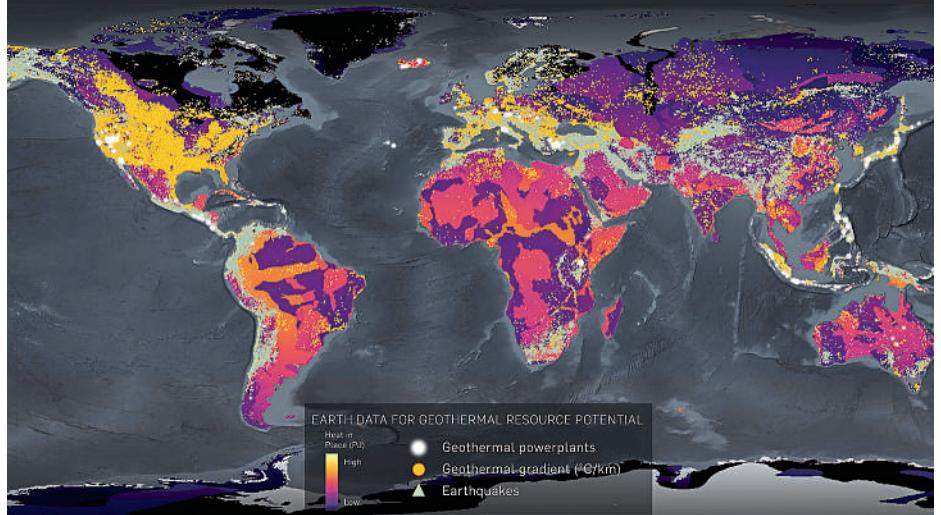
ANNOUNCING A NEW TRIMBLE BUILDINGPOINT DEALER FOR THE UK AND IRELAND

KOREC Group announce the establishment of BuildingPoint UK and Ireland as it becomes the newest partner to join Trimble's BuildingPoint distribution network. KOREC Group is an existing, established **Trimble distribution geospatial partner** with over **50 years of experience** working with the construction industry. Over 70% of UK and Ireland construction projects run over time and over budget due to a number of factors including rework, barriers to stakeholder collaboration and challenges to onsite efficiency and productivity. Through this new Trimble partnership, those that work within the construction industry, can now access a full Trimble digital construction portfolio backed up by regional expertise. www.korecgroup.com



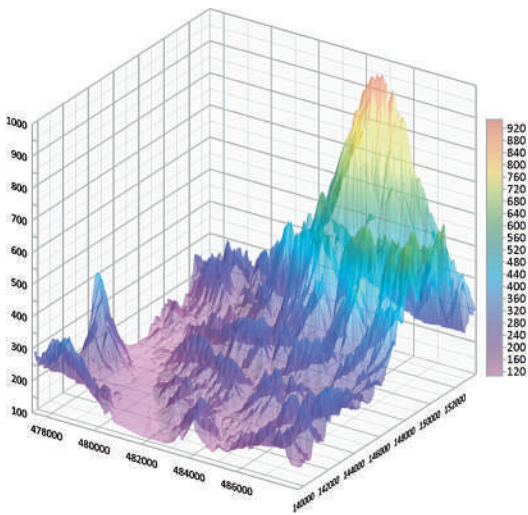
CGG LICENSES GEOTHERMAL MULTI-CLIENT STUDIES SUPPORTING ENERGY TRANSITION TO US ENERGY COMPANY

After launching its Geothermal Resource Assessment and Lithium Brine Screening multi-client studies in March, CGG has licensed both new studies in its Earth Data library to an energy company in the US. The two studies, backed by industry prefunding before this license, provide accurate and unique independent tools to discover, assess and compare **geothermal resource** and **lithium brine opportunities** and the scale of their potential. They are the latest additions to CGG's new suite of science-based GeoVerse modules specifically designed to support the energy transition. www.cgg.com



VINFAST INTEGRATES INTELLIGENT SPEED ASSISTANCE FROM HERE TECHNOLOGIES INTO VF 8 AND VF 9

VinFast, Vietnam's manufacturer of premium automobiles, announced that it will be integrating the HERE ISA Map into the VinFast VF 8 and VF 9 electric sport utility vehicles (SUVs) for the European markets to comply with the **European Union's (EU) General Safety Regulations** on ISA mandate aimed at improving driver safety. Developed by HERE Technologies, the location data and technology platform, the **HERE ISA Map** provides information on both explicit speed limits visible on road signs and implicit speed limits derived from road signs without numerical values. Providing drivers with this important safety guidance on local speed regulations is especially useful when drivers have difficulty recognizing situational speed limits, are distracted, have missed traffic signs and warnings, or have impaired visibility due to bad weather. www.here.com



