CORNWALL IS LAUNCHING THE UK BACK **INTO SPACE** Cornwall **SPACE**

WELCOME TO CORNWALL SPACE

With a dedicated horizontal launch site, the world's most capable satellite ground station, deep space communications, earth observation, flight testing and satellite launches, Cornwall is rapidly becoming a world leading technology destination for businesses.

Offering unmatched funding and support packages for businesses working in data, space and aerospace, opportunities are increasing for businesses in the UK and beyond to expand into Cornwall and benefit from the skills and expertise within Cornwall's space sector.

Find out for yourself, why Cornwall is the home of innovation in the UK.

Cornwall is leading some of the biggest innovations currently taking place in space

























The Local Enterprise
Partnership for Cornwall
and the Isles of Scilly
have created a new Local
Industrial Strategy to
drive the growth and
prosperity of Cornwall
and the accelerated
growth of the Data and
Space sectors will play
a key part in growing the
Cornwall economy over
the next 10 years.

The Local Industrial Strategy will outline how Cornwall will develop an internationally credible space cluster and how R&D programmes will support economic growth in Data and Space.

The Cornwall Space Cluster is ambitious and committed to accelerating growth in the Data and Space sectors, building on Cornwall's strength in these industries.

We work with national Government to grow the UK Space economy and in doing so we are growing Cornwall's economy – securing jobs and investment for the future of Cornwall.

66

The UK enjoys a significant presence in the space industry which is expected to grow quickly in the years ahead and Cornwall is an integral part of this. With our burgeoning Space sector located around Goonhilly Earth Station on the Lizard and at Spaceport Cornwall, the home of Europe's first horizontal launch site, the Local Enterprise Partnership is determined that Cornwall will play a growing role in this industry. We will do this by controlling space missions, launching satellites, deep space exploration and interpreting the data that returns, plus building and training the supply chain, creating new facilities, new jobs and new opportunities for people of all ages. The data derived from this industry will shape how we understand our environment and climate and will give us the tools to live a life that impacts and repairs the same. We have no doubt that the data and space sectors will develop new technologies and industries in the years ahead and Cornwall will be very well placed to make sure many take root in our soil. 🛼



Mark Duddridge, Chair of Cornwall & Isles of Scilly LEP.

GROWTH



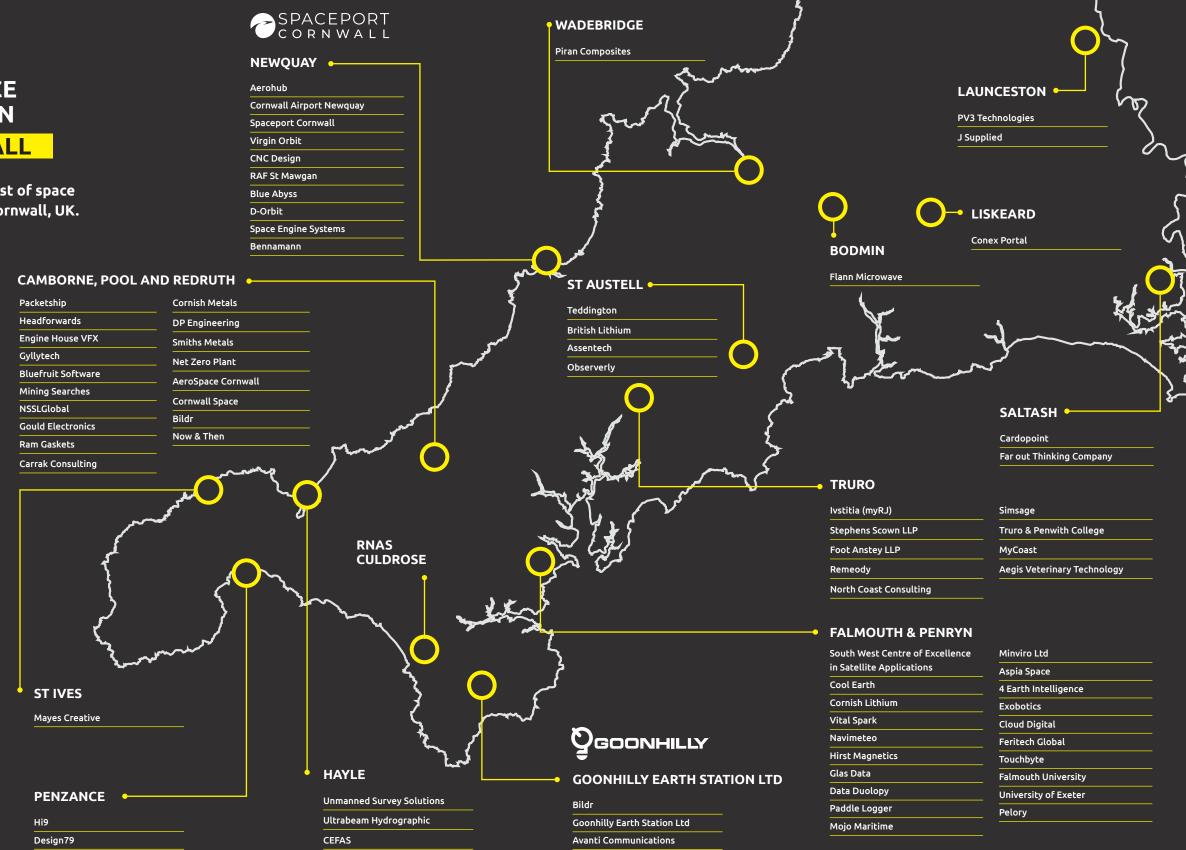
INVESTMENT IN INFRASTRUCTURE

by local government at Spaceport Cornwall and Goonhilly Earth Station Ltd ensures the continued growth of the aerospace and space clusters there, enabling manufacturing and testing of aerospace and space flight technologies.



THE SPACE SECTOR IN CORNWALL

Our extensive list of space businesses in Cornwall, UK.





SPACEPORT CORNWALL THE HOME TO UK LAUNCH

Spaceport Cornwall and Virgin Orbit will deliver the UK's historic first orbital sovereign launch in 2022.

Spaceport Cornwall is a multi-user spaceport project between Cornwall Council, The Local Enterprise Partnership Goonhilly Earth Station Ltd and Virgin Orbit, to provide horizontal satellite launch from Cornwall Airport Newquay, creating high paid jobs in Cornwall in a globally growing sector.

MULTI-USER OPERATIONS

One of the longest runways in the UK, uncongested airspace, and direct access to the sea creates a world class operational environment for orbital, sub-orbital, micro-gravity and experimental future flight technologies.

PROVEN TECHNOLOGY

In January 2021 Virgin
Orbit's LauncherOne rocket
successfully reached space
from Mojave, USA deploying
10 satellite payloads for NASA's
Launch Services Program (LSP).

