



WORLD SATELLITE  
BUSINESS WEEK  
VIRTUAL EDITION

Euroconsult  
Summits

# #WSBW Program

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DIGITAL EDITION

Nov. 9-11, 2020

Connecting the leading decision makers from the satellite  
communications and information sectors

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# WELCOME NOTE

Welcome to this special session of the Euroconsult World Satellite Business Week, a virtual edition of the unique annual executive meeting place for leaders of the global satellite communications and information business.

This year's crisis has provoked some profound changes in our economies, the way we work and live. Satellite based services have contributed and are still contributing innovative technology and invaluable services to support many governments, private sector organizations and ultimately people all around the world during this pandemic.

So much has occurred since the WSBW community last met in Paris in September 2019. The COVID-19 pandemic arrived in the middle of a transition cycle for the satellite communications industry and has undoubtedly burdened many in our sector with unwanted challenges, but also accelerated the industry's transformation and driven industry leaders to rethink business models. The pandemic and changes in the ecosystem have also challenged specific vertical markets including maritime and inflight connectivity services and traffic. Meanwhile, the Earth observation data and services market, sustained by government funding, has navigated the health crisis and should find new support for growth in the upcoming deployment of sensors and cloud applications.

Euroconsult's World Satellite Business Week has been taking place every year since 1997.

Each year, the event brings together top leaders of the satellite sector including CEOs of major satellite operators, service providers and analytics companies, manufacturers, launch providers, as well as policy makers, government and private sector users.

Traditionally, the event provides a week-long opportunity to meet in Paris for engaged discussions, an agenda fully packed with meetings, networking sessions and events. Due to the COVID-19 pandemic, for the first time in years, it was not possible to physically meet and Euroconsult decided to move the entire event online.

Our team is proud to offer this new virtual experience, led by a strong program of top-level guests that remains true to the DNA of our usual event. We are confident that you will find it engaging and insightful. Inevitably, the event will follow a slightly altered template. The three-day program will take place over two stages with sessions on different topics running in parallel. We have also worked to integrate and facilitate networking between participants within the platform and hope you will have the opportunity to take advantage of that.

Lastly but by no means least, we would like to thank all the participants and especially our many great sponsors.

Lorraine Whitfield  
Chief Events and Marketing Officer Euroconsult

# PROGRAM AT A GLANCE

## Monday, November 9

Stage #1	Stage #2
<b>13:30 / 14:00</b> Opening remarks Welcome to the new satcom world	<b>13:30 / 14:00</b> Opening remarks Welcome to the new satcom world
<b>14:00 / 14:35</b> Investment Strategies in a Pandemic Paradigm	<b>14:00 / 14:45</b> Enterprise, cloud, AI: Building the next gen satellite experience
<b>14:35 / 14:45</b> Finspace Startup Pitch	<b>14:45 / 15:45</b> Global satellite businesses: A new world?
<b>14:45 / 15:45</b> Global satellite Businesses: A new world	<b>15:45 / 16:00</b> Break
<b>15:45 / 15:55</b> Break	<b>16:00 / 16:50</b> Universal Access: Even more required during and after the COVID-19 crisis?
<b>15:55 / 16:15</b> In discussion with BAKTI	<b>16:50 / 17:00</b> Finspace Startup Pitch
<b>16:15 / 17:15</b> Delivering access to space: New options, new models	<b>17:00 / 17:15</b> Break
<b>17:15 / 17:30</b> Break	<b>17:15 / 17:45</b> Connectivity at sea: CEOs' views on this evolving business
<b>17:30 / 18:30</b> Satellite manufacturing: COVID-19, C-band, flex sats, constellations = The new normal?	<b>17:45 / 18:45</b> IFC: Through and beyond the storm
<b>18:30 / 18:40</b> Day closing	<b>18:45 / 18:55</b> Day closing

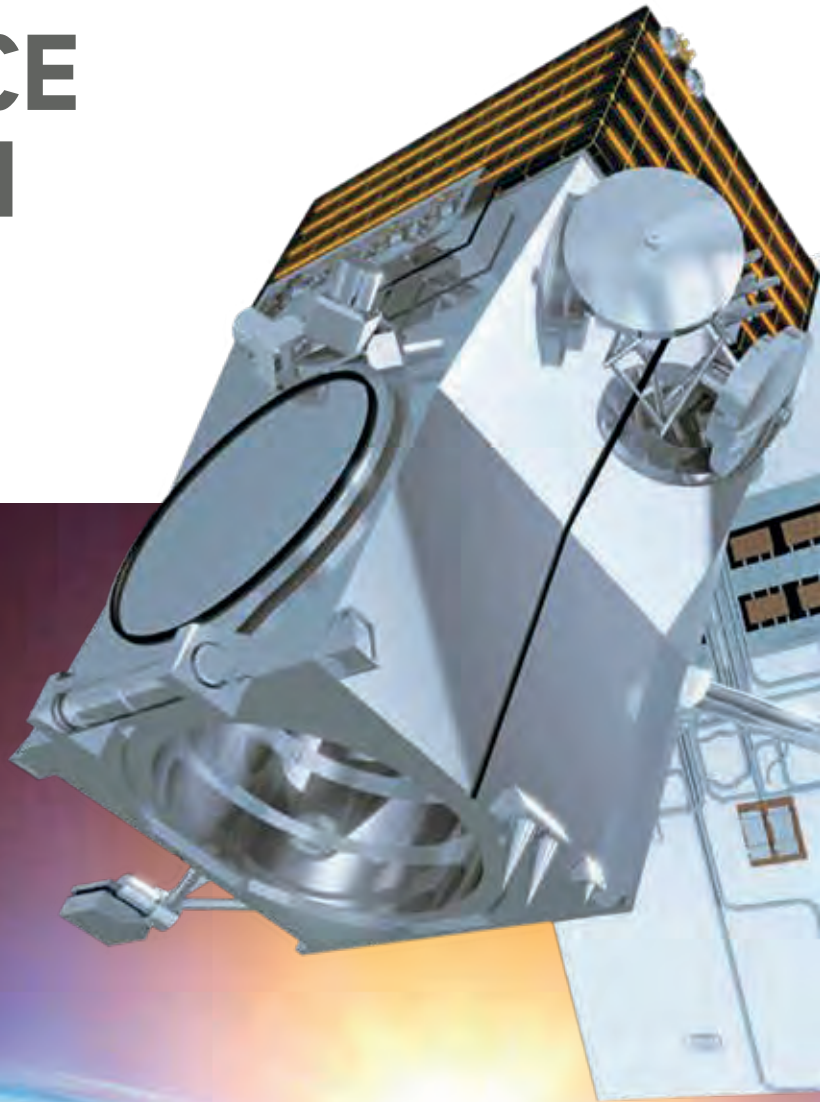




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# MAXAR

Explore Maxar at work in space [maxar.com](https://maxar.com)

# PROGRAM AT A GLANCE

## Tuesday, November 10

Stage #1	Stage #2
<b>13:30 / 13:45</b> Virtual welcome & Official Partners' videos	<b>13:30 / 13:45</b> Virtual welcome & Official Partners' videos
<b>13:45 / 14:00</b> In discussion with AXA XL	<b>13:45 / 14:00</b> Prospects for the Earth Observation business
<b>14:00 / 14:40</b> Maintaining leadership: CEOs from key operators crossing views	<b>14:00 / 14:45</b> A world in crisis: The value of Earth intelligence
<b>14:40 / 15:00</b> In discussion with EXIM	<b>14:45 / 15:00</b> In discussion with Antrix Corporation
<b>15:00 / 15:15</b> Break	<b>15:00 / 15:15</b> Break
<b>15:15 / 15:25</b> Finspace Startup Pitch	<b>15:15 / 16:00</b> Permanency, low latency: New disruptions in the EO business?
<b>15:25 / 16:00</b> Constellations: Upcoming milestones	<b>16:00 / 16:30</b> The new radar market - getting closer on the radar screen
<b>16:00 / 16:30</b> Ground segment: Innovation, consolidation and much more	<b>16:30 / 16:45</b> Break
<b>16:30 / 16:45</b> New models for space enterprises	<b>16:45 / 16:55</b> Finspace Startup Pitch
<b>16:45 / 17:00</b> Break	<b>16:55 / 17:15</b> In discussion with Venture Capital Funds
<b>17:00 / 18:00</b> The Smallsats revolution: Innovation, differentiation, value creation?	<b>17:15 / 18:00</b> Ground segment & data management: The new value proposition
<b>18:00 / 19:00</b> Satellite IoT: Condemned to grow?	<b>18:00 / 19:00</b> Satellite IoT: Condemned to grow?
<b>19:00 / 19:20</b> Euroconsult WSBW Awards Announcements & SSF Closing	<b>19:00 / 19:20</b> Euroconsult WSBW Awards Announcements & Closing remarks





