



NSR
NORTHERN SKY RESEARCH

**The Leading Global Consultancy
in Satellite & Space**

2021

NSR's Mission



Providing industry leading **market research** and **consulting services** to satellite & space clients around the world.



Team Members Located In

- USA
- Canada
- Argentina
- France
- Spain
- Philippines
- Hong Kong
- India
- Sweden
- Nigeria
- Belgium
- Ireland

NSR features **the most global presence of any satellite consulting/research company.**

Our multi-cultural and multi-lingual team provides industry-leading telecom market research and consulting delivering unique, actionable intelligence.

12 Major International Hubs of business and government

Our Team



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NSR's multi-cultural and multi-lingual team with over **200 years** of collective experience in the satellite industry.

SATELLITE COMMUNICATIONS

From mass-market consumer broadband applications to aeronautical and maritime mobility, NSR's **Satellite Communications** research practice covers the range of satellite communications verticals.



FINANCIAL ANALYSIS

Financial data matters. Beyond EBITDA or Annual Revenues, NSR's **Financial Analysis** research practice places each financial metric in context with macroeconomic trends occurring throughout the industry.

SATELLITE & SPACE APPLICATIONS

More than just "New Space", NSR's **Satellite & Space Applications** research practice covers everything from M2M/IoT via Satellite opportunities, to more traditional Earth Observation markets providing an overview of the major market opportunities.



SATELLITE & SPACE INFRASTRUCTURE

Focusing on the entire range of launch vehicles, satellite manufacturers, and ground infrastructure; NSR's **Satellite & Space Infrastructure** research practice covers the CAPEX-side of the satellite industry.

NSR: Serving Clients in All Regions and All Markets

Service Providers



Space Agencies



Ground Segment Providers



Satellite Manufacturers and Primes



Software and Platform Providers



Financial Industry (PE, VC, Institutional, etc)



All Companies Active in Satellite & Space



End Users (Airlines, Cruise, Energy, Video, Military)



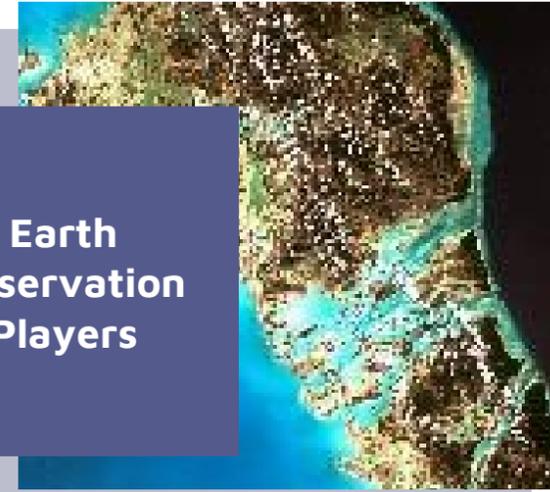
IoT and 5G Satcom Companies



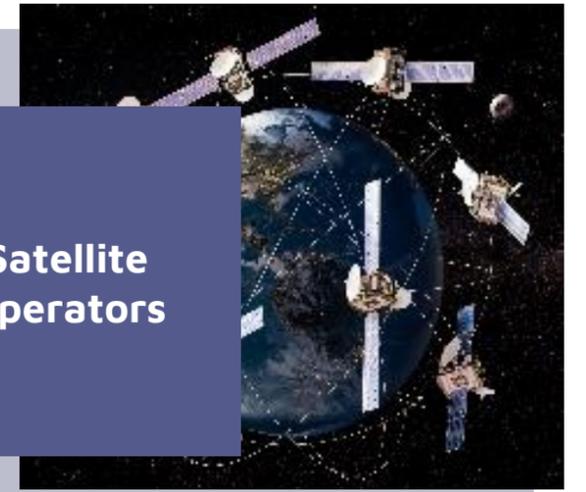
Emerging Space Players