NEXT STEP IS LAUNCH FROM CORNWALL, UK IN 2022.

THE MOST SUSTAINABLE LAUNCH LOCATION IN THE WORLD

Spaceport Cornwall is committed to leading the industry in cleaner, greener launch practices, has a Sustainability Action Plan, and is working towards being carbon neutral.

CONNECTED

With daily flights to London, Manchester and other major UK and European cities, great road access, and Superfast Broadband as standard, Spaceport Cornwall is a modern launch location that makes doing business easy.



Centre for Space Technologies

Payload Assembly, Integration, Testing

Mission Operations

Rocket testing

R&D zone – Full Time or Pay-As-You-Go

Collaboration workspace

Linking industry and academia







GOONHILLY EARTH STATION LTD

GOONHILLY

A UNIQUE LOCATION

Goonhilly Earth Station Ltd is situated in a unique location - at a strategic geographic "space-crossroads"

 WE ARE POSITIONED IN THE PERFECT LOCATION TO SUPPORT:

Commercial satellite communications

The International Space Station

Deep space communications

Radio astronomy & space science

AI INSTITUTE

Goonhilly Earth Station Ltd is building an "Institute for Space Artificial intelligence and Machine Learning" together with an expanding group of UK Universities. This collaboration includes our partners at University of Oxford, University Manchester, University of Leeds and University of Hertfordshire.

The mathematics of digital signal processing, radio astronomy, artificial intelligence and machine learning are closely connected, and we are using our cross-sectoral skills to apply algorithms developed in one field to solve problems in another.

We have invested in a number of GPU and FPGA based supercomputers which provide massive parallel processing capacity.

This, together with our LEO tracking capability dedicated to downlinking EO data directly into our data centre, provides us with the capability to derive new high-value data sets for various markets including agri-tech, coastal monitoring, traffic monitoring, and flood warning, to name but a few.

The institute will contain incubation space for companies to come and use the facilities at Goonhilly Earth Station Ltd and work with us and our partners.

www.goonhilly.org

ISS Orbital Path

QGOONHILLY

ACCESS OUR INNOVATION ECOSYSTEM IN CORNWALL



01.

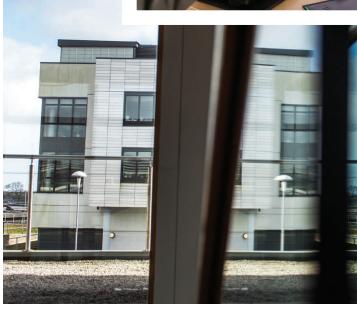
FALMOUTH UNIVERSITY

Innovation happens where creativity and technology meet. Both are in abundance in Cornwall, and Falmouth's industry-focused courses help foster new thinking.

Penryn Campus is the only campus in the UK with three universities co-located and offers access to robotics, mining, environmental sustainability and artificial intelligence expertise as well as specific research such as extra-solar planets, the dark environment and earth observation. This capability is supplemented by other learning centres including the Eden Project.

falmouth.ac.uk





02.

UNIVERSITY OF EXETER

The University of Exeter is globally recognised for research excellence. The University are experts in developing impact, connecting partners, nurturing collaborations and generating value.

exeter.ac.uk



Truro & Penwith College Campuses in Truro and Penzance

03.

TRURO & PENWITH COLLEGE

Truro & Penwith College is rated Ofsted Outstanding and widely respected as one of the best colleges in the country.

The College offers a range of educational choices, which are supported by modern resources, inspirational teaching and purpose built facilities.

truro-penwith.ac.uk

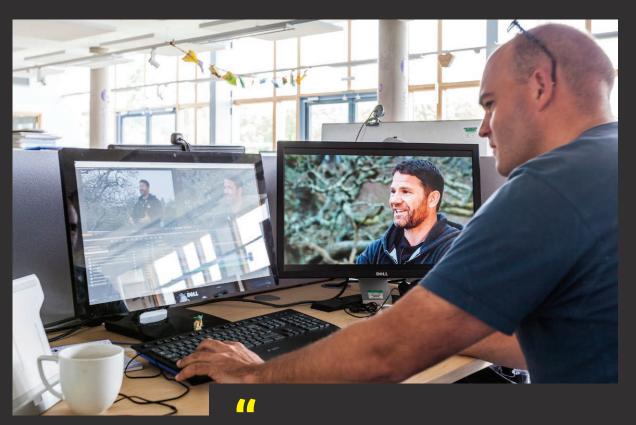


04.

CORNWALL COLLEGE

The Cornwall College Group is the largest training provider in Cornwall, with over 15,000 learners each year, 2,000 of whom are studying a university programme. Our proven track record of over 10,000 apprentices in ten years makes us the most successful provider of work based learning in the South West.

cornwall.ac.uk



Overall, this is an outstanding programme, not least due to the high quality of the people involved. We have enjoyed being a partner and feel we have learned a great deal.

Ian Jones CEO | Goonhilly Earth Station Ltd

FALMOUTH LAUNCHPAD

05.

falmouthlaunchpad.co.uk

Part of Falmouth University Business School, Launchpad is an innovative postgraduate incubation and acceleration programme. It is part funded by the European Regional Development Fund.

Launchpad is an exclusive opportunity for software engineers, digital creatives and business developers to work on real industry challenges, provided by leading global businesses.

Supported by experienced coaches and mentors they will create

in-demand, cutting edge solutions that investors want to buy into. Participants receive £16k tax-free and study for a no-fees Masters to support and equip them on their start-up journey.

Four steps to a successful graduate startup:

Identify the market gaps within the industry

Recruit talent to meet the market gaps

Pivot to the market

Launch Incorporate, accelerate

06.

THE SOUTH WEST CENTRE OF EXCELLENCE

The South West Centre of Excellence in Satellite Applications (SWCoESA), is part of the national Space network established by the Satellite Applications Catapult and UK Space Agency.

We help to grow the South West Space Cluster, by supporting innovators and researchers to develop and commercialise Space Technologies and satellite applications, including Earth Observation, Satellite Communications and Navigation. Centre partnership includes the Universities of Exeter, Falmouth and Plymouth and our coverage includes Cornwall, Devon & Somerset.
Our key regional focus areas are:

Health & Wellbeing

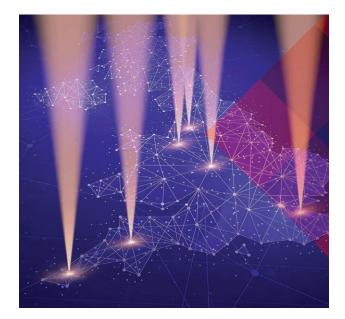
Marine & Maritime

Mining

Natural Capital

We connect people with key stakeholders, constantly scan the horizon for new opportunities, and provide wide-ranging business support initiatives for start-ups and SMEs, to accelerate your innovations empowered by satellites.

sa.catapult.org.uk/south-west/



07.