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# PROGRAM AT A GLANCE

## Wednesday, November 11

Stage #1	Stage #2
<b>13:45 / 14:00</b> Virtual welcome & Official Partners' videos	<b>13:30 / 13:45</b> Virtual welcome & Official Partners' videos
<b>14:00 / 14:45</b> EO satellites: Next frontiers for leading manufacturers	<b>13:45 / 14:00</b> In focus Copernicus @DG Defis
<b>14:45 / 15:00</b> In discussion with the Canadian Space Agency	<b>14:00 / 14:45</b> Data fusion and interoperability enhancing maritime awareness
<b>15:00 / 15:15</b> Break	<b>14:45 / 15:00</b> In discussion with the Brazilian Space Agency
<b>15:15 / 15:25</b> Finspace Startup Pitch	<b>15:00 / 15:15</b> Break
<b>15:25 / 16:15</b> Defense and security: Upcoming capabilities for the decade	<b>15:15 / 16:00</b> In focus: Servicing the insurance community
<b>16:15 / 16:30</b> In discussion with the Royal Centre for Remote Sensing	<b>16:00 / 16:45</b> From policy to action - tackling food security with EO
<b>16:30 / 16:45</b> Break	<b>16:45 / 17:00</b> In discussion with the IFC - International Financial Corporation
<b>16:45 / 17:00</b> In discussion with the European Space Agency	<b>17:00 / 17:10</b> Finspace Startup Pitch
<b>17:00 / 18:00</b> New value creation through AI and next gen solutions	<b>17:10 / 18:00</b> Precision agriculture - Enhancing value creation
<b>18:00 / 18:20</b> Euroconsult WSBW Awards Announcements & Closing remarks	<b>18:00 / 18:20</b> Euroconsult WSBW Awards Announcements & Closing remarks



# FINSPACE

Bringing entrepreneurs/startups  
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FinSpace is a pitch competition for space tech startups to promote some of the most promising companies of the industry. The competition enables entrepreneurs, decision

makers and financiers from the entire global satellite industry to discuss, network, seek out future partnerships, facilitate industrial deployment and international expansion.

## The jury



**Jean-Jacques Dordain**

Member of Advisory Board  
SpaceResources.lu



**Pacôme Révillon**

CEO  
Euroconsult



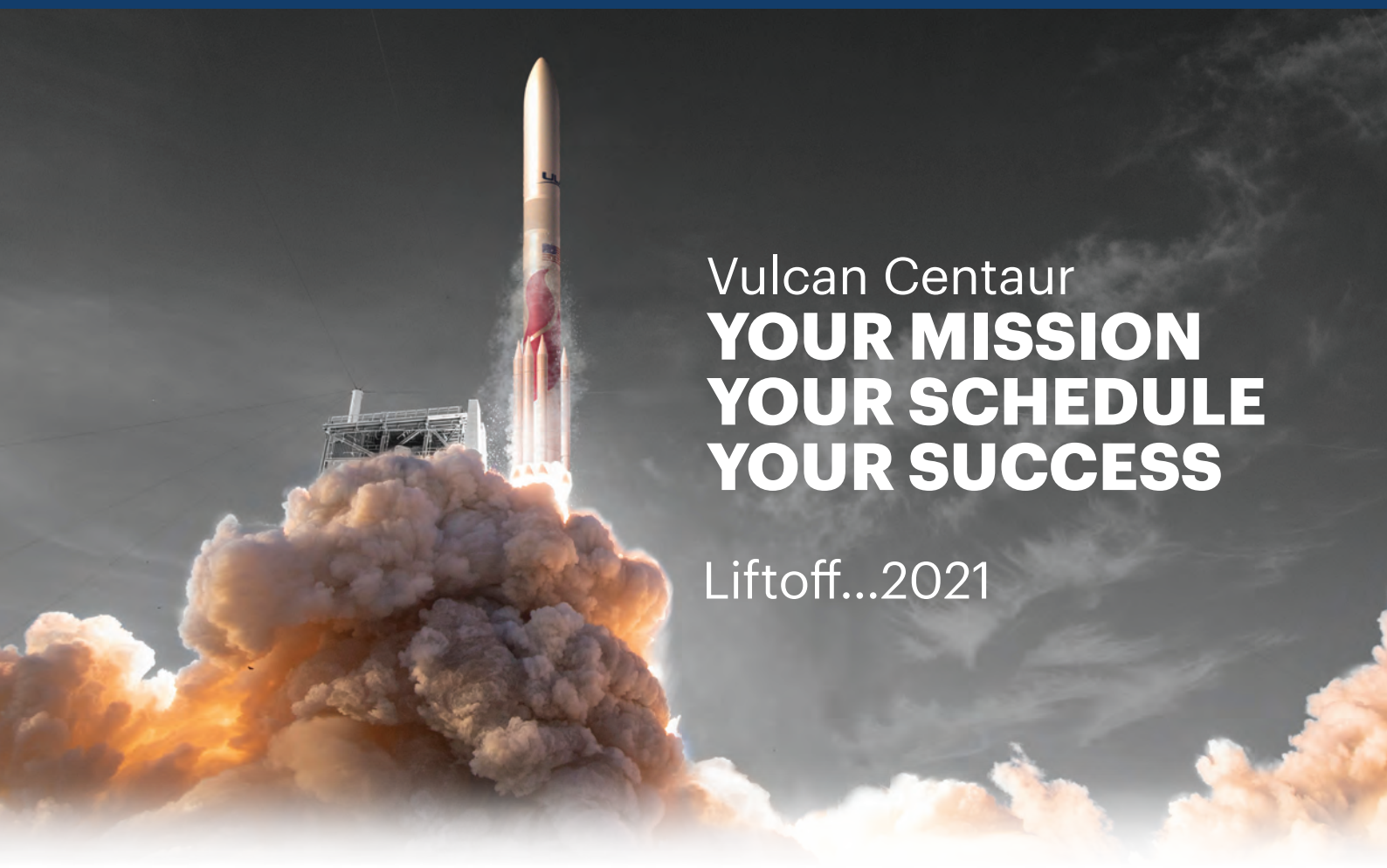
**Mark Boggett**

CEO  
Seraphim Capital



**Craig Clark**

Founder & Chief Strategy Officer  
AAC Clyde



Vulcan Centaur  
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# FINSPACE

## The selected startups



Greenerwave's ambition is to unlock the full potential of Satellite Communication, and to make seamless connectivity a reality. Coming from the physics of wave control and the best academic lab, Greenerwave is disrupting the beamforming concept. Greenerwave introduces a software defined antenna, using off the shelf electronics and discrete components to control the beam: no custom ICs, no exotic materials, no complex industrial process. Greenerwave achieves the speed and precision of electronics, at the price of mechanical. Versatile, the potential is limitless, from ultra-high performance with Aero multi panel systems to few 100\$ consumer broadband terminals.



Kythera Space Solutions is the leading provider of dynamic management systems for next generation satellite payloads and SATCOM networks. Kythera's software solutions manage and optimize your satellite resources along with your ground-based assets, providing fully autonomous, real-time space network provisioning and operations that take full advantage of today's flexible, high-throughput satellites.



Since late 2015, LyteLoop has been perfecting our proprietary, patent pending photonic method of data storage which puts data in a constant state of perpetual motion. Achieved through the use of ultra-high bandwidth lasers, data now moves in an endless circulating loop. LyteLoop's revolutionary "storage in motion" technique will transform how data is stored while providing a myriad of unique and customizable advantages based on the desired LyteLoop application deployed. LyteLoop now makes it possible to harness the power of light to store huge amounts of data in spaced based Hyperscale Data Centers.



Satellite Vu is going to launch a small constellation of thermal infrared satellites, which will gather temperature intelligence into any structure on the planet. We will do this up to 20 times/day at 3.5m resolution. Small structures will be visible enabling new and valuable insights into economic activity, energy efficiency and maritime activity. This will enable better business decisions.



