



2022
KEY TRENDS
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SATELLITE & NEWSPACE

The key trends in the Satellite &
NewSpace industry for 2022.



INTRODUCTION

As we enter 2022, we have collated the key trends in the Satellite & NewSpace space for 2022.

We're thrilled to have been able to collaborate on this ebook with some of the brightest minds in the Satellite & NewSpace industry.

Some of the trends range from on orbit services, satellite as a service and the rise of LEO.

We are humbled to have been joined by experts and leaders from Hawkeye 360, Orbit Fab and Inmarsat to name a few.

Thank you to all our guest contributors, and we hope you find the insights in this ebook valuable for you and your teams.

All the best,



Laurie Scott
Director & Co-Founder



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Senior Consultant



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SPACE TOURISM

Space is not just for astronauts anymore and as we enter 2022, will we see it be the year of space tourism?

The small steps are picking up pace, with Blue Origin having nearly \$100m in commitments from aspiring space tourists, whilst Virgin Galactic have 600 people willing to spend \$450,000 a piece for its 90-minute suborbital flight.

With Blue Origin and Virgin competing to be the masters of the suborbital tourism realm, they both offer a similar experience, with the two both briefly crossing into space and giving the participants a view of Mother Earth and the big black beyond.

These flights are currently on course for take-off late in 2022, will we see other companies looking to capitalise on space tourism as the year goes on?



DANIEL FABER

CEO, ORBIT FAB

We're going to see more space tourism & the ongoing financing of competing commercial space stations.

These will lead to the first permanent job in orbit within 5 years. The paradigm shift that will come for the first PERMANENT job in space can not be underestimated.

THE LAUNCH REVOLUTION

With satellite launches costing up to \$400 million there is already a race underway to reduce these costs and make satellite launches more affordable.

As mentioned by Chris Gregory ridesharing can make these launches a bit more affordable, but when this takes all the satellites to the same orbit things can become a bit crowded.

In 2022 we're likely to see a rise in space tugs and other orbital transfer vehicles which can perform a variety of on-orbit functions, including taking satellites to their final orbit.

Companies such as Nanoracks offer small satellite deployment with a host of options for customers' needs and we're likely to see other companies pave a similar path in 2022.



CHRIS GREGORY

VICE PRESIDENT, ENGINEERING R&D,
HAWKEYE 360

Our biggest challenge is the availability of low-cost launch options to a variety of orbits.

The rideshares are great but they all go to the same orbit more or less. I would like to see orbit transfer vehicles and smaller rockets like Rocket Lab and competitors gain momentum

THE RISE OF LEO

With the new space revolution, we're seeing the rapid growth of Low Earth Orbit (LEO) constellation technology and this is likely to continue in 2022.

With an advance in demand from bandwidth and no slow down in sight, companies such as OneWeb have developed creative models to generate profits from LEO Connectivity.

With the offer of faster communications due to lower latency, LEO can offer higher bandwidth than traditional GEO constellations and with more funding and new business models we think 2022 will be the time for the rise of the LEO.



DAVID GELEMAN

PRESIDENT AND CEO, SPACEBRIDGE

Without a doubt The LEO constellations will be the biggest trend for 2022.

They are here and rapidly reshaping and changing the landscape of the satellite communication as we know it.

THE RISE OF LEO



ALVARO SANCHEZ

CEO, INTEGRASYS

Flat Panel Antennas and Automation of the LEO & MEO networks, as without the ground it is not possible to connect the space, it is critically important to enable new constellations with newer ground technologies for closing their business models.

“LEO can offer higher bandwidth than traditional GEO constellations.”

ON ORBIT SERVICES

As we enter 2022, we're likely to see a big focus on the emerging on-orbit Servicing, Assembly and Manufacturing (OSAM) sector. Including the repairing and refuelling of existing satellites, removing of orbital debris and creating new capabilities in space.

Programmes such as Orbital Prime run by SpaceWERX will spur government and private investment into OSAM technologies. This programme looks to award contracts to teams who can win up to \$250,000 in the first round and \$1.5m in the second. With successful projects being eligible for future financing. With major incentives like this we're likely to see a boom in innovation in the OSAM sector.

Space industry investors are welcoming these types of incentives as they've been something that have been talked about for a long time.



DANIEL FABER

CEO, ORBIT FAB

We'll see more OSAM as we go through 2022.

It will lead to immortal satellite platforms, being continually upgraded and refueled. The paradigm shift will be dramatic as we can finally grow asset values on orbit rather than just depreciate them.

SATELLITE AS A SERVICE

As we enter 2022 the Satellite as a service market is really starting to take shape. Companies such as Capella Space, Spire, Maxar Technologies' DigitalGlobe, Myriota, D-Orbit, NSLComm are already signed up to Amazon's Satellite as a Service platform and they are leading the construction of ground stations for supporting these data services.

Companies who are offering Satellite as a service have built out business models where they charge customers for the time and bandwidth consumed. This allows companies a lower barrier to entry when it comes to satellite capabilities.

We think we're likely to see this industry grow far beyond the offering of Amazon, with more companies offering access to their satellites as required by smaller businesses.