DIGITAL SKILLS PARTNERSHIP

The Cornwall and Isles of Scilly
Digital Skills Partnership is one of
6 local pilot partnerships funded
by the Department of Digital,
Culture, Media and Sport. We work
with public, private and voluntary
sector organisations to understand
challenges and opportunities, provide
strategic leadership and champion
the importance of digital skills. We
work to foster greater collaboration,
to remove barriers to growth and
ensure existing industry and future
investors in Cornwall have a rich
talent pool from which to recruit.

cioslep.com/projects/digitalskills-partnership



BE PART OF SPACE

IN CORNWALL

Opportunities are increasing for businesses in the UK and beyond to expand into Cornwall and benefit from our skills and expertise in the space sector.

AeroSpace Cornwall helps businesses capitalise on the space cluster in Cornwall and will facilitate your expansion into the region through a red carpet roll out. All tailored to your business requirements.

Benefit from R&D funding, business support, travel and accommodation, an independent feasibility study and introductions to all the right people.

CORNWALL



BENEFITS OF HAVING AN OPERATIONAL BASE IN CORNWALL

The Local Industrial Strategy – enabling joined up thinking from local Government, industry and academia

Cornwall Space – recognised as a space cluster

Access to Goonhilly Earth Station's AI institute

Spaceport Cornwall – home to horizontal launch

Access to Cornwall's innovation ecosystem

Low-cost flexible workforce

Hi spec property and facilities for rent

Regional funding opportunities

Enterprise Zones, with planning freedoms

ACCESS TO AVAILABLE FUNDING



R & D Funding up to £100K at 50% match



R & D Advice



Start up support



Trade and Export Advice



Financial Advice



Capital grants up to £150k at 45% match



Equity Investment and loans up to £2 million

To find out more about the benefits of expanding into Cornwall and the funding available, email james@aerospacecornwall.co.uk





PROPERTY AND ENTERPRISE ZONES

IN CORNWALL

Cornwall is an inspiring location for businesses, with a wide variety of workspace options available, including Enterprise Zones offering tax incentives and planning freedoms.

We manage a large collection of highquality office, industrial and commercial development plots. Workspaces are available to rent across Cornwall at a number of Cornwall Council's landmark developments.

choosecornwall.co.uk

CI

These state-of-the-art three storey buildings provide dynamic office space, access to individually tailored business support services, cutting-edge meeting & conference facilities, informal networking areas, fabulous connectivity and technology and the connection to a vibrant and collaborative business community.

cornwallinnovation.co.uk

AEROHUB

Join the UK's only dedicated
Aerospace Enterprise Zone. Based at
Cornwall Airport Newquay, Aerohub
gives businesses opportunities to
grow, with planning freedom and
business rate relief. Aerospace, space
or related sectors can benefit from
the airport's infrastructure as well as
an adjacent 36 hectare Business Park.

ESAM

The Enterprise Space for Advanced Manufacturing (ESAM) is a new workspace dedicated to growing advanced manufacturing, engineering and low carbon environmental goods and services businesses.

GOONHILLY

EZ

Goonhilly Enterprise Zone. With access to space communications, data storage and processing, well-equipped labs, ample office and workshop space, and zero business rates, the Goonhilly Enterprise Zone offers a fantastic opportunity for business development.

ENTERPRISE ZONE

INCENTIVES

At the heart of the Enterprise Zone is the desire to reduce barriers to growth for businesses.

Your company could benefit from:

1 DEVELOPMENT OPPORTUNITIES

Simplified local authority planning at Newquay, i.e. through LDO's that grant automatic planning permission for certain development (such as new industrial buildings or changing how existing buildings are used) within specified areas.

2 BUSINESS RATE

100%
DISCOUNT

Worth up to £275,000 per business over a 5-year period

3 CAPITAL ALLOWANCES

100% ENHANCED

to businesses making large investments in plant and machinery





CARRAK CONSULTING

Renewed interest in the mining sector to aid clean growth, coupled with investment in space enabled technologies, has sparked some exciting projects with a focus on georesources in the South West. Mining Consultancy, Carrak Consulting, is investigating the use of a novel remote sensing technique to help understand mining related pollution of river catchments. They have recently received funding to enable knowledge transfer between AI specialists, for the analysis of hyperspectral drone data.

GLAS DATA

Helping champion a new era of responsible, smarter farming, Glas Data aims to enhance farm management through data automation and easy aggregation. How much a harvest yields is never an exact science, but with the common data ecosystem from Glas Data positioned to unify the data, some of the guesswork can be taken away - allowing farmers to better prepare and plan. Their system also helps make informed on-farm decisions with data from renowned research institutes.

REMEODY

Remeody / Plan Spatial have built a platform for public health and reconstruction planning which uses spatial data to surface insights and to prioritise interventions. Their unique approach leverages the best elements of Geographic Information Systems, Project Management and Business Analytics to underpin a decision cycle that, in the hands of domain experts, can start with census data or a satellite photo and lead quickly to strategic impact.

CLOUD DIGITAL

On a mission to unlock the complex web of space data for business benefit, cloud computing company Cloud Digital have begun to build their Earth Vision platform with the help of Goonhilly Earth Station Ltd as their strategic partner. Experts in cloud strategy and digital transformation, Cloud Digital's new endeavour intends to integrate the rich web of space data harvested from satellites into mainstream software offerings. Using such software could help with the prediction of consumers' behavioural patterns in the retail industry for example, or future proofing in the construction industry based on historical data.

Satellites and other space technologies are used to help protect communities and help mitigate the effects of climate change

CORNWALL WILL:

Be a leader in the national space programme by exploiting the physical, digital and intellectual assets in Cornwall and using satellite data to overcome local and global challenges, such as the impact of climate change.

Be the UK's primary data communications and satellite operations centre for Government, commercial and academic led exploration and deep space missions, enhanced by the use of Artificial Intelligence and Machine Learning.

Be globally recognised as a centre for horizontal launch services.

Have inspired and equipped the next generation of scientists, software and technology developers, engineers and entrepreneurs to engage with the Data and Space sectors and develop products and services which create sustainable value for the economy.

Cornwall's assets are nationally important and central to the UK national spaceflight programme. In a new era of exploration some 50 years on from when Goonhilly was integral in distributing the images of the first Moon landing, Cornwall and the Isles of Scilly will focus on 'exploration' missions with exploration being rooted throughout its culture and history. Through Spaceport Cornwall and the growing supply chain of upstream data communications and operations businesses, upper stage modifications and technology could allow "air launch" to support 'beyond LEO' orbital services, with missions to the moon and beyond.