Sofant Technologies Ltd is a highly innovative technology company which was incorporated in 2011 to commercialize researched and developed work which began at the University of Edinburgh in 2006. Sofant's inherently low cost, low power and high performance smart antenna™ technology is being applied to develop innovative solutions which help its customers reduce the cost and complexity of leading edge RF system design.



Historically, global navigation satellite systems (GNSS) have been \$10 billion+ government-controlled behemoths designed largely to serve military assets. Xona is turning the GNSS world on its head by leveraging the existing GNSS infrastructure and falling costs in the new space ecosystem to develop a Low Earth Orbit constellation of small but powerful satellites that will provide a new generation of satellite navigation and timing services. Xona's services will provide a cost-effective solution to future transportation methods for safe and reliable navigation, allowing them to operate in any conditions, anywhere on earth.

# A PIVOTAL YEAR FOR THE SATCOM ECOSYSTEM

The satcom industry's transformation and the revisiting of business models is being accelerated by the impact of the COVID-19 outbreak.

The satcom market has seen an unprecedented number of exceptional events in the course of 2020. A non-exhaustive list includes:

- The conjunction of bankruptcy and subsequent debt restructuring and/or acquisition process of companies such as Intelsat, OneWeb, Speedcast, Global Eagle and Phasor;
- The C-band reallocation process agreement in the US, which opened the door to compensations of close to \$10 billion for satellite operators, and has triggered the procurement of 13 geostationary satellites and 6 launches to date; and
- The launch, to date, of close to 1,000 satellites by SpaceX for its Starlink constellation.

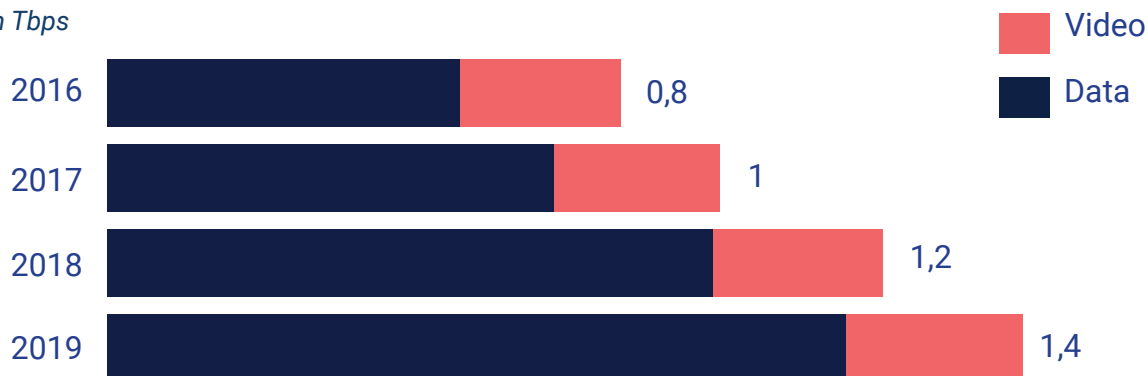
While certain events were expected to take place over time and resulted from pre-existing difficulties of certain companies or from multi-year development efforts, the outbreak undoubtedly accelerated certain decisions. The industry is proving again this year the resilience of the satellite communication activity in periods of crisis. This pandemic is still significantly impacting the short-term dynamics of certain user segments and of their related value chains.



# A PIVOTAL YEAR FOR THE SATCOM ECOSYSTEM

## SATELLITE CAPACITY LEASED

in Tbps



Source : Euroconsult Research  
Satellite Connectivity and Video Market

Recent events are taking place on the back of structural changes in the satellite connectivity business. The shift towards a more data-centric industry will accelerate with the current boost of online professional and personal activities. Last year saw a 17% growth in capacity leased to more than 1.4Tbps, of which around 66% being HTS capacity. While this year shall see a relative slowdown, we anticipate an accelerated growth from 2022 with usage standing over 5Tbps by 2025.

Pressure on capacity pricing remains high, with a continuous alignment in the data market

to the lower end of prices that HTS systems can support. This continues to weigh on the revenues of satellite operators in the near term prior to an expected rebound.

The next two to three years will again be transformational for capacity supply, with the start of services of new constellations and the deployment of both VHTS and “fully” flexible GEO systems. In the meantime, strategies towards a higher vertical integration have accelerated, and will combine with strategic partnerships to provide a seamless experience for cloud-based applications.



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# SUMMIT FOR SATELLITE FINANCING TRACK

Monday, November 9

## 13:30 Opening remarks - Welcome to the new satcom world

- **Lorraine Whitfield**, Chief Events and Marketing Officer, Euroconsult
- **Pacôme Révillon**, CEO, Euroconsult

## 14:00 Investment Strategies in a Pandemic Paradigm

**Moderator:** **Peter Nesgos**, Partner, Milbank

- **Rupert Pearce**, CEO, Inmarsat
- **Clif Marriott**, MD, Head of Cable and Telecom Infrastructure, Europe, Goldman Sachs
- **Jessica Kearns**, Partner, Strategic Advisory Group, PJT Partners
- **Jared Hendricks**, Senior Managing Director, Centerbridge Partners

## 14:35 Finspace Startup Pitch

- **David Wither**, CEO, Sofant Technologies

## 14:45 Global satellite Businesses: A new world

**Moderator:** **Pacôme Révillon**, CEO, Euroconsult

- **Steve Collar**, CEO, SES
- **Rodolphe Belmer**, CEO, Eutelsat
- **Rick Baldrige**, President & CEO, Viasat
- **Steve Spengler**, CEO, Intelsat
- **Pradman P. Kaul**, President & CEO, Hughes Network Systems

## 15:45 Break

## 15:55 In discussion with BAKTI

**Interviewer:** **Pacôme Révillon**, CEO, Euroconsult

- **Kanaka Hidayat**, Technical Advisor Satellite Infrastructure, BAKTI

# SUMMIT FOR SATELLITE FINANCING TRACK

Monday, November 9

## 16:15 Delivering access to space: New options, new models

**Moderator:** Brian Berger, Editor-in-Chief, SpaceNews

- Gwynne Shotwell, President & COO, SpaceX
- Stéphane Israël, Chairman & CEO, Arianespace
- Tiphaine Louradour, President, ILS
- Tory Bruno, President & CEO, United Launch Alliance (ULA)
- Clay Mowry, VP - Sales, Marketing & Customer Experience, Blue Origin
- Ko Ogasawara, Vice President & Senior Chief Engineer, Space Systems Division, Mitsubishi Heavy Industries, Ltd. (MHI)

## 17:15 Break

## 17:30 Satellite manufacturing: COVID-19, C-band, flex sats, constellations = the new normal?

**Moderator:** Steve Bochsinger, COO, Euroconsult

- Jean-Marc Nasr, EVP, Head of Space Systems, Airbus Defence & Space
- Chris Johnson, President, Boeing Satellite Systems International
- Lisa Callahan, VP and General Manager, Commercial Civil Space, Lockheed Martin
- Dan Jablonsky, President & CEO, Maxar
- Hervé Derrey, President & CEO, Thales Alenia Space

## 18:30 Day closing





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# ENTERPRISE CONNECTIVITY & SMARTPLANE TRACK

Monday, November 9

## 13:30 Opening remarks - Welcome to the new satcom world

- **Lorraine Whitfield**, Chief Events and Marketing Officer, Euroconsult
- **Pacôme Révillon**, CEO, Euroconsult

## 14:00 Enterprise, cloud, AI: Building the next gen satellite experience

**Moderator:** **Nathan de Ruiter**, Managing Director Euroconsult Canada, Euroconsult

- **Luigi Pasquali**, CEO, Telespazio
- **Chirag Parikh**, Senior Director, Microsoft Azure Space
- **Scott Mumford**, CEO, Liquid Telecom

## 14:45 Global satellite businesses: A new world?

**Moderator:** **Pacôme Révillon**, CEO, Euroconsult

- **Steve Collar**, CEO, SES
- **Rodolphe Belmer**, CEO, Eutelsat
- **Rick Baldridge**, President & CEO, Viasat
- **Steve Spengler**, CEO, Intelsat
- **Pradman P. Kaul**, President & CEO, Hughes Network Systems