JOAKIM ESPELAND

CEO, QUADSAT

I see one of the biggest impacts of New Space being the transition from capex to opex e.g everything as a service.

We are used to seeing software as a service, where we pay monthly for a software that just gets better and better the longer you have it. It just becomes a part of your business. Now, whether it be ground segment, data, satellite platforms and even satellite operations as a service, I think this is an amazing transition that will ensure high quality in every critical link of the industry.

Companies maximizing on quality and state of the art technology and then offering it industry wide, will lower the capex barriers to enter space and simultaneously increase chances of success in doing so, as you can rely on others for all the infrastructure that surround your business.

CAPITAL INVESTMENT

Shrinking launch costs, advances in technology and rising public-sector interest, we think space could be the next trillion-dollar industry.

With more investments we're seeing space become more accessible and less expensive, with potential opportunities in plenty of fields, including space tourism and connectivity. We're likely to see public and private investment in this sector increase into 2022.

Beyond tourism and connectivity, there are plenty of other interesting investment opportunities within the space industry including the exciting OSAM fields.

We're excited to see how the sector continues to grow in 2022 with continued investments.



OHAD HARLEV

FORMER CEO, LYTELOOP

In 2021 we saw Capital increasingly flowing into the space market, it came from 3 sources: SPACs, corporate investments and VCs. The common theme is that space is interesting.

Space tourism has created a hype, companies are finally showing useful application as well as ways to monetize space versus the past where space was predominately launch and geostationary satellites. With more capital the industry can continue to bring in talent and create new and innovative value propositions.

CAPITAL INVESTMENT



TOM KOSTER

SVP GLOBAL PARTNERSHIPS, LASER LIGHT COMMUNICATIONS



“The Future of Space is on the Ground - and the Future of Ground is in Space”

The Space environment will increasingly mimic the terrestrial telco environment.

The US will prime most activities with allies in supporting roles due to the size of budgets, priorities, hyper-fast decision making, and execution ability.

Any Space activity will be directly intertwined within national security and geopolitical considerations. Led by the United States and supported by friendly western (and eastern) allies sharing a rules-based environment, just like the US/UK/etc navies are upholding Freedom of Navigation around the world. Expect to see more cooperation between AUKUS/NATO/Five-Eyes/The Quad, etc

Within the launch and BUS segments, it will increasingly be about reusability, maximising COTS components (raiding consumer electronic component bins (smartphone/PC's/drones) to obsessively focus on SWaP-C

The Space domain really comes down to software. How do I monetize the service delivery?

CONSOLIDATION AND DIVERSIFICATION

As with all growing markets there are always innovators looking to disrupt and challenge the status quo. In 2022 we're expecting to see a lot more of this. With entrepreneurs coming through funding stages with exciting and innovative opportunities.

Of course, these new players will be looking to make a big impact, whether that be helping to connect the unconnected or giving us new ways of doing things. Those currently in the market need to keep their eye on the innovators and keep up.

We think 2022, will be huge for ideas, innovations and new thinking for space and beyond.



JAN GRONDRUP-VIVANCO

SVP OF TECHNOLOGY BUSINESSES, KRATOS

Disruption is the key trend for 2022 and beyond. Because enormous amount of new capacity is coming online, and at the same time the satellite industry is still "2G in a 5G" world. This will provide disruption that will create both new winners and companies not being able to keep up due to an old school mindset. On top of this, space is attracting new investors, bringing new companies and new people with a different mindset.

CONSOLIDATION AND DIVERSIFICATION



NARA SIHAVONG

HEAD OF PACIFIC BUSINESS DEVELOPMENT,
MANGATA NETWORKS

For me, if I were to address the elephant in the room, the topic would be how to tackle the 4 billion people who are still without Internet and or broadband. Through consolidation or diversification.

That is where the satellite race can make the biggest impact. To invest into giving them connectivity, and in result, new revenue and markets will continue to grow from and within those newly connected 4 billion users.



DANIEL FABER

CEO, ORBIT FAB

China-US great power conflict and the Thucydides Trap. The next world war could end civilization. And even a “conventional” conflict will spill over into space causing the debris environment to make many of the best orbits unusable. Avoiding that trap should be the priority of the political class.

CONSOLIDATION AND DIVERSIFICATION



NEALE FAULKNER

REGIONAL VP EMEA, INMARSAT

Dynamic mesh networks. To elaborate further, it is the consolidation of different technologies to enable users, and in my case, aviation users, to benefit from not just one type of technology to provide their passengers with the best possible service (fast, uninterrupted and cheap). As it stands, we have some great global networks, which use the same or similar technology. Inmarsat has its global GEO constellation as the perfect example. We also have some poorly patched together networks using different technologies. We then have new technologies that are coming both in space and on the ground, that provide different, arguably better, services for different parts of the journey (like terrestrial 5G in and around airport hubs), or densely populated flight routes that might benefit from LEO, which all work as part of the same network.

“2022 will be huge for ideas, innovations and new thinking.”

And there we have it, our view on the key trends in the Satellite & NewSpace industry for 2022.

We'd love to get your thoughts on these trends, and if there are any others we've missed, get in touch with us using the details below.

All the best,

neuco's Satellite & NewSpace team

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