SPACE BUSINESSES WORKING

IN CORNWALL



Recently moved to Cornwall, Cloud Digital is a cloud management company specialising in security and digital transformation, such as developing cyber security innovation for banks and telecommunications companies. They also offer consultancy and product development. As a Google partner they are certified in developing and promoting Google platforms.

They have received a grant from AeroSpace Cornwall to deliver a portal to allow users in the research / space / Earth observation industries to access data from various satellite sources. This single platform will allow users to:

Access data sets from Commercial and free to use sites

Allow users to run compute queries and develop use cases via a single "pane of glass"

Allow users to select specific regions / providers i.e. Google / UK or Goonhilly /

With an ambition to provide development, consultancy and IT infrastructure services with Goonhilly Earth Station Ltd, Cloud Digital are a business to watch.



Waveguide SwitchManual and Motorised

FLANN MICROWAVE LTD

Flann is an innovative engineering led company, recognised by industry leaders globally.

For over sixty years, Flann's specialist engineering team has been solving waveguide problems for the space, telecoms, automotive, health and education sectors. Flann serves companies such as NASA, Met Office and well known telecoms companies.

Demand from individuals and businesses for high speed data service is driving a revolution in satellite technology. Traditional large satellites weighing several tonnes and orbiting 22,236 miles above the equator are set to make way for nanosatellites and CubeSats deployed in constellations just 300 miles above the Earth's surface.

Nanosatellites and CubeSats as small as 10cm cubed and weighing as little as 1.4kg are small enough to be launched as additional payloads on a large mission, in clusters of up to 100 at a time or on a single rocket or by a new class of vertical and horizontal space launch systems being developed in Cornwall and Scotland.

This makes them very cost effective and more than 350 of these satellites were launched in 2018. Maximising the greater data capacity, or bandwidth, offered by these systems requires much higher frequency microwave switches to transmit data to ground antennas. These 'W-band' switches don't currently exist.

Flann has been designing and producing precision components since 1956 and first designed and manufactured a W-band switch in 1980 for ground use. With its precision manufacturing skills and experience in space flight hardware, including for NASA's Jet Propulsion Laboratory, Flann is well placed to create a new smaller, lighter switch to enable faster and more accurate communication with satellites.

CLOUD DIGITAL

clouddigital-emea.com

flann.com

Exobotics is developing the world's first scalable, modular roving platform, providing low-cost, high-performance solutions for lunar operations.



EXOBOTICS

The business will use its rovers to provide a mobile payload delivery service for anything from a single chip to a telescope, and open access to governmental/commercial lunar missions for:

Prospecting and analysis of resources e.g. metals, minerals and water.

Resource distribution (comms. relays, power, shelter, air/water & night survival).

Repair, monitoring & diagnostics of space assets including infrastructure.

Exploration and preparation e.g. mapping and radiation monitoring.

Exobotics have been awarded an R&D grant from AeroSpace Cornwall which will focus on development of the rover wheels to enable the rover to perform on larger platforms and the development of software and hardware that's appropriate for extreme environments. These technologies can be sold to similar businesses in the sector.

exobotics.space



BLUEFRUIT SOFTWARE

Developers, Testers, and Quality Specialists. The business has been awarded funding for an R&D project, where the team are creating their first prototype; the Audio Classification Equipment (ACE) project is an embedded software application that can take

Audio Classification Equipment
(ACE) project is an embedded
software application that can take
pre-recorded audio or live audio
and categorise the sample into pretrained categories, making it possible
to diagnose an internal machinery
fault through sound recognition

using real-time AI solutions.

Bluefruit Software are embedded

software specialists working with

innovative clients in quality-critical

spaces, using Agile Lean practices.

They are a growing tech business

with software teams made up of

The team are currently working on a second wave of prototypes, exploring other data sources within machinery and devices that can be gathered and diagnosed on the devices themselves, not requiring any cloud connections.

There are now three different feasibility projects underway within life sciences and manufacturing. For these projects, Bluefruit is deploying AI on embedded ARM processors creating small diagnostic solutions that can be built into or bolted onto the equipment.

bluefruit.co.uk

VALUE OF SPACE IN CORNWALL

CORNWALL SPACE SECTOR

GROWTH: **164%**SINCE 2010



DATA & SPACE IN CORNWALL TO CONTRIBUTE

£1BN

OF ADDITIONAL ECONOMIC VALUE BY 2030



150DIRECT JOBS +

246
IN THE SUPPLY CHAIN

FAST BECOMING THE UK'S PRIMARY

DATA COMMS AND SAT OPS



CENTRE FOR GOVERNMENT, COMMERCIAL & ACADEMIA

WATCH THIS SPACE...

WHO'S HERE? SPACE AND SUPPLY CHAIN BUSINESSES IN CORNWALL

Cornwall is home to many innovative space businesses, and businesses using satellite data.

Read on to find out more.



Cornwall SPACE

CUBE SAT MANUFACTURING

E X O B \diamondsuit T I C S

nadeem@exobotics.space exobotics.space

EXOBOTICS

Exobotics Ltd is removing the barriers to entry in terms of cost, skill and time required to perform roving missions by developing a low-cost standardised exploration platform.

We are developing the world's first CubeSat-compatible roving modules, enabling missions to the Moon, Mars or near-Earth objects that could previously only be done on a large scale.

GROUND STATION



info@goonhilly.org
goonhilly.org

LAUNCH OPERATORS



info@virginorbit.com virginorbit.com

GOONHILLY EARTH STATION LTD

Goonhilly is synonymous with innovative British engineering and technological advances. It is famous for being at the heart of the satellite communications industry. Goonhilly Earth Station has the ideal location, assets and resource capabilities to support: New Space (including LEO, MEO & GEO), Commercial Satellite Communications, Deep Space Communications, Data Centre Services and Systems Engineering and Space Consulting.

VIRGIN ORBIT

Virgin Orbit is a company within the Virgin Group providing a revolutionary launch service for small satellites. Their proprietary launch system is light, fast, flexible and affordable. In January 2021 their LauncherOne successfully reached orbit, deploying 10 CubeSats. In 2022 Virgin Orbit will conduct their pathfinder launch into LEO from Spaceport Cornwall.

SATELLITE COMMS



mark.loveday@avantiplc.com
avantiplc.com

AVANTI COMMUNICATIONS

Avanti Communications PLC is a UK-based Satellite Operations Company providing high throughput satellite communications across Europe, Middle East and Africa. It provides military satellite communications, broadband (internet) services and humanitarian connectivity support across those regions. It also operates the fleet of satellites from Goonhilly in Cornwall and employs 70 staff in Cornwall, mostly in technical roles including Satellite Operations, Flight Dynamics, Ground Station and Data Networking support.