## 15:45 Break

## 16:00 Universal Access: Even more required during and after the COVID-19 crisis?

**Moderator:** **Gregg Daffner**, President, APSCC and CEO, GapSat

- **Renato Goodfellow**, Head of Global Satellite, BT Telecom
- **Mauricio Segovia**, CEO, AXESS Networks
- **Bing Kung**, Extra-Terrestrial Product Manager, Facebook
- **Adi Rahman Adiwoso**, CEO, Pasifik Satelit Nusantara
- **Andrew Walwyn**, CEO, BigBlu Broadband

# ENTERPRISE CONNECTIVITY & SMARTPLANE TRACK

Monday, November 9

16:50 Finspace Startup Pitch

- **Timothee Laurent**, CEO, Greenerwave

17:00 Break

17:15 Connectivity at sea: CEOs' views on this evolving business

**Moderator:** **Brent Prokosh**, Senior Affiliate Consultant, Euroconsult

- **Steven Pickett**, CEO & President, RigNet
- **Martin Kits van Heyningen**, President, CEO & Chairman of the Board, KVH Industries
- **Pradip Jyoti Nath**, Managing Director & CEO, Nelco

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# ENTERPRISE CONNECTIVITY & SMARTPLANE TRACK

Monday, November 9

## 17:45 IFC: Through and beyond the storm

**Moderator:** David Bruner, CEO, Aviation Communications Advisors

- **Quentin Couturier**, Head of BFE & Contracts, Etihad Airways
- **Tal Kalderon**, Head of InFlight Entertainment & Connectivity, El Al Israel Airlines
- **Eric Peyrucain**, Digital Transformation Leader, Airbus
- **Jeff Sare**, Vice President, Connectivity Solutions, Panasonic Avionics Corporation
- **Don Buchman**, Vice President Commercial Mobility, Viasat
- **Gustavo Nader**, Head of Strategy, IFEC, Thales Group

## 18:45 Day closing



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# PIVOTAL YEAR FOR INFLIGHT CONNECTIVITY

The pandemic put a halt to the rise of IFC services and traffic. This year has seen major changes in the ecosystem that affect the next stage in the inflight broadband experience.

Inflight connectivity had reached a new high in early 2020 with 110 “connected” airlines. The current pandemic has however resulted in a dramatic reduction in air traffic.

This crisis has had a domino effect on the ecosystem. Airlines have taken strong measures to adapt their fleet and organizations, with a direct impact on OEMs and the entire aircraft supply chain. In the IFC ecosystem, all service providers have had to adapt or restructure. This has involved a revisit of agreements with operators and antenna and modem suppliers.

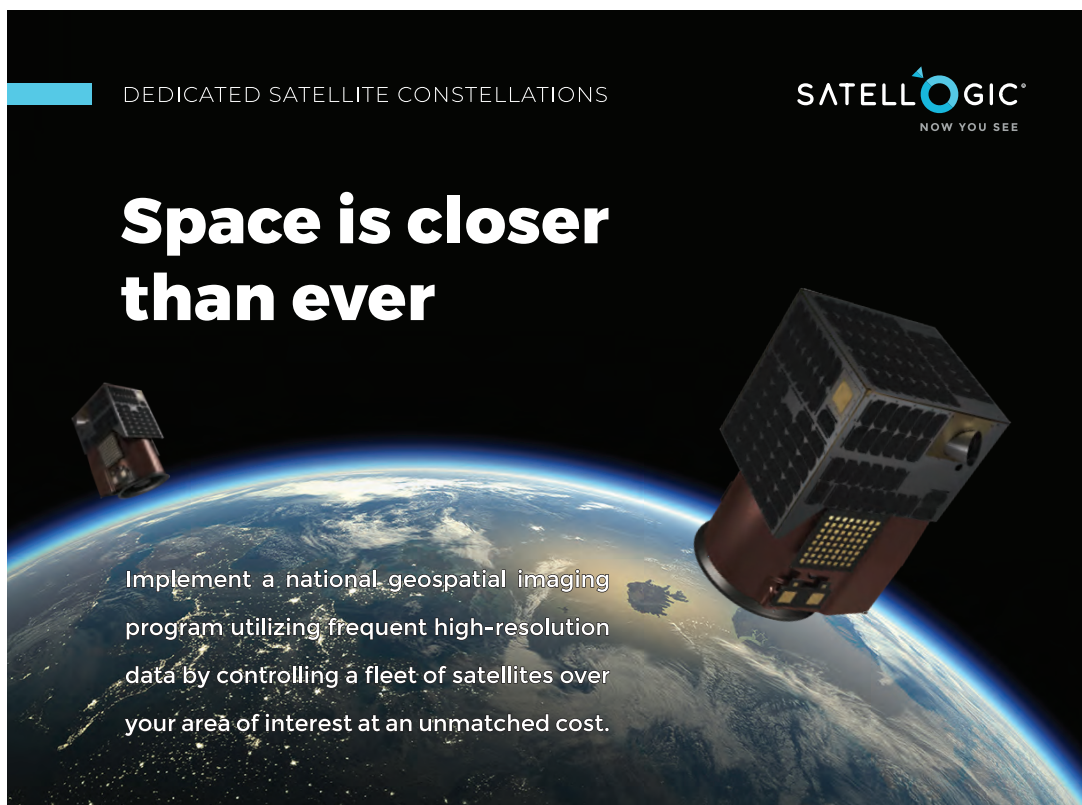
The crisis is far from over. Nevertheless, the ambition of airlines to offer a broadband experience still stands. This calls for a new level in the optimization of bandwidth costs, equipment and services. The deployment of next-generation systems in all orbits, the design of new solutions should all contribute to a new developmental phase. Strategic issues will include the timing and level of rebound in air traffic, and the time needed for new solutions to reach an appropriate maturity level. The recent partnership between Inmarsat and Hughes, and the transaction between Intelsat and Gogo,

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# PIVOTAL YEAR FOR INFLIGHT CONNECTIVITY

certainly stand out in that overall industry roadmap. Compared to the more than 9k connected aircraft of 2019, and following a low in 2020 and potentially 2021, we still anticipate

that 12k to 16k aircraft should be connected by 2025, with broadband representing a must-have in the inflight experience.

## A SNAPSHOT OF THE IFC MARKET At YE 2019

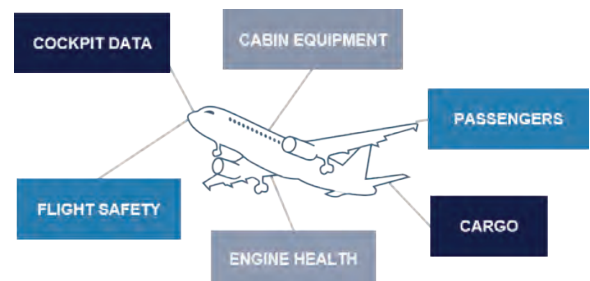
**110+**  
airlines offering IFC



**> 9,000**  
aircraft with IFC  
onboard

Source : Euroconsult Research  
Prospects for In-Flight Entertainment & Connectivity

## THE SMARTPLANE APPLICATIONS



Source : Euroconsult Research  
Prospects for In-Flight Entertainment & Connectivity

POWERING A

# CONNECTED FUTURE

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# SUMMIT FOR SATELLITE FINANCING TRACK

## Tuesday, November 10

### 13:30 Virtual welcome & Official Partners' videos

- **Lorraine Whitfield**, Chief Events and Marketing Officer, Euroconsult

### 13:45 In discussion with AXA XL

**Interviewer:** **Rachel Villain**, Principal Advisor, Euroconsult

- **Dominique Rora**, Head of Space Underwriting, AXA XL, a division of AXA

### 14:00 Maintaining leadership: CEOs from key operators crossing views

**Moderator:** **Peter De Selding**, Co-Founder, Chief Editor, Space Intel Report

- **Miguel Ángel Panduro**, CEO, Hispasat
- **Richard Franklin**, UK Managing Director, Airbus Defence and Space
- **Masood M. Sharif Mahmood**, CEO, Yahsat

### 14:40 In discussion with EXIM

**Interviewer:** **Brent Prokosh**, Senior Affiliate Consultant, Euroconsult

- **Stephen M. Renna**, Chief Banking Officer, Export-Import Bank of the United States