GOLDEN SOFTWARE ENHANCES GRAPHER PACKAGE WITH IMPROVED AXES, PLOTTING, AND 3D FUNCTIONALITY

Golden Software, a developer of software for visualizing and analysing diverse data sets, has rolled out the newest version of its Grapher scientific graphing package. The new version features improvements in axes and plots, as well as adding a new **3D plotting capability**. Grapher is used extensively by scientists and engineers in environmental services and consulting, climate research, exploration, and academic pursuits. The package offers deeper insights into diverse data sets, including chemical, physical, geologic, and geospatial data, through **80 different 2D and 3D plotting types**. Golden Software's development team is working on new features, functionality, and enhancements for the next version of Grapher that will be released in 2023. www.goldensoftware.com

GEOGRAMA SELECTS OTONOMO TO HELP ADVANCE ROAD SAFETY IN SPAIN

Otonomo Technologies, the platform powering the mobility economy, announced that Geograma, a geographic information systems (GIS) and location intelligence service provider, has awarded Otonomo a multi-year contract to provide **multi-layered connected vehicle data** designed to advance road safety in Spain. Geograma is integrating the granular connected vehicle data delivered through the **Otonomo Smart Mobility Data Platform** into its traffic platform and developing new road safety applications based on uniquely available extended vehicle sensor data. Geograma's **GEOTRAFFIC platform** provides connected vehicle data-based services to traffic management agencies, including traffic analytics and real-time traffic monitoring services which are deployed in regional Traffic Control Centers. www.otonomo.io

MICROSOFT LAUNCHES PROJECT AIRSIM, AN END-TO-END PLATFORM TO ACCELERATE AUTONOMOUS FLIGHT

Project AirSim is a new platform running on Microsoft Azure to safely build, train and test autonomous aircraft through high-fidelity simulation. Project AirSim uses the power of Azure to generate massive amounts of data for **training AI models** on exactly which actions to take at each phase of flight, from take-off to cruising to landing. It will also offer libraries of **simulated 3D environments** representing diverse urban and rural landscapes as well as a suite of sophisticated pretrained AI models to help accelerate autonomy in aerial infrastructure inspection, last-mile delivery and urban air mobility. It arrives as advances in AI, computing and sensor technology are beginning to transform how we move people and goods, said Gurdeep Pall, Microsoft corporate vice president for Business Incubations in Technology & Research. www.microsoft.com

FUGRO ASSISTS VATTENFALL WITH THE DESIGN OF NORFOLK OFFSHORE WIND DEVELOPMENT

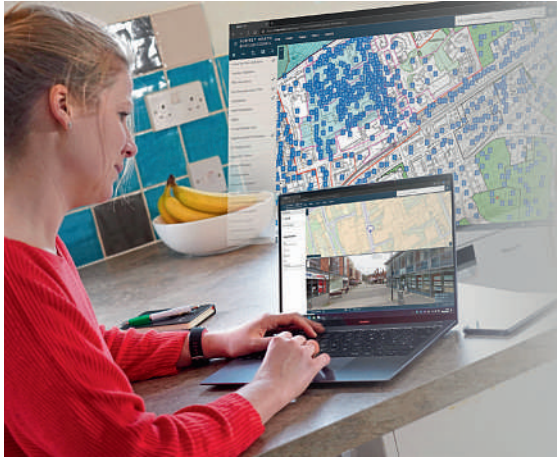
Fugro has been awarded a new marine site investigation contract by Vattenfall for their Norfolk Boreas offshore wind farm located off England's east coast. The 1.4 GW wind farm forms part of Vattenfall's Norfolk Zone and will generate enough clean energy to power **1.5 million UK homes** while offsetting **2.3 million tonnes of carbon emissions a year**. This investigation follows on from a four-month marine site characterisation campaign in 2020. From August 2022, Fugro will mobilise multiple geophysical and geotechnical vessels from local ports to complete full coverage surveys across the Norfolk Boreas wind farm, inter-array cables and export cable routes. These operations will include the use of **Fugro's SEACALF Mk V DeepDrive system for seabed cone penetration tests (CPTs)** and Fugro's innovative **Blue Snake geotechnical system**. The Blue Snake integrates CPT and sampling technology to enable safe, efficient and high-quality data acquisition along the cable route. www.fugro.com