SUPPLY CHAIN FOR SPACE



martin.jewellaj-supplied.co.uk
j-supplied-3d.co.uk

J-SUPPLIED

J-Supplied 3D: experts in customised end-to-end integration of 3D printing to transform your manufacturing processes, empower your workforce and launch your business into Industry 4.0.

▶ DPEngineering

sales@dpengineeringltd.co.uk dpengineeringltd.co.uk

DP ENGINEERING

Established for nearly 70 years, DP Engineering offers a turnkey solution. They are AS9100 aerospace accredited and lead the way as a major supplier of precision-engineered components to the aerospace, defence and space sectors. With long-term contracts in place with large corporates, they are the number one choice for component manufacture in the West Country.

SUPPLY CHAIN FOR SPACE



salesateddingtonsystems.co.uk teddingtonsystems.co.uk

TEDDINGTON

Teddington is a global leader in the design, development and manufacture of appliance control systems, solutions and products for a range of industries worldwide, including the space and aerospace sectors.



info@smithmetal.com
smithmetal.com

SMITHS METAL CENTRES

Smiths Metal Centres Ltd is a world-class supplier of metals and plastics into a broad range of engineering and industrial applications. We are the only UK multi-metal and plastics stockholder to have a fully equipped UKAS Accredited Testing Laboratory which forms part of our Technical Services Department.



info@spaceenginesystems.com spaceenginesystems.com

SPACE ENGINE SYSTEMS

Space Engine Systems Inc. is a Canadian aerospace company located in Edmonton, Canada and has a propulsion testing facility at Spaceport Cornwall, UK. Space Engine Systems Limited is a 100 % UK standalone company. The main focus of the company is the development of a light multi-fuel propulsion system (DASS GNX Engine) to power a fully reusable single-stage-to-orbit (SSTO) and hypersonic cruise vehicle.



HIRST MAGNETICS

Hirst Magnetic Instruments Ltd is one of the leading industrial magnetics companies in the world in research, development and innovative solutions. Our pioneering innovation in a new form of technology has led to us becoming market leaders in China, the world's largest market for magnet manufacturing. Having anticipated the rise of electric vehicles and electric aircraft, we are uniquely positioned to provide solutions from magnet material manufacture through to the magnetisation of Electric Motors/Rotors in industrial production environments and applications. Permanent magnets have unlocked many applications for aerospace, environmental and automotive markets, but their true potential in energy/weight/ performance improvements has only started to be realised. Hirst Magnetic Instruments Ltd is ideally situated, with a 60-year history of innovative industrial solutions, pushing the boundaries of theoretical physics into real-world solutions.

enquiry@hirst-magnetics.com hirst-magnetics.com



enquiriesaTFPhydrogen.com tfphydrogen.com

TFP HYDROGEN LTD

TFP Hydrogen Ltd focuses on the manufacture and development of materials for electrochemical technologies. Our products include coatings to increase energy efficiency and lifetime for hydrogen-generating water electrolysers and high-performance fuel cells, catalysts for water electrolysers and electrodes for water treatment. Our team has experience in large-scale technology development in areas such as chlor-alkali, water electrolysis, flow batteries and molten salt electrolysis, so we know and appreciate the challenges our customers face. In addition to our product range we offer contract R&D and contract manufacturing services, all based around electrochemical materials and electrochemical technologies.

SUPPLY CHAIN FOR SPACE



salesawes1td.com wesltd.com

WES

WES Engineering Solutions is an advanced precision engineering firm with a heritage of supplying lightweight hard metal components for satellites. Specialising in the advanced engineering of complex and high-tolerance components, their primary capabilities include CNC milling, CNC turning, CNC grinding, spark erosion and wire erosion as well as a range of support operations.



enquiries@subterandt.com subterandt.com

SUBTERA NDT LTD

SubTera is developing Non-Destructive Testing (NDT) solutions to help manufacturers, asset owners and service providers enhance productivity and protect the environment. Our non-contact, real-time TeraHertz technology determines the internal or underlying condition of polymers, foams, insulations and other advanced materials used across industries such as aerospace, energy, manufacturing and mobility. In addition to this, we provide consultancy services, such as feasibility studies and inspection process development support.



info@feritech.com feritech.com

FERITECH

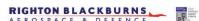
Feritech Global Ltd is a harsh environment engineering and technology company, working with global clients across all marine engineering sectors. We design, manufacture and retail equipment and systems, and provide a consultancy service, project support, data collection and analysis services for offshore geotechnical surveys.



PIRAN COMPOSITES

Having worked on world-leading projects in a variety of industries as a manufacturer and direct consultant to major projects, Piran has now established itself offering a complete service to design, engineering and manufacture of one-off, R&D, low-volume and high-volume structures and components. Piran has developed novel technologies in order to offer high-quality services to many sectors, including space and aerospace. Their experience ranges from ultra-lightweight novel Aerospace R&D aerostructures through to low/high volume propulsion and flight-critical components.

m.searledpirancomposites.co.uk pirancomposites.co.uk





RIGHTON BLACKBURNS LTD

Operating from three AS 9100 REV D and AS 9120 REV B licensed sites, Righton Blackburns Aerospace stockholds and distributes Aerospace & Defence Speciality alloys in all forms, along with both AM & Hip Powder, for additive manufacture to the UK and worldwide markets. The company is dedicated to offering customers the complete supply package - an approach that has consistently been proven to reduce total acquisition costs, with emphasis on:

Exceptional levels of quality and OTIF | Relationship and partnership | Technical knowledge | Value added methods of supply | Supply chain management and integration at all levels

All Righton Blackburns Aerospace Service Centres hold the prestigious SC21 Silver Award and are fully engaged in the SC21 programme to deliver continuous and sustainable improvements in all areas of the business including: productivity, competitiveness, quality, relationships and stakeholder benefit.

agauler@rblimited.co.uk rightonblackburns.co.uk

36. 37.

SUPPLY CHAIN FOR SPACE



VITAL SPARK CREATIVE

Vital Spark Creative is the one-stop shop for Product Design and Development – providing a 'concept-to-shelf' service for the nuclear, space and aerospace sectors. Working with both multinational blue-chip companies and start-ups, we combine design flair, innovation and manufacturing know-how to ensure that our products not only look great and function brilliantly, but can be manufactured easily and at the best possible price. We believe that we offer something unique – value for money and a fresh, uncomplicated approach to product design.

info@vitalsparkcreative.com
vitalsparkcreative.com



space@flann.com flann.com

FLANN MICROWAVE

For over sixty years, Flann Microwave Ltd has been using the expertise of their fantastic team to solve your waveguide problems. They are the market-leading designer and manufacturer of waveguide antennas, precision microwave components and test & measurement products. Flann's ongoing policy of maintaining the highest standards ensures that the Company's global reputation for quality, reliability and performance continues.