### 15:00 Break

### 15:15 Finspace Startup Pitch

- **Jeffrey Freedman**, CEO, Kythera Space Solutions

### 15:25 Constellations: Upcoming milestones

**Moderator:** **Nathan de Ruiter**, Managing Director Euroconsult Canada, Euroconsult

- **Matthew J. Desch**, CEO, Iridium
- **Jonathan Hofeller**, Vice President of Starlink & Commercial Sales, SpaceX
- **Stewart Sanders**, EVP Technology, O3b mPower Program Lead, SES Networks
- **Michael Schwartz**, SVP, Corporate & Business Development, Telesat



# SUMMIT FOR SATELLITE FINANCING TRACK

## Tuesday, November 10

### 16:00 Ground segment: Innovation, consolidation and much more

**Moderator:** Brent Prokosh, Senior Affiliate Consultant, Euroconsult

- Kevin Steen, CEO, ST Engineering iDirect
- Alexander Mueller-Gastell, CEO, ND SatCom
- Phil Carrai, President, Space, Training & Cyber Division, Kratos
- Ron Levin, Vice-President Mobility & Global Accounts, Gilat Satellite Networks

### 16:30 New models for space enterprises

**Interviewer:** Rachel Villain, Principal Advisor, Euroconsult

- Lon Levin, President & CEO, GEOShare

### 16:45 Break

### 17:00 The Smallsats revolution: Innovation, differentiation, value creation?

**Moderator:** Natalia Larrea Brito, Principal Advisor, Euroconsult

- Sir Martin Sweeting, Executive Chairman, SSTL
- Dan Hart, President & CEO, Virgin Orbit
- Giulio Ranzo, CEO, Avio
- Alexander Serkin, CEO, GK Launch Services
- Mikhail Kokorich, CEO, Momentus

### 18:00 Satellite IoT: Condemned to grow?

**Moderator:** Stéphane Chenard, Senior Associate Consultant, Euroconsult

- Alexandre Tisserant, CEO, Kinéis
- Luc Perard, SVP, IoT Business, Eutelsat
- Mina Mitry, CEO, Kepler Communications
- Erik Wienk, Managing Director, Hiber
- Fabien Jordan, Founder & CEO, Astrocast
- David Gelerman, President & CEO, SpaceBridge

### 19:00 Satcom & Finspace Awards Announcement & Summit for Satellite Financing Closing

- Pacôme Révillon, CEO, Euroconsult
- Lorraine Whitfield, Chief Events and Marketing Officer, Euroconsult



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# SUMMIT ON EARTH OBSERVATION BUSINESS TRACK

Tuesday, November 10

## 13:30 Virtual welcome & Official Partners' videos

- **Alexandra Jercaianu**, Project Manager, Euroconsult

## 13:45 Prospects for the Earth Observation business

- **Pacôme Révillon**, CEO, Euroconsult

## 14:00 A world in crisis: The value of Earth intelligence

**Moderator:** **Pacôme Révillon**, CEO, Euroconsult

- **François Lombard**, Director of Intelligence Business, Airbus Defence & Space
- **Tony Frazier**, EVP, Global Field Operations, Maxar
- **Paolo Minciaccchi**, CEO, e-GEOS

## 14:45 In discussion with Antrix Corporation

**Interviewer:** **Steve Boehinger**, COO, Euroconsult

- **Rakesh Sasibhushan**, Chairman & Managing Director, Antrix Corporation

## 15:00 Break

## 15:15 Permanency, low latency: New disruptions in the EO business?

**Moderator:** **Adam Keith**, Affiliate Principal Advisor, Euroconsult

- **Emiliano Kargieman**, Founder & CEO, Satellogic
- **Benoît Deper**, Founder & CEO, Aerospacelab
- **Ryan Hartman**, President & CEO, WorldView
- **Yuya Nakamura**, CEO, Axelspace Corporation

## 16:00 The new radar market - getting closer on the radar screen

**Moderator:** **Damien Garot**, Managing Partner, Jansky Partners

- **Payam Banazadeh**, CEO & Co-Founder, Capella Space Corp.
- **Rafal Modrzewski**, CEO & Co-Founder, ICEYE
- **Adam Maher**, CEO & Founder, Ursa Space Systems
- **Motoyuki Arai**, Founder & CEO, Synspec



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## SUMMIT ON EARTH OBSERVATION BUSINESS TRACK

Tuesday, November 10

16:30 Break

16:45 Finspace Startup Pitch

- **Ohad Harlev**, CEO, LyteLoop

16:55 In discussion with Venture Capital Funds

**Interviewer:** **Alexis M. Sainz**, Special Counsel, Milbank

- **Maria Lundqvist**, Innovation Finance Advisor, European Investment Bank (EIB)
- **Matt O'Connell**, Operating Partner, Data Collective Venture Capital (DCVC)



# SUMMIT ON EARTH OBSERVATION BUSINESS TRACK

Tuesday, November 10

## 17:15 Ground segment & data management: The new value proposition

**Moderator:** Maxime Puteaux, Principal Advisor, Euroconsult

- Rolf Skatteboe, CEO, Kongsberg Satellite Services
- John Williams, VP, RTE, Viasat
- Bill Carlin, Senior Manager, Amazon Web Service Ground Station
- Alfonso Barreiro, Head of Business Development SaMS, SSC - The Swedish Space Corporation
- Giovanni Pandolfi, Co-Founder & CTO, Leaf Space

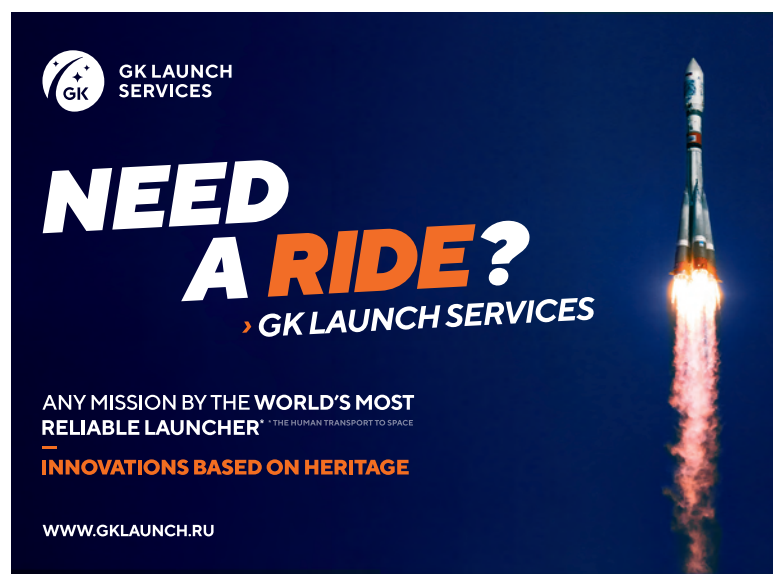
## 18:00 Satellite IoT: Condemned to grow?

**Moderator:** Stéphane Chenard, Senior Associate Consultant, Euroconsult

- Alexandre Tisserant, CEO, Kinéis
- Luc Perard, SVP, IOT Business, Eutelsat
- Mina Mitry, CEO, Kepler Communications
- Erik Wienk, Managing Director, Hiber
- Fabien Jordan, Founder & CEO, Astrocast
- David Gelerman, President & CEO, SpaceBridge

## 19:00 Satcom and Finspace Awards Announcements & Closing remarks

- Pacôme Révillon, CEO, Euroconsult
- Lorraine Whitfield, Chief Events and Marketing Officer, Euroconsult





# THE EO INDUSTRY ON THE EVE OF A NEW GROWTH PHASE?

Sustained demand by governments enables the industry to navigate through the impacts of the current sanitary crisis. The upcoming deployment of new sensors and cloud applications should support growth.

The Earth observation market, combining data and value-added services, reached around \$4.6 billion last year. Available figures suggest a new growth in 2020 despite the impact of the COVID-19 outbreak. Demand from government customers remains strong, with the renewal and expansion of defence contracts and the new budget decisions for the Copernicus program in Europe.

The true impact of the outbreak on demand dynamics remains uncertain, with many verticals being heavily impacted. Delays in the manufacturing and launch process of certain satellite systems are also likely.

The deployment of new sensors is getting closer following multi-year development efforts. Both Airbus and Maxar should launch new systems in 2021, while Planet recently completed the deployment of its SkySat constellation. In the meantime, several startup organizations have completed B-rounds of financing, including in the more complex environment of 2020. It should enable the deployment of their first assets into orbit and the start of their services. HAPS programs are also progressing with the rollout of different trials.