AIRBUS AND NORTHROP GRUMMAN SIGN MOU FOR FUTURE UK MILSATCOMS

Airbus and Northrop Grumman have signed a Memorandum of Understanding covering their intention to address the **UK Ministry of Defence's (MOD) SKYNET Enduring Capability (SKEC)** military satellite communications requirements as an integrated joint team. The combination of the experience, knowledge, and capabilities of two of the world's leading space companies into a joint team will provide the MOD with **optimal solutions for the space and ground segments of the SKYNET architecture**. The team will work together to address future aspects of the SKYNET programme ensuring that UK social value and industrial participation is maximised, and that the 'allied by design' approach is implemented to drive towards interoperability with key national allies. www.airbus.com





SURREY HEATH IMPROVES PUBLIC ENGAGEMENT WITH XMAP MAPPING PORTAL

Surrey Heath Borough Council, UK, has launched a new interactive mapping portal for public consultation on its **Draft Local Plan**. Powered by XMAP, the **new generation GIS platform**, the online gateway allows visitors to search by address, or by zooming in and out on specific locations, and select the type of information they want to display from a drop-down list. Feedback on the plan is automatically sent to the Council with pre-filled forms relating to the information displayed and selected. The **Draft Surrey Heath Local Plan** sets out a vision for how the borough will develop as a place up to 2038. The Plan looks at future needs and will play an important role in shaping how towns and villages develop and will help protect and enhance the natural environment, develop the local economy, improve leisure and visitor facilities, and support more sustainable forms of travel. www.xmap.geosphere.com

PRESAGIS EXTENDS 3D TILES NEXT WORKFLOW INTO ESRI ARCGIS PRO

Presagis, a global provider of 3D advanced modelling and simulation software, is releasing the 3D Environments Add-In application for Esri's ArcGIS Pro. 3D Environments allows ArcGIS users to rapidly transform **3D Tiles Next data formats**, such as One World Terrain, into ArcGIS Pro projects to **create 3D scenes** from 2D vector data and 3D models. Available on the Esri ArcGIS Marketplace, the 3D Environments Add-In leverages Presagis' **building templates** and **texture libraries** that analysts can use to create enhanced 3D visualizations of GIS environments, thus helping increase collaboration across the enterprise. The Presagis 3D Environments Add-In contains tools to create, transform, and extract a wide variety of 3D formats to provide seamless interoperability between ArcGIS Pro and modelling & simulation applications. www.presagis.com



EUROGEOGRAPHICS WELCOMES STRENGTHENED UN-GGIM

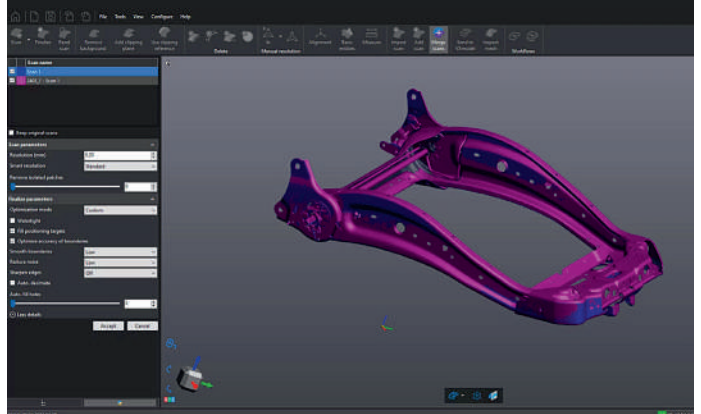
EuroGeographics has welcomed the strengthening of the United Nation's Committee of Experts on Global Geospatial Information Management's (UN-GGIM) mandate and Secretariat resources. "The resolution adopted by the UN's Economic and Social Council (ECOSOC) recognises that a strong global geospatial infrastructure is an essential enabler for achieving a sustainable future for all," says **Léa Bodossian, Secretary General and Executive Director, EuroGeographics**. Léa Bodossian made her comments during the twelfth session of **UN-GGIM** in New York where the not-for-profit association made a series of interventions as an Observer organisation. She also confirmed EuroGeographics' commitment to using its **unique expertise in authoritative data** and its extensive and well-established regional knowledge exchange networks to support a range of international initiatives, including the UN Integrated Geospatial Information Framework (IGIF), the Sustainable Development Goals (SDGs), Geospatial Roadmap, and the Framework for Effective Land Administration (FELA). www.eurogeographics.org