BLUE ABYSS

Blue Abyss enables the research and development of marine, subsea, space, aerospace, offshore and energy technologies and techniques. It facilitates training, testing and evaluation to prepare humanity and technology for operation in extreme environments through life science research, diver and astronaut training and technological readiness advancement. Creating valuable educational resources and outreach, raising aspiration and awareness among young people around the world and promoting the critical importance of sustainable green, blue and space economies."

blueabyss.uk Sven.Parrisāblueabyss.uk



CONEX PORTAL

ConeX is a unique digital platform for the UK manufacturing sector aimed at fostering new relationships and sparking innovation through increased connectivity; building a strong community of manufacturers, product developers, engineers and suppliers across the UK.

Members are given their own homepage on which they can include a portfolio, they can explore the supply chain map and interact with other members - forging connections for projects, get exclusive access to events through a personalised calendar and are able to post problems in the forum where experts in their field can share solutions. The easy-to-navigate platform amalgamates all elements of day-to-day business operations into one streamlined service.

Info@conex-portal.co.uk conex-portal.co.uk



ASSENTECH

Assentech Sales Limited supplies equipment, services and technical support in tank storage and process safety. Prevention and reduction of harmful emissions from tank storage equipment is their core objective; and they succeed in reducing the number of unnecessary vapours impacting the health of workers and surrounding neighbourhoods, whilst also stopping the waste of precious revenue. Using knowledge, education and revolutionary testing to enable operators to understand the functional efficiency of their breather vents.

Using Assentech's innovative software and AI technology to establish leakage rates and generate accurate results for the aviation industry to ensure operations remain safe, compliant and profitable. Businesses also benefit from their rapid response unit service – offering immediate support across the UK.

debbie.pearce@assentech.co.uk
assentech.co.uk

SUPPLY CHAIN FOR SPACE



BILDR

Investing in the cloud means more than just finding an infrastructure provider. It means finding a partner that will help you navigate inevitable complexities, help you solve challenges, and be an extension of your team. BILDr saves businesses time, money, and patience by adopting a one-stop-shop approach to cloud. We are focused on providing not just the infrastructure, but the expertise and flexibility needed to take full advantage of the growing cloud market. Think about it. What if your business didn't just have a cloud, but an entire team of trained systems admins just a call away when challenges inevitably arise?

Instead of spending resources attempting to fix the problem, you can grow your business while we find a solution. We are making the cloud fast, reliable, and easy by offering a suite of solutions ranging from basic web hosting to bleeding-edge Dedicated Private Clouds for enterprise. BILDr also offers the extras like SSLs certificates, backup snapshots, and security solutions. All this is powered by KVM and backed by our team of experts.

tony.redfearn@bildr.co.uk bildr.co.uk



D-ORBIT

D-Orbit is a market leader in the space logistics and transportation services industry with a track record of space-proven technologies and successful missions. Committed to helping companies profitably and sustainably maximize the opportunities to do business in space today and into the future, the company has developed proprietary space logistics technology and transportation solutions that will accelerate the growth and development of a trillion-dollar space economy, including human expansion into space. With an incremental strategic approach to the space marketplace, D-Orbit is delivering successful customer outcomes today while developing advanced products and services for the needs of tomorrow.

Founded in 2011, before the dawn of the New Space market, D-Orbit is the first company addressing the logistics needs of the space market. ION Satellite Carrier, for example, is a space vehicle that can transport satellites in orbit and release them individually into distinct orbital slots, reducing the time from launch to operations by up to 85% and the launch costs of an entire satellite constellation by up to 40%. ION can also accommodate multiple third-party payloads like innovative technologies developed by startups, experiments from research entities, and instruments from traditional space companies requiring a test in orbit. To further empower satellite operators to achieve a more profitable and effective business, the company has also developed in-house a proprietary cloud-based mission control software suit designed to control entire satellite constellations. D-Orbit's forwardthinking view has enabled it to consistently create solutions for its customers that save them money and time.

D-Orbit is a space infrastructure pioneer with offices in Italy, Portugal, UK, and the US and now Cornwall. its commitment to pursuing business models that are profitable, friendly for the environment, and socially beneficial, led to D-Orbit becoming the first certified B-Corp space company in the world.

simon.reid@dorbit.space
dorbit.space

EARTH OBSERVATION



4 EARTH INTELLIGENCE

4EI are transforming the way organisations obtain value through geospatial analytics intelligence. 4EI have an impressive portfolio of scientific knowledge, technological expertise and real-world experience – bringing you an end-to-end data offering that empowers change intelligence. We run and deliver a range of technical geospatial projects, to fit your specifications. Our suite of data-focused capabilities has been developed over decades with customer requirements and business applications in mind.

Our capabilities are designed to gather the most suitable, highquality data resources for your needs from global locations, and transform them into applied intelligence. From remote sensing techniques to software development to AI-powered automation; 4EI use the latest and most innovative capabilities to deliver more interactive, interpretable and actionable data solutions.

Capabilities include Earth Observation & Remote Sensing to monitor the most inaccessible environments, Artificial Intelligence & Machine Learning and Digital Expertise. Through the delivery of products, solutions and consultancy project management, we support organisations to make sustainable decisions for their business and the planet.

rfa4earthintelligence.com
4earthintelligence.com



survey@cms-geotech.co.uk
cms-geotech.co.uk

CMS-GEOTECH

CMS-Geotech Ltd is a marine geotechnical operational & hire company, specialising in Vibrocore, Sediment Sampling & Marine CPT throughout the world in both offshore and coastal waters. CMS-Geotech also provides geotechnical equipment and bespoke survey services to support those working within ports & harbour dredging & developments, civil engineering, subsea cables & pipelines, the aggregate & mineral mining industry & offshore energy.



ASPIA SPACE

Clouds block satellites' views of Earth, meaning intelligence is lost. Aspia Space's cutting-edge AI algorithm, ClearSky, gives you unprecented cloud-free Earth observation data intelligence in near time. ClearSky produces cloudless multispectral imaging, right across the visible and short-wave infrared spectrum, meaning you can reliably access accurate and regular imagery that has been previously unobtainable from satellite observation. Through a unique synergy of AI and expert human eye, Aspia has discovered solutions, insights and efficiencies vital to business performance, strategy and growth. ClearSky will give you intelligence you can rely on and insights to act on, helping you solve problems faster, discover new opportunities and manage resources more efficiently.

aspiaspace.com



info@3dmsi.co.uk 3dmsi.com

3DMSI

3DMSI is a quality-driven team of geospatial surveyors who draw upon a wealth of knowledge acquired from diverse backgrounds, rooted in small and large-scale projects. Using our innovative laser scanning technology to measure, plan and visualise both as built and natural environments, we can help improve communications and efficiency in design and construction, regardless of project size. Our drive to surpass expectations means we are always willing to explore new possibilities and push the boundaries to deliver the value we know the technology offers.



cathākittiwakelabs.com kittiwakelabs.com

KITTIWAKE LABS

Kittiwake Labs was set up to develop innovative solutions to real-world challenges in the sports industry. They bring together expertise in Big Data, Software Development, Space and GIS technologies, Internet of Things, Technology Transfer, Design and Technology and Partnership Building.