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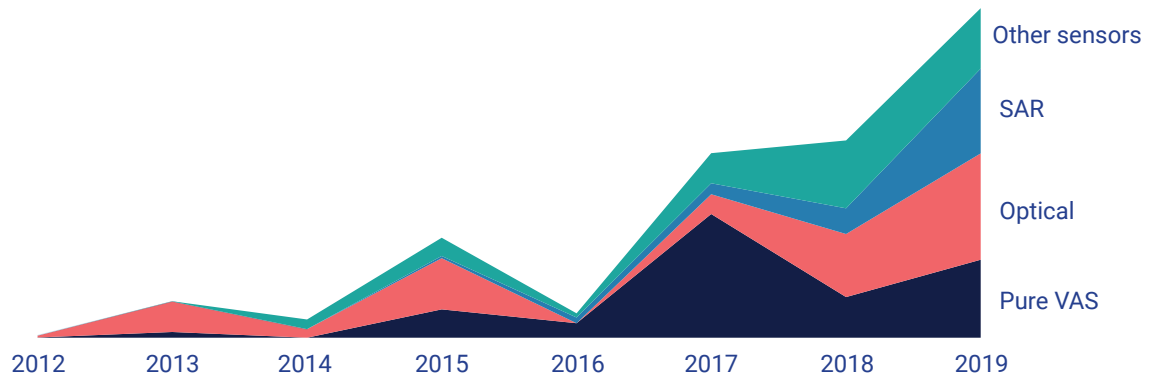
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# THE EO INDUSTRY ON THE EVE OF A NEW GROWTH PHASE?

## FUNDRAISING FOR EO STARTUP COMPANIES in \$B



Source : Euroconsult Research  
Earth Observation Data & Services Market

New sensors shall bring new competition as well as brand-new capabilities, either in terms of cost efficiency, revisit capability, or in terms of frequency bands being covered. New radar programs should, for example, contribute to transforming this industry segment where a relative data scarcity used to be the norm. Recent announcements by Microsoft, with the launch of its Azure Orbital program, and by AWS, with the expansion of its network of ground stations, come together with the expansion of cloud offerings by all operators. The ecosystem of value-added service providers remains heavily fragmented, with strategic agreements between

operators and VAS companies announced on a regular basis. Startup companies focusing on the development of new generation services have passed different milestones, while the reach of a critical size remains an objective for most of them. Business models shall continue to evolve, with the global offering combining the delivery of data, services, as well as the supply of software, platforms and/or ground equipment. Subscription models shall take a higher importance, with a reported increase in the number of subscribers of these still-recent offerings.

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# SUMMIT ON EARTH OBSERVATION BUSINESS TRACK

Wednesday, November 11

## 13:45 Virtual welcome & Official Partners' videos

- **Lorraine Whitfield**, Chief Events and Marketing Officer, Euroconsult

## 14:00 EO satellites: Next frontiers for leading manufacturers

**Moderator:** **Rachel Villain**, Principal Advisor, Euroconsult

- **Philippe Pham**, Head of Earth Observation, Navigation & Science, Airbus Defence & Space
- **Massimo Comparini**, Deputy CEO ESVP Observation Exploration Navigation, Thales Alenia Space
- **Paul Estey**, Executive Vice President of Customer Relations and Special Advisor to the CEO, Maxar
- **Christopher A. Lentz**, Systems Engineering & Integration Fellow, Lockheed Martin Commercial Civil Space

## 14:45 In discussion with the Canadian Space Agency

**Interviewer:** **Nathan de Ruiter**, Managing Director Euroconsult Canada, Euroconsult

- **Eric Laliberté**, Director General, Space Utilization, Canadian Space Agency (CSA)

## 15:00 Break

## 15:15 Finspace Startup Pitch

- **Brian Manning**, CEO, Xonaspace

## 15:25 Defense and security: Upcoming capabilities for the decade

**Moderator:** **Simon Seminari**, Principal Advisor, Euroconsult

- **Major-General Odd-Harald Hagen**, Head of the Department of Defence Policy and Long Term Planning, Norway Ministry of Defense
- **Ambassador Sorin Ducaru**, Director, European Union Satellite Centre
- **Dirk Vande Ryse**, Director of Situational Awareness and Monitoring Division, Frontex



# SUMMIT ON EARTH OBSERVATION BUSINESS TRACK

Wednesday, November 11

16:15 In discussion with the Moroccan Royal Centre for Remote Sensing

**Interviewer:** Steve Boehinger, COO, Euroconsult

- Driss El Hadani, Director, CRTS, Royal Centre for Remote Sensing

16:30 Break

16:45 In discussion with the European Space Agency

**Interviewer:** Simon Seminari, Principal Advisor, Euroconsult

- Giuseppe Borghi, Head of Φ-lab, Earth Observation Programmes Directorate, European Space Agency (ESA)

17:00 New value creation through AI and next gen solutions

**Moderator:** Stéphane Chenard, Senior Associate Consultant, Euroconsult

- Antoine Rostand, CEO, Kayros
- Gareth Morgan, CEO, Terrabotics
- Philip Briscoe, COO, Rezatec
- Stéphane Germain, CEO, GHGSat
- Ryan McKinney, Head of Data Strategy and Partnerships, Descartes Labs
- Steven Hamburg, Chief Scientist, Environmental Defence Fund

18:00 EO and Finspace Awards Announcements & Closing remarks

- Pacôme Révillon, CEO, Euroconsult
- Lorraine Whitfield, Chief Events and Marketing Officer, Euroconsult



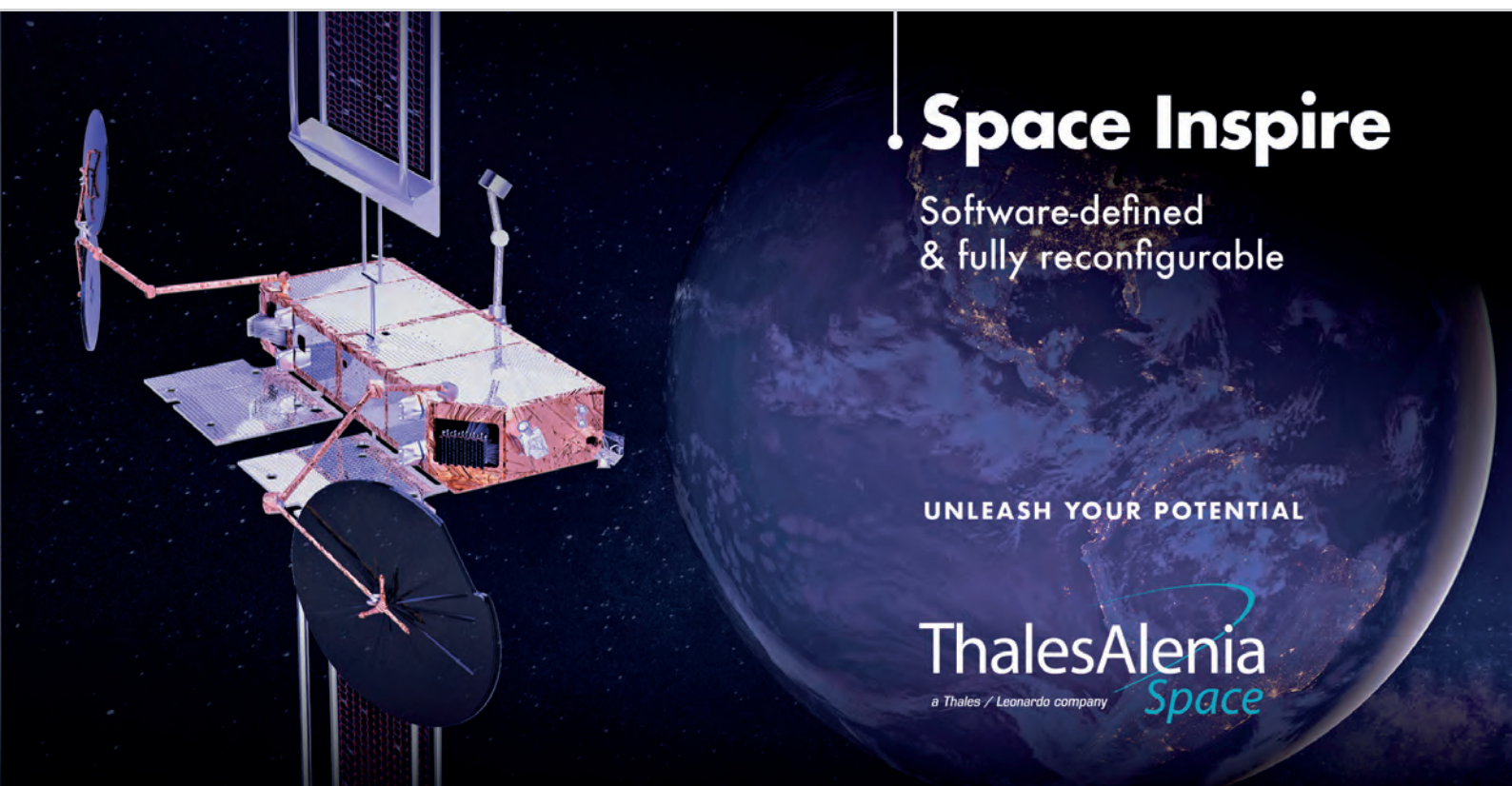
# ENHANCING VALUE CREATION THROUGH THE AGRICULTURE VALUE CHAIN

Next generation services should address the entire ecosystem. Supporting decision making will be about analytics, services, but also connectivity and dissemination.