U-BLOX'S ANNOUNCES FIRST CELLULAR MODULE FEATURING AN EMBEDDED SIM (ESIM)

u-blox, a global provider of positioning and wireless communication technologies and services, has announced the SARA-R500E, its first cellular module with an embedded SIM chip (eSIM). Offering LTE-M connectivity, SARA-R500E is designed for size-constrained applications with high requirements in terms of robustness and security, such as connected healthcare and asset trackers. The first variant of the module will offer **out-of-the-box connectivity** on a **North American LTE-M cellular network**. eSIMs are increasingly gaining a foothold in devices offering cellular connectivity. Today, most such devices, including the vast majority of smartphones, still feature a plastic SIM card that contains all the attributes and features required to connect the device to the cellular network. Like the plastic SIMs they are designed to replace, eSIMs are provisioned with a profile that allows devices to connect to a specific mobile network operator. www.u-blox.com

CREAFORM RELEASES TENTH VERSION OF THEIR VXELEMENTS 3D MEASUREMENT SOFTWARE PLATFORM

Creaform, a business unit of AMETEK and provider of portable 3D measurement solutions and engineering services, announced the launch of **VXelements 10**—now boasting a new cloud licensing system, new 3D mesh and entity edition functionalities, multiple CAD imports, and compatibility of the **MetraSCAN-R 3D scanners** with collaborative robots (cobots). VXelements, now an integrated 3D measurement software platform that comprises several acquisition and application modules—VXscan, VXprobe, VXshot, VXmodel, VXtrack, VXinspect, VXscan-R—traces all the way back to 2005 with version 1.0 of VXscan, first software module developed by Creaform. www.creaform.com



ESRI COLLABORATES WITH RB RAIL AS TO BUILD SUSTAINABLE RAIL INFRASTRUCTURE IN EU

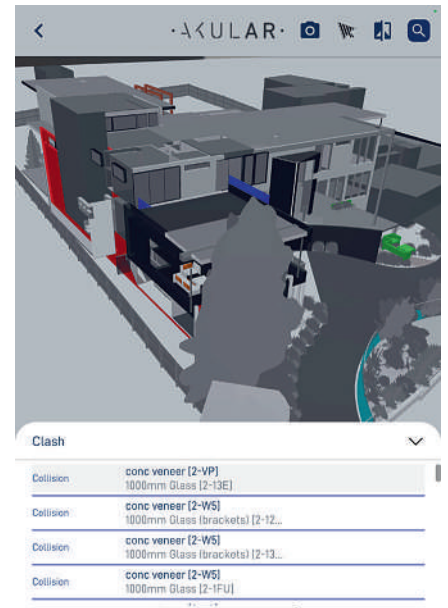
The 870 kilometers of Rail Baltica are divided into several sections across each of the three Baltic countries: Estonia, Latvia, and Lithuania. An ongoing electric rail infrastructure project in the region, Rail Baltica's purpose is to provide **sustainable passenger and freight service** between participating countries and improve rail connections between central and northern Europe. To help engineers plan, construct, and manage maintenance tasks to make improvements, RB Rail AS and Esri, the global provider of location intelligence, have signed an enterprise agreement to integrate geographic information system (GIS) software across all project units. The **holistic geographic approach** that the new GIS system will bring also allows railway personnel to make necessary adjustments in near real time and plan routes to be less environmentally impactful. www.esri.com