EARTH OBSERVATION



robertaminviro.com
minviro.com

MINVIRO

At Minviro, we offer innovative solutions for the mining industry to reduce their environmental impact, and work with businesses internationally solving complex problems with innovative data-driven solutions. We provide best-in-class carbon footprint analyses, life cycle assessment, mine development and renewable energy environmental performance studies.



CLOUD DIGITAL

Certified Google Partner, Cloud Digital. is a cloud management company specialising in security and digital transformation, such as developing cyber security innovation for banks and telecommunications companies, as well as consultancy and product development. Cloud Digital is in the process of developing a portal to allow users in the research, space and Earth observation industries to access data from various satellite sources.

This single platform will allow users to:

- Access data sets from commercial and free-to-use sites
- Run compute queries and develop use cases via a single "pane of glass"
- Select specific regions / providers i.e. Google / UK or Goonhilly / Cornwall

cornwall@clouddigital.io clouddigital.io



khicks@carrakconsulting.co.ukcarrakconsulting.co.uk

CARRAK CONSULTING

Carrak Consulting provides project implementation services relating to the assessment, reclamation & regeneration of land affected by former mining, as well as the sustainable development & management of proposed, operational & redundant mining & industrial sites.



info@cornishlithium.com
cornishlithium.com

CORNISH LITHIUM

Cornish Lithium is a mineral exploration and development company, using satellite technology and data to re-evaluate Cornwall for lithium and other vital technology metals such as tin, copper and cobalt. The use of modern digital computer technology has enabled the company to combine large historical datasets with satellite and other geophysical data to allow the reinterpretation of mineral potential in the light of modern extraction technologies.

SATELLITE DATA



PELORY

As commercial spaceflight becomes more accessible, AI is playing a key role in propulsion modelling, orbital engineering and mission control. Pelory is working with innovation hubs in the UK such as Aerospace Cornwall to bring AI technologies to commercial spaceflight and propel a new frontier of the UK economy forward.

As missions such as the 2019 Mars landing have shown, accurate models are becoming critical to successful execution. Pelory are able to use the power of Data and AI to create detailed simulations of key mission components such as propulsion and landing, harnessing the power of super-compute in the cloud to deliver increasingly accurate predictions over a number of different mission parameters.

The relationship between Space, Aerospace and AI is not just one way though. More satellite launches and drone flights means more data. Pelory Research is working on its own in house drone solutions which combining object detection, machine learning and sensor arrays to bring increasingly accurate data sets to better inform critical decisions.

richard.keirnanapelory.com pelory.com

SATELLITE DATA



natalie.gawor@coolearth.org coolearth.org

COOL EARTH

Non-profit organisation Cool Earth works alongside rainforest communities to halt deforestation and climate change.

With the help of satellite technology and canopy cover monitoring, Cool Earth supports communities to develop sustainable incomes and protect their surrounding forests from threats such as logging, agriculture and other extractive industries.

Clear Mapping Co

helloaclearmapping.co.uk clearmapping.co.uk

CLEAR MAPPING

We create award-winning maps, and provide GIS training courses and international cartographic design consultancy.

Experts in our field, we will provide you with a bespoke service. Clear Mapping Co joins up the disciplines of tech, design and illustration, providing a seamless mapping service. Winners of the British Cartographic Society (BCS) Ordnance Survey Open Data Award, 2015, we work internationally, sharing our expertise with businesses just like yours.



info@merrettsurvey.com
merrettsurvey.com

MERRETT SURVEY

Merrett Survey has over 30 years' experience in the topographical survey industry, working with businesses in over 60 countries. We apply the latest surveying technologies, including airborne, LiDAR and satellite imagery. We can provide or source LiDAR surveys, and create satellite-derived digital terrain models (DTM) based on an independent appraisal of your requirements. We also provide independent quality control, confirming the accuracy of LiDAR and satellite-derived data sets.



davidapaddlelogger.com
paddlelogger.com

PADDLE LOGGER

Paddle Logger is a water sports software app that allows SUPers, surfers, kayakers and general water sports enthusiasts to track their progress after a session out on the water. Stylish and simple to use, Paddle Logger has proven popular with water sports enthusiasts all over the world.



colin@glas-data.com glas-data.co.uk

GLAS DATA

Glas Data has developed a fully customisable, cloud-based agricultural management ecosystem for farmers, consultants, processers and retailers. The app is designed to unify and aggregate your data, from any source without restrictions. The result is optimised food-supply-chain management with greater efficiency and profitability.

SATELLITE DATA



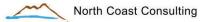
dan.dowmanaplanspatial.com
planspatial.com

PLAN SPATIAL

PlanSpatial is the wider application of Remeody's map-based prioritisation and works in many different contexts where spatial data plays an important role.

Public health, agriculture and infrastructure maintenance are all seeing an increase in crowd-sourced and satellite-derived data, but there is a real need for a tool for decision makers and experts to turn this data into coherent action.

PlanSpatial is ideally suited to help in epidemic response, postdisaster management and community building initiatives.



kmclothier@north-coast-consulting.co.uk

north-coast-consulting.co.uk

NORTH COAST CONSULTING

North Coast Consulting Ltd is a Minerals and Environmental Consultancy, specialising in the provision of services to the world mining sector, offering bespoke assistance to the UK and International Mining Market. NCC can provide high-quality help to enable mining companies and funding agencies to implement environmental and social management solutions that will satisfy both national and international standards and requirements.

NCC has worked with a wide variety of clients, from Government Mineral and Environmental Ministries to International Banks and Financiers, and globally important Mining Companies, to provide sustainable, cost-effective solutions to their mining, environmental and social issues.



info@dataduopoly.com
dataduopoly.com

DATA DUOPOLY

Data Duopoly is a Cornwall-based start-up from the Launchpad incubator, solving the issue of congestion and frustrations experienced by visitors by offering personalised incentives to discover and navigate venues. Their aim is to revolutionise the visitor experience in any venue worldwide. Data Duopoly create win-win situations for both visitors and venues, by offering personalised discounts to visitors as an incentive to visit less busy areas around an attraction. From this, unique location data insights are gathered to improve attractions' future planning. In addition, visitors benefit from an engaging and tailored experience at venues, and less queuing due to the improved visitor distribution.