Earth observation data and services have contributed to the progress of agriculture for many years. Still, the current market value of EO solutions, at close to \$500 million, represents no more than 6% of what we consider as the addressable market.

While the value of EO for governments and agricultural policies is well established, the coming years should focus on the rollout of a new value proposition to the entire ecosystem involved in agriculture production, processing, trading and retail.

Crop health and crop yield will be two focus areas. Considering the yield component, and while both yield improvement and yield estimation have importance to the grower, being able to estimate yield has significance across the supply chain of the overall Agri-Food business.



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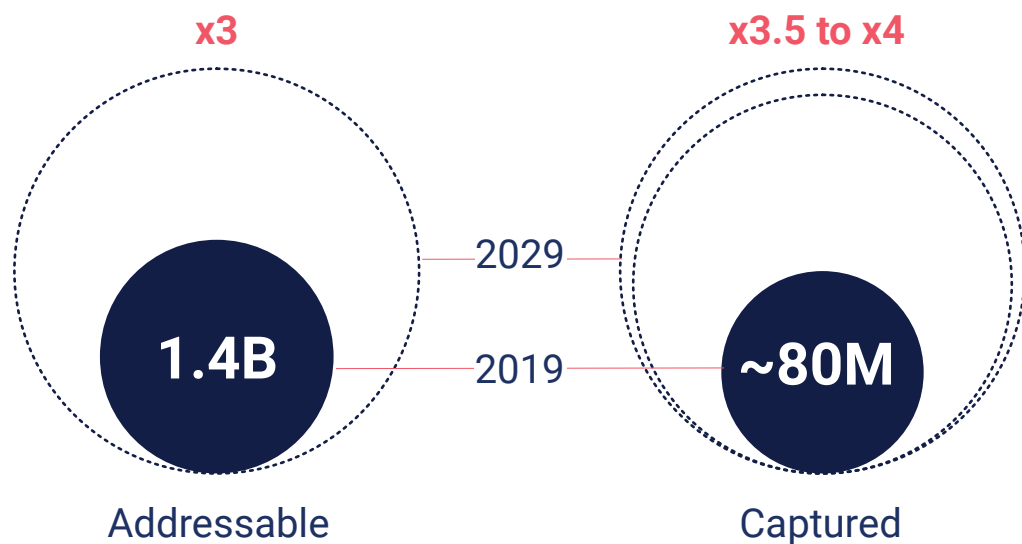
# ENHANCING VALUE CREATION THROUGH THE AGRICULTURE VALUE CHAIN

Agriculture is at the forefront of several new EO constellation and service companies' business plans. One of the objectives is to provide the "right data" at the "right time". Just as important, however, is how services will be provided to the agricultural sector. This shall require both the improvement in service platforms, the setup of partnerships through the ecosystem, and an improvement of connectivity options in rural

area, to facilitate the delivery of live data to and from the fields.

We expect that the focus innovation and value creation should enable the Agri EO market value to at least double in size by 2029, with further upside potential to realize.

## PRECISION AGRICULTURE EO MARKET in USD



Source : Euroconsult Research  
Earth Observation for Agriculture

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# SUMMIT ON EARTH OBSERVATION BUSINESS AND SMART AGRI TRACK

Wednesday, November 11

## 13:30 Virtual welcome & Official Partners' videos

- **Alexandra Jercaianu**, Project Manager, Euroconsult

## 13:45 In focus Copernicus @DG Defis

**Interviewer:** **Steve Boehinger**, COO, Euroconsult

- **Mauro Facchini**, Head of Earth Observation Unit, DG Defence Industry and Space, European Commission

## 14:00 Data fusion and interoperability enhancing maritime awareness

**Moderator:** **Badia Belkouchi**, Principal Advisor, Euroconsult

- **Pedro Lourenço**, Head of Earth Observation, European Maritime Safety Agency (EMSA)
- **Ami Daniel**, Founder and CEO, Windward
- **John Serafini**, CEO, HawkEye 360
- **Nadia Maaref**, Director, Maritime Surveillance Business Unit, CLS Group

## 14:45 In discussion with the Brazilian Space Agency

**Interviewer:** **Steve Boehinger**, COO, Euroconsult

- **Carlos Moura**, President, Brazilian Space Agency (AEB)

## 15:00 Break

## 15:15 In focus: Servicing the insurance community

**Moderator:** **Emmanuel Pajot**, Secretary General, European Association for Remote Sensing Companies (EARSC)

- **Gianni Biason**, Head Property & Specialty Solutions, Swiss Reinsurance
- **Huu-An Pham**, Head of CYMO, NatCat services by Axa Climate, Axa Climate
- **Dan Ajun**, Chief Actuary, Kin Insurance
- **Laurent Sabatié**, Co-Founder & Executive Director, Skyline Partners



# SUMMIT ON EARTH OBSERVATION BUSINESS AND SMARTAGRI TRACK

Wednesday, November 11

## 16:00 From policy to action - tackling food security with EO

**Moderator:** **Damien Lepoutre**, Vice President AgTech, Land O'Lakes

- **Tassos Haniotis**, Director Strategy, Simplification and Policy Analysis, DG Agriculture, European Commission
- **Robert Tetrault**, Director, International Production Assessment Division (IPAD), Foreign Agricultural Service, USDA
- **Douglas Muchoney**, Head of the Geospatial Unit, Climate, Biodiversity, Land and Water Department, Food and Agriculture Organization of the United Nations (UN FAO)

## 16:45 In discussion with the International Financial Corporation

**Moderator:** **Adam Keith**, Affiliate Principal Advisor, Euroconsult

- **Panos Varangis**, Agricultural Finance and Agricultural Insurance Expert, IFC

## 17:00 Finspace Startup Pitch

- **Anthony Baker**, CEO, SatelliteVu

## 17:10 Precision agriculture - enhancing value creation

**Moderator:** **Clint Graumann**, CEO & Co-Founder, TerraMetric

- **Charles O'Hara**, Digital AgTech Integration Leader, Corteva AgriScience
- **Fiammetta Diani**, Head of Market Development Department, European GNSS Agency
- **Zara Khan**, Director Business Development for Agriculture, Planet
- **Grega Milcinski**, General Manager, Sinergise
- **Ron Osborne**, Chief Technology Officer, FarmersEdge

## 18:00 EO and Finspace Awards Announcements & Closing remarks

- **Pacôme Révillon**, CEO, Euroconsult
- **Lorraine Whitfield**, Chief Events and Marketing Officer, Euroconsult

# GOVERNMENT SPACE PROGRAMS ON EUROCONSULT DIGITAL PLATFORM

Government Space Programs is the first Euroconsult research product hosted on the Digital Platform. The Digital Platform allows clients to view and manipulate data thanks to interactive graphs, and report content is refreshed on a quarterly basis. Government Space Programs is a comprehensive assessment covering 87 countries investing today or tomorrow in space,

with detailed analysis of their space programs and space budgets. Various sources of information are collected by Euroconsult on government space programs and budgets from government agencies' primary information, public sources, and estimates. This information is harmonized and processed to form a coherent set of data. Each country has an in-depth profile.