BLACKSKY EXPANDS ITS DYNAMIC MONITORING CAPABILITIES WITH AIRBUS RESELLER PARTNERSHIP

BlackSky Technology and Airbus have signed a reseller agreement enabling BlackSky to expand its dynamic monitoring platform's all-weather, day and night, and very high-resolution satellite imagery offerings for BlackSky customers. "The combination of **BlackSky's dynamic, real-time multi-source Spectra AI monitoring platform** with multiple types of very high-resolution electro-optical and **synthetic aperture radar (SAR)** images gives customers great flexibility for tasking requests when monitoring fast-moving, day and night operations and sites around the globe," said Brian E. O'Toole, BlackSky CEO. As part of the agreement, BlackSky has reseller rights to 23 different Airbus tasking and archive imagery products including very high-resolution optical imagery from Pléiades Neo (30 cm) and Pléiades (50cm); OneAtlas Basemap products; and SAR imagery and digital elevation models from WorldDEM Neo and WorldDEM. www.blacksky.com

AKULAR TWIN ACHIEVES POWERED BY ITWIN DESIGNATION

Akular announced the release of AKULAR TWIN, a lightweight app that is built on the Bentley iTwin platform. The app enables users to upload a **BIM model** during construction or have a BIM model created from the layout of an existing building. It means that everyone from construction workers to facility managers can compare updated versions of the same model, detect clashes, or create and track issues. All this can be done in a real-world overlay through **augmented reality**, by walking through it in a virtual reality, or simply pinch/zooming in 3D on a phone or tablet. All changes are immediately synced back to the platform in real time. The AKULAR TWIN app met the criteria needed to achieve the **"Powered by iTwin" designation**, which means that the app meets the same standards as Bentley's own Powered by iTwin apps. www.bentley.com



SCHNEIDER ELECTRIC ANNOUNCES IEEE 2030.5 CERTIFICATION OF ECOSTRUXURE DERMS

Schneider Electric, the global provider of the digital transformation of energy management and automation, announced IEEE 2030.5 CSIP certification for EcoStruxure DERMS and EcoStruxure ADMS. With IEEE 2030.5 certification, EcoStruxure DERMS – the #1 ranked DERMS vendor as recognized by **Guidehouse Insights Leaderboard** – now provides new, enhanced capabilities to interface with **Distributed Energy Resources (DER)**. Advanced monitoring and control capabilities also provide ultimate situational awareness, grid constraint management and maximized DER hosting capacity. IEEE 2030.5 represents the most comprehensive communications interface for DER connected to smart inverters such as solar panel installations, battery energy storage systems and electric vehicle chargers. EcoStruxure DERMS and EcoStruxure ADMS are two of the first solutions to combine 2030.5 with its core capability to aggregate DER at any level of the network hierarchy, allowing implementation of a wide range of grid services by using DER flexibility in a holistic and orchestrated way. www.se.com

PARISH ONLINE MAPS A ROUTE TO BETTER MENTAL HEALTH WITH WALK N TALK

Parish Online, the online mapping solution tool for UK Parish, Community and Town Councils, is working with Walk N Talk For Mental Health. The charity organises regular walks with trained **Mental Health First Aiders** providing a safe and open environment to talk about issues such as depression, stress and anxiety. To help raise awareness, **Walk N Talk Founder, Jude Price** will be walking around **1,200 miles** between Land's End and John O'Groats. With her progress charted using an online map powered by Parish Online, she will be delivering a number of mental health awareness talks along the way. Parish Online has also encouraged its users to get involved with offers of accommodation, refreshments or company. www.geoxplore.com



KLEOS SPACE INVESTS FOR FUTURE GROWTH IN THE UK

Kleos Space, the UK subsidiary of Kleos Space S.A., is to set up operations at the Space Park Leicester, a hub for innovative research, enterprise and education in space and earth observation. Kleos is a **'space-powered' Radio Frequency Reconnaissance Data-as-a-Service (DaaS) and Mission-as-a-Service (MaaS)** provider. The new UK facility will provide access to a buoyant technology-centred community and state-of-the-art facilities for research, development, and manufacturing. The move is part of a long-term strategy for Kleos' growth and investment to support the UK market. Kleos is rapidly building its satellite constellation and currently has twelve satellites in space, flown in clusters of four in close formation. The **Patrol Mission** was launched in April, and a fourth cluster, the **Observer Mission**, is planned for launch later this year on the Transporter-6 SpaceX mission. www.kleos.space