REMEGOY

REMEODY

Remeody is a planning platform for post-conflict reconstruction where explosive hazards are hindering development. At the heart of the planning process is a prioritisation tool that allows decision makers to express policy on a map whilst assessing the benefit of different pieces of infrastructure.

The output is passed to a project management module for scheduling and tracking. The ability to track the benefit enabled by investment in explosive hazard clearance and subsequent construction is a step-change in driving transparency in this humanitarian sector.

dan@remeody.com

SATELLITE APPLICATION USES



matthemathefaroutthinkingcompany.co.uk
thefaroutthinkingcompany.co.uk

THE FAR OUT THINKING COMPANY

The Far Out Thinking Company is an environmental research, development and innovation company, who is creating a network of AI camera bee hives and moth traps across Cornwall. This ground-breaking project is utilising next generation DNA sequencing, artificial Intelligence and satellite weather data to understand the drivers of insect decline. By harnessing insects as biosensors, The Far Out Thinking Company will be able to inform database backed rewilding seed solutions.

SOFTWARE



info@bluefruit.co.uk
bluefruit.co.uk

BLUEFRUIT SOFTWARE

Bluefruit Software is an embedded software specialist working with innovative clients in quality-critical spaces. We are a growing tech business and now have over 65 people working from our offices in the heart of Cornwall. Our software teams are made up of Developers, Testers and Quality Specialists. We believe excellent embedded software is achieved through an investment in people, processes, and a dedication to quality. Working closely with our clients, we use our embedded expertise to bring their products to life.



markan-coders
n-coders.co.uk

N-CODERS

n-Coders is a UK-based software development company that delivers high-quality, custom software applications that enable businesses around the world to become more efficient with their operations. We work in partnership with commercial clients globally, in a wide range of industry sectors, to ensure businesses can meet their goals with the assistance of automated custom solutions developed just for them.

DATA



HEADFORWARDS

Headforwards is an outsource software development company based in Cornwall. We are centred around Agile philosophies and practices and are focused on building lasting relationships with clients. We do this by building dedicated teams who work collaboratively with you to create and deliver customer software through the use of cutting-edge technology, techniques and principles. We use emerging machine learning techniques across many areas in the space industry to gain greater value and achieve competitive advantage for our clients. As a business, we pride ourselves on improving staff skills, techniques and prospects and ensuring people don't have to compromise their career in order to live and work in Cornwall.

toby.parkins@headforwards.com headforwards.com



jeremy.sneller@touchbyte.co.uk
touchbyte.co.uk

TOUCHBYTE

Touchbyte is an exciting, high-growth IT business, innovating Face Recognition applications for new worldwide markets. The business provides accurate real-time video analytics, people recognition and individual validation of "People in Places" using Face Recognition technology. They have a number of off-the-shelf components, helping speed up new deployments and keeping costs down – meaning Touchbyte can provide comprehensive real-world solutions to tight timescales and budgets.



t.hind-valentine@sechoia.com

sechoia.com

cean 3D

chris@ocean3d.co.uk ocean3d.co.uk

SECHOIA

Sechoia is a smart city platform company with a goal to provide cities and their inhabitants with access to data to help improve health, happiness and productivity. Their mission is to benefit society by advancing technology and aim to establish a smart city data-handling and connectivity platform, deploy real-time Al applications on city-wide computing frameworks and set a precedent for open and transparent data handling. Their flagship application is PinPointPark, a parking system capable of navigating a driver directly to a parking space. No more cumbersome payment systems, no more stress looking for a space and built for an autonomous driving future.

OCEAN 3D

Ocean 3D offers a full High Definition (HDR), 3D, fully immersive showcase of locations, such as airports and commercial properties. This immersive experience will show you or your clients a true sense of being in the room, and will create a desire to experience it for real.

Based in Cornwall, Ocean 3D scans the property with their Matterport system, enabling a more seamless experience. They serve many industries, including space, aerospace and construction.

DATA



hellommyrj.co.uk ivstitia.co.uk

IVSTITIA LTD

Ivstitia Ltd has developed a high-quality, accessible and secure system that supports the secure transit of special category data across multiple agencies, which promotes multi-partnership working and collaboration. Combining over 30 years' experience working with victims, offenders, police, probation, courts and schools, we are able to provide a well-thought-out plethora of secure systems.



mike@nowthen.uk nowthen.uk

NOW & THEN

Now & Then is a mobile application which triggers via GPS or Bluetooth when the user is close to historical places of interest. Uniquely tailored to each user, the app provides guided tours relevant to what they choose to react with. Not just for inside of attractions, or walks, the app can be used across the borders of local attractions and history.

These guided tours are easily created by venues, including attractions, museums, art galleries – in fact any place of interest – using Now & Then's free creation tools. The venue is able to use their pre-existing content or create something brand new for the user.

The aim of the app is to increase footfall in existing historical or heritage places of interest whist still obtaining revenue.

52. 53.



spacechain.com/contact/

SPACE CHAIN

Founded in 2017, SpaceChain is building an open and neutral infrastructure for the New Space Economy by integrating space and blockchain technologies. Our vision is to remove barriers and allow a global community to access and collaborate in space.



SIMSAGE

SimSage offers a fully customisable and configurable AI to automate your website customer interactions. By automating fast and relevant answers to customers' most common queries, in simple-to-understand language, the customers' experience is enhanced. This allows your staff to respond faster to more complex customer issues, improving customer satisfaction and retention.

SimSage solutions are tailored to industries or even companies, as required, recognising industry-specific terms, including commonly used acronyms and abbreviations. SimSage solutions use the proprietary and innovative SimSage Artificial Intelligence platform containing machine learning and context-specific search technologies.

info@simsage.nz simsage.nz

DATA



wo@hi9.io

HI9

Hi9 is a Voice UI, NLP and AI design agency that builds Audio Digital Assistants that work in Extreme and Industrial Environments. Our technologies provide a more efficient, accurate and safe approach when it comes to accessing and recording information using voice and Space Communications both off and online.

CONSULTANCY SERVICES



contactafootanstey.com footanstey.com

FOOT ANSTEY

Foot Anstey LLP is a fast-growing UK Top 100 law firm, with a strong presence in the South West. Through a network of eight offices from Truro to London, Foot Anstey LLP works as one national team offering specialist legal advice and services to regional, national and international clients, including those in the space sector.



andy.williams@space-professionals.com
space-professionals.com

SPACE PROFESSIONALS

Space Professionals is an independent consultancy providing specialist commercial and technical assistance in the Space Sector.

Founded in Cornwall, UK, we work with Space organisations seeking specialist support and Non-Space companies looking to access the growing space industry.