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Airbus is a global leader in aeronautics, space and related services. In 2019, it generated revenues of € 70 billion and employed a workforce of around 135,000. Airbus offers the most comprehensive range of passenger airliners. Airbus is also a European leader providing tanker, combat, transport and mission aircraft, as well as one of the world's leading space companies. In helicopters, Airbus provides the most efficient civil and military rotorcraft solutions worldwide.



Arianespace uses space to make life better on Earth by providing launch services and solutions for all types of satellites (institutional and commercial) into all orbits. It has orbited more than 740 satellites since 1980, using its family of three launchers, Ariane, Soyuz and Vega, from launch sites in French Guiana (South America) and Baikonur (Central Asia). Arianespace is headquartered in Evry, near Paris, and has a technical facility in Kourou at the Guiana Space Center, Europe's Spaceport in French Guiana, plus local offices in Washington, D.C., Tokyo and Singapore. Arianespace is a subsidiary of ArianeGroup, which holds 74% of its share capital, with the balance held by 15 other shareholders from the European launcher industry.

# WSBW VIRTUAL EDITION OFFICIAL PARTNERS



Space and Launch's global satellite businesses, headquartered in El Segundo, Calif., together make up Boeing's center for all space-borne intelligence systems and government and commercial satellite systems. Boeing offers end-to-end intelligence services and has competency in large-scale systems integration; intelligence, surveillance and reconnaissance systems; and navigation and communication systems. The world's first geosynchronous communications satellite, Syncom II, was built by Boeing and launched in 1963. Since Syncom, the company has delivered more than 300 satellites to more than 50 customers in over 20 countries. All were designed and built in Boeing's satellite manufacturing factory, the world's largest such facility.



Maxar is a trusted partner and innovator in Earth Intelligence and Space Infrastructure. We deliver disruptive value to government and commercial customers to help them monitor, understand and navigate our changing planet; deliver global broadband communications; and explore and advance the use of space. Our unique approach combines decades of deep mission understanding and a proven commercial and defense foundation to deploy solutions and deliver insights with unrivaled speed, scale and cost effectiveness. Maxar's 4,000 team members in 20 global locations are inspired to harness the potential of space to help our customers create a better world.



MILBANK LLP stands alone among global law firms in its commitment to the space and satellite sectors. The Milbank Space Business Group is actively involved, every day, in the commercial space marketplace. Our clients – satellite companies, aerospace manufacturers, financial institutions, teleport operators, users of satellite capacity, and investors in space businesses – benefit from that experience. The Milbank Space Business Group is multidisciplinary, concentrating in: Commercial space industry contracts, Satellite finance, Space insurance and risk management, Regulation of space-related activities, the use of outer space and associated national security matters.



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With more than a century of combined heritage, ULA is the nation's most experienced and reliable launch service provider. ULA has successfully delivered 140 satellites to orbit that aid meteorologists in tracking severe weather, unlock the mysteries of our solar system, provide critical capabilities for troops in the field, deliver cutting-edge commercial services, and enable GPS navigation.



Viasat is a global communications company that believes everyone and everything in the world can be connected. For more than 30 years, Viasat has helped shape how consumers, businesses, governments and militaries around the world communicate. Today, the Company is developing the ultimate global communications network to power high-quality, secure, affordable, fast connections to impact people's lives anywhere they are—on the ground, in the air or at sea.



Based on a 40-year experience, Thales Alenia Space delivers cost-effective solutions for telecommunications, navigation, Earth observation, exploration, science and orbital infrastructures. Governments and private industry rely on us to design satellite-based systems that provide connections and positioning, monitor our planet, enhance management of its resources, explore our Solar System and beyond. Thales Alenia Space sees space as a new horizon, helping to build a better, more sustainable life on Earth. A joint-venture between Thales (67%) and Leonardo (33%), Thales Alenia Space teams up with Telespazio to form the Space Alliance, which offers a complete range of solutions including services.



Avio is a leading international group engaged in the construction and development of space launchers and solid and liquid propulsion systems for space travel. The experience and know-how built up over more than 50 years puts Avio at the cutting-edge of the space launcher sector, solid, liquid and cryogenic propulsion and tactical propulsion. Avio has 5 facilities in Italy, France and France Guyana, employing approx. 900 highly-qualified personnel, 30% involved in research and development. Avio is a prime contractor for the Vega programme and a sub-contractor for the Ariane programme, both financed by ESA.



# WSBW VIRTUAL EDITION PLATINUM SPONSORS



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Blue Origin was founded in 2000 by Jeff Bezos. Its vision is to enable a future where millions of people are living and working in space to benefit Earth. Its mission is to lower the cost of access to space. To preserve Earth, Blue Origin believes in enabling humanity to expand, explore, find new energy and material resources, and move heavy industries into space that stress Earth. Blue Origin is helping to build a road to space by lowering the cost of access to space through fully reusable launch vehicles and systems that are safe, reliable and affordable. Operational reuse is the key to radical reduction in the cost of access to space, which is a gate to achieving Blue Origin's long-term vision. Every launch vehicle is designed for human space flight from the beginning.



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GK LAUNCH SERVICES is an operator of commercial launches. The company was established by the decision of State Space Corporation "Roscosmos" to conclude and implement commercial contracts for the launch of spacecraft using Soyuz-2 family launch vehicles from Russian spaceports. GK Launch Services is a joint venture of GLAVKOSMOS, a subsidiary of ROSCOSMOS State Space Corporation, and private INTERNATIONAL SPACE COMPANY KOSMOTRAS. Established in 2017.

# WSBW VIRTUAL EDITION

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SFL generates bigger returns from smaller, lower cost satellites. Small satellites built by SFL consistently push the performance envelope and disrupt the traditional cost paradigm. Satellites are built with advanced power systems, stringent attitude control and high-volume data capacity that are striking relative to the budget. SFL arranges launches globally and maintains a mission control center accessing ground stations worldwide. The pioneering and barrier-breaking work of SFL is a key enabler to tomorrow's cost aggressive satellite constellations.



Kratos ensures customers are Ready for What's Next in the satellite industry by enabling a more dynamic ground. From RF interference mitigation, network management, signal processing to command and control, Kratos products are used by more than 80 percent of the world's satellite operators and 90 percent of U.S. based space missions.



# WSBW VIRTUAL EDITION

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KSAT, Kongsberg Satellite Services, is the market leader in providing communication services between spacecraft and launch vehicles and Earth. Supporting a total of 50,000 satellite passes a month, our extensive global network of over 200 antennas at 24 sites across the globe, from Svalbard to Antarctica, is constantly expanding. KSAT also delivers Earth Observation services derived from the largest portfolio of satellites, including both Synthetic Aperture Radar (SAR) and high-resolution optical satellite data. Providing a variety of EO products and environmental monitoring services like vessel detection, oil spill monitoring, ice- and land-based information, our unique ground network tailored to provide data and services in near real-time, ensures responsive access.



Since its establishment in 1884, Mitsubishi Heavy Industries (MHI) has especially played an important role in the space development in Japan, from the N-I rocket in 1970's to current launch vehicles, H-IIA and H-IIB. From 2007, MHI began to provide launch services for both commercial and government missions. Today, MHI is also working on the development of Japan's next generation launch vehicle, H3, a much more customer-oriented launch vehicle. To become the best player in the global market, MHI will continue to push our utmost efforts on development and sales activities for MHI Launch Services.



Northrop Grumman solves the toughest problems in space, aeronautics, defense and cyberspace to meet the ever-evolving needs of our customers worldwide. Our 90,000 employees define possible every day using science, technology and engineering to create and deliver advanced systems, products and services.



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GEOshare is a wholly owned subsidiary of Lockheed Martin that operates as an independent entrepreneurial venture. GEOshare develops new satellite and space opportunities using innovative business models. GEOshare helps customers realize value in many areas including satellite systems, condosats, 5G, artificial intelligence, space science, and LEO commercialization. GEOshare helps shape businesses using Lockheed Martin products and expertise.



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Connectivity Business provides investors, senior corporate executives, and strategic advisors with forward-looking market intelligence on the critical strategic and financial issues impacting the global terrestrial and orbital connectivity infrastructure and services industry. Our coverage includes telecommunications and satellite service providers, fibre networks and data centres, small cell and tower companies, technology and infrastructure equipment manufacturers, capital providers and investors in the public and private capital markets. Formed more than 25 years ago in London as SatelliteFinance and TelecomFinance, today Connectivity Business is one of the most respected sources for information and perspective on the global communications infrastructure industry.

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