EARTH BLOX ANNOUNCES NO-CODE SAAS OFFERING FOR DATA ANALYSTS AT GOOGLE'S GEO FOR GOOD SUMMIT 2022

Earth Blox, the no-code Earth observation platform for data analysts, announced a low-touch SaaS offering at Google's **Geo for Good Summit** in Mountain View, California and invited delegates to register for early access. Launching early in the new year, the program will give data scientists and analysts access to the software for free for a limited time. Participants will be asked to participate in online surveys and feedback sessions to help improve the product. The **low-touch SaaS** will enable Earth Blox to extend subscription options to benefit a wider range of users across different disciplines with no Earth observation expertise, furthering the company's mission to provide accessible environmental intelligence at scale to drive sustainability initiatives and climate change mitigation worldwide. www.earthblox.io

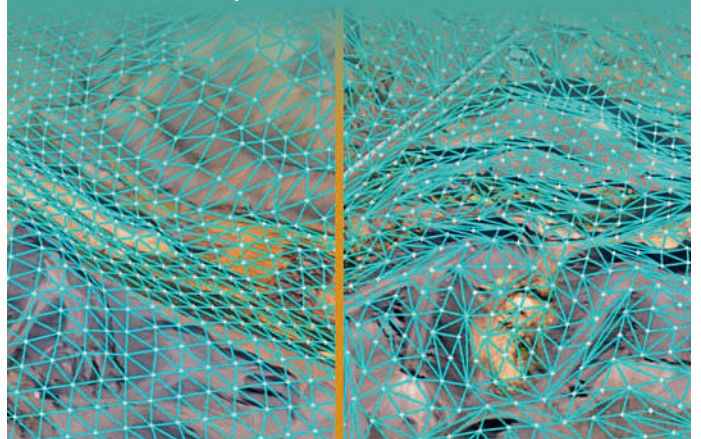
SPACE FLIGHT LABORATORY (SFL) COMPLETES ON-ORBIT COMMISSIONING OF HAWKEYE 360 CLUSTERS 4 AND 5 MICROSATELLITES

Space Flight Laboratory (SFL) has completed on-orbit commissioning of six radio frequency (RF) geolocation microsatellites developed for HawkEye 360 of Herndon, Va. Cluster 4 launched on April 1, 2022, and Cluster 5 launched on May 25, 2022, bringing the number of microsatellites built by SFL for HawkEye 360 and now in orbit to 15. The HawkEye 360 Constellation **detects and geolocates RF signals** for maritime situational awareness, emergency response, national security, and spectrum analysis applications. In addition to expanding HawkEye 360's global revisit and collection capacity, Clusters 4 and 5 microsatellites include enhanced antenna functions for greater flexibility in detecting and geolocating signals across a wide range of frequencies, stated the Virginia company. www.utias-sfl.net



VIRTUAL SURVEYOR UNVEILS INNOVATIVE METHOD OF GENERATING TOPOGRAPHIC SURFACES FROM DRONE SURVEY DATA

Virtual Surveyor has unveiled newly developed Auto-Flip Edges functionality that generates more accurate terrain surfaces from drone survey data. This innovative triangulation process is included in **Version 8.7** of the popular Virtual Surveyor software package, along with upgrades in overall ease of use. Virtual Surveyor is a robust surveying software that bridges the gap between **drone photogrammetric processing applications** and **engineering design packages**, enabling surveyors to derive topographic information from drone data needed by engineers for construction, mining, and excavation projects. The software combines drone orthophotos, digital surface models (DSMs), and/or lidar point clouds to create an interactive virtual environment where users generate CAD models, create cut-and-fill maps and calculations, or calculate volume reports. www.virtual-surveyor.com



GEOCUE WELCOMES THREE NEW DISTRIBUTORS TO ITS GLOBAL NETWORK

GeoCue announced the addition of three new distributors to its global network: 5D Teknik, Duncan-Parnell, and Navigation Electronics (NEI). All three distributors are fully authorized to sell **TrueView 3D imaging systems and LP360 Drone lidar & photogrammetry 3D point cloud software**. The TrueView solution offers innovative drone lidar and photogrammetry sensors integrated in lightweight payloads. It allows for fast, easily automated generation of true 3D colored point clouds, oblique imagery, and orthophotos from a single drone flight. The product line includes the TrueView 435 utility grade mapping sensor, the TrueView 515 all purpose-grade mapping Sensor, and the new TrueView 655/660 3-camera survey grade lidar sensor. www.geocue.com

SANBORN ACQUIRES APPGEO

The Sanborn Map Company (Sanborn), a geospatial solution provider of analytics, imagery, lidar, photogrammetry, software applications, and related services to government and commercial clients, announced that it has acquired **Applied Geographics (AppGeo)**. AppGeo has helped hundreds of governments and businesses develop the best GIS, location intelligence, and geospatial solutions for their needs. Sanborn was represented by The **Environmental Financial Consulting Group, LLC (EFCG)** and AppGeo was represented by Mirus Capital Advisors. Terms of the acquisition were not disclosed. AppGeo will continue to operate under the AppGeo brand name as a wholly owned subsidiary of Sanborn, aligning its full range of products and services with the extensive capabilities of Sanborn. www.sanborn.com



HEAVY.AI LAUNCHES INDUSTRY'S FIRST DIGITAL TWIN FOR TELCO NETWORK PLANNING, BUILDING AND OPERATIONS, LEVERAGING THE NVIDIA OMNIVERSE PLATFORM

HEAVY.AI, an innovator in advanced analytics, announced HeavyRF, an extension of the company's **deep analytics platform** that uses NVIDIA Omniverse to create **digital twins** that help telco network operators speed deployments of wireless networks. The industry's first radio frequency (RF) digital twin solution, HeavyRF enables telcos to simulate potential city-scale deployments as a faster, more efficient

way of **optimizing cellular-tower and base-station placements** for best coverage. HeavyRF allows telcos to review historic and current network-performance data as they test site-configuration scenarios against physical impediments, such as trees and dense buildings. It uses GPU-accelerated analytics to seamlessly combine customer-demographic and behavioral data with real-time geophysical mapping. www.heavy.ai

VODAFONE DEVELOPING NEW SATELLITE TECHNOLOGY THAT CAN LOCATE INTERNET OF THINGS DEVICES AND AUTONOMOUS VEHICLES WITHIN CENTIMETRES

Vodafone and Topcon Positioning Group are developing a new mass-market precise positioning system that will locate Internet of Things (IoT) devices, machinery, and vehicles with a greater degree of accuracy than using only individual global navigation satellites systems (GNSS). Vehicles, scooters, and even robot lawn mowers can be **securely monitored in real-time** to within a few centimetres when connected to **Vodafone's global IoT network** and using technology from Topcon which **corrects inaccuracies** from navigation satellite signals. Location accuracy is improved from a few metres to just centimetres using Topcon's dense European network of thousands of GNSS reference stations, especially when vehicles and devices are fitted with suitable antennas and receiver equipment. www.topcon-positioning.com



SKYWATCH LAUNCHES NEW EARTHCACHE-X OFFERING; ANNOUNCES PARTNERSHIPS WITH LEADERS IN EARTH OBSERVATION

SkyWatch Space Applications, a Canadian space tech company democratizing remote sensing data, announced the launch of EarthCache-X (EC-X) and its partnerships with **Capella Space, ICEYE, Satellogic, and Vexcel Imaging**, to deliver emerging data types to the commercial Earth observation (EO) market. EarthCache-X (EC-X) provides a new means for remote sensing partners to go to market with flexible ways to handle data in custom formats that customers might require. With the addition of these partners to SkyWatch's repertoire, customers will now have access to **SAR, DEMs, aerial imagery and stereo/tri-stereo imagery**. EC-X presents a flexible platform for ingesting and distributing new data types to the EarthCache customer base. The way a customer searches for and receives data remains the same; EC-X still eliminates the friction of multiple contracts by providing a single business relationship with SkyWatch. www.skywatch.com

TELEDYNE ANNOUNCES NEXT GENERATION 5GIG E AREA SCAN CAMERA PLATFORM

Teledyne FLIR announced the Forge 5GigE area scan camera family for machine vision. Constructed on an all-new modern platform, Forge is designed to provide the richest combination of advanced imaging features in the industry and is engineered to handle the most complex vision system challenges both now and into the future. Available in Q4, the first models extend the Genie Nano 5GigE sensor offering by integrating **5 to 24 MP Sony Pregius Gen 4 Global Shutter CMOS sensors**. In addition to supporting link speeds of 1, 2.5, and 5GigE, Forge offers burst mode to capture images at speeds up to 10Gb/s into memory. This, combined with a **500 MB image buffer**, allows engineers to rapidly capture information in bursts for high-speed applications. It's Trigger-to-Image Reliability (T2IR) framework giving engineers tools to develop reliable and robust systems faster. www.flir.ca



SATELLITE APPLICATIONS CATAPULT TO EXPAND ITS LIVING LABS NETWORK

Following the successful launch of the Agri and Health Living Labs in July 2022, the UK's Satellite Applications Catapult is expanding its national Living Labs network with a new Environmental Living Lab in the South West. The Environmental Living Lab will enable the space sector to **collaborate** with the **agriculture** and **environmental sectors**, demonstrating the economic benefits of satellite-enabled technologies across real-world environments within agriculture, horticulture, animal husbandry, aquaculture, and the management of woodlands and other habitats. The project is funded by key partners, the **Heart of the South West Local Enterprise Partnership (LEP)**, which is supporting the Satellite Applications Catapult to set up the project's facilities and kick-start trials and demonstrations of sustainable agricultural and environmental technology. www.sa.catapult.org.uk/living-lab

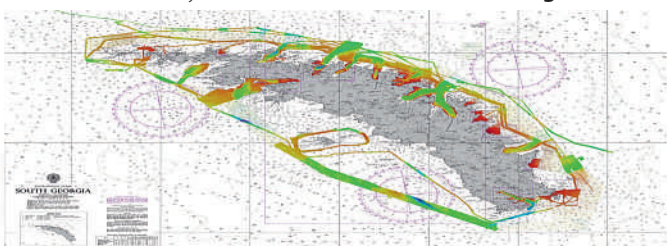
SUCCESSFUL DRONE TEST FLIGHTS IN AUSTRIA FOR EU PROJECT GOF 2.0

The drone market is growing rapidly and unmanned aerial vehicles, including air taxis, are the next milestone for the development of airborne digital mobility technologies. The **SESAR 3 JU project GOF 2.0 Integrated Urban Airspace VLD** is developing solutions for the safe and sustainable integration of unmanned aerial vehicles and air taxi operations in urban airspace. In September, an important series of tests took place in Austria, the findings of which mark a milestone for further development. Fifteen partners from both the scientific community and the drone and aviation industry are working together in the EU project GOF 2.0 to enable **safe, orderly, and efficient control of unmanned aerial systems** in a manned aviation environment. Interoperability is at the forefront, enabling secure (data) communication between airborne and ground-based systems. This creates a "system of systems" that combines classic air traffic management and new and improved drone-specific services. www.frequentis.com



UKHO PROVIDES BATHYMETRIC SURVEYS FOR THE SEABED 2030 PROJECT

The UK Hydrographic Office (UKHO) has started supplying bathymetric survey data for non-UK waters to the General Bathymetric Chart of the Oceans (GEBCO), after signing the memorandum of understanding (MOU) with **The Nippon Foundation-GEBCO Seabed 2030 Project** (Seabed 2030) earlier this year. The MOU was signed with the goal of advancing the industry's understanding of ocean bathymetry and supporting the **UN Decade of Ocean Science for Sustainable Development**. The UKHO has agreed to provide bathymetric data gridded map products and advise on data management methods and best practice, to support the ambitious goal of completely mapping the world's oceans by 2030 (Seabed 2030). www.ukho.org



SPIRE GLOBAL ANNOUNCES SPACE SERVICES AGREEMENT WITH GHGSAT TO LAUNCH SATELLITES FOR GREENHOUSE GAS EMISSIONS MONITORING

Spire Global, a global provider of space-based data, analytics and space services, announced a Space Services agreement with GHGSat, a provider of **high-resolution methane monitoring from space**, to expand its satellite constellation for greenhouse gas emissions monitoring. Under the agreement, Spire will launch three **16U satellites in 2023** that will carry GHGSat's payload and provide the company with Spire's robust, scalable, and simple-to-integrate API to effortlessly receive its data and operate its payloads. Spire's more than **350 years of space heritage** will help GHGSat, which currently operates six small satellites, meet growing demand for its business of providing timely, accurate measurements of methane emissions from industrial sites worldwide. The data collected by its payload is used to monitor emissions from carbon-intensive industries such as oil and gas, coal mining, waste management and agriculture. www.ghgsat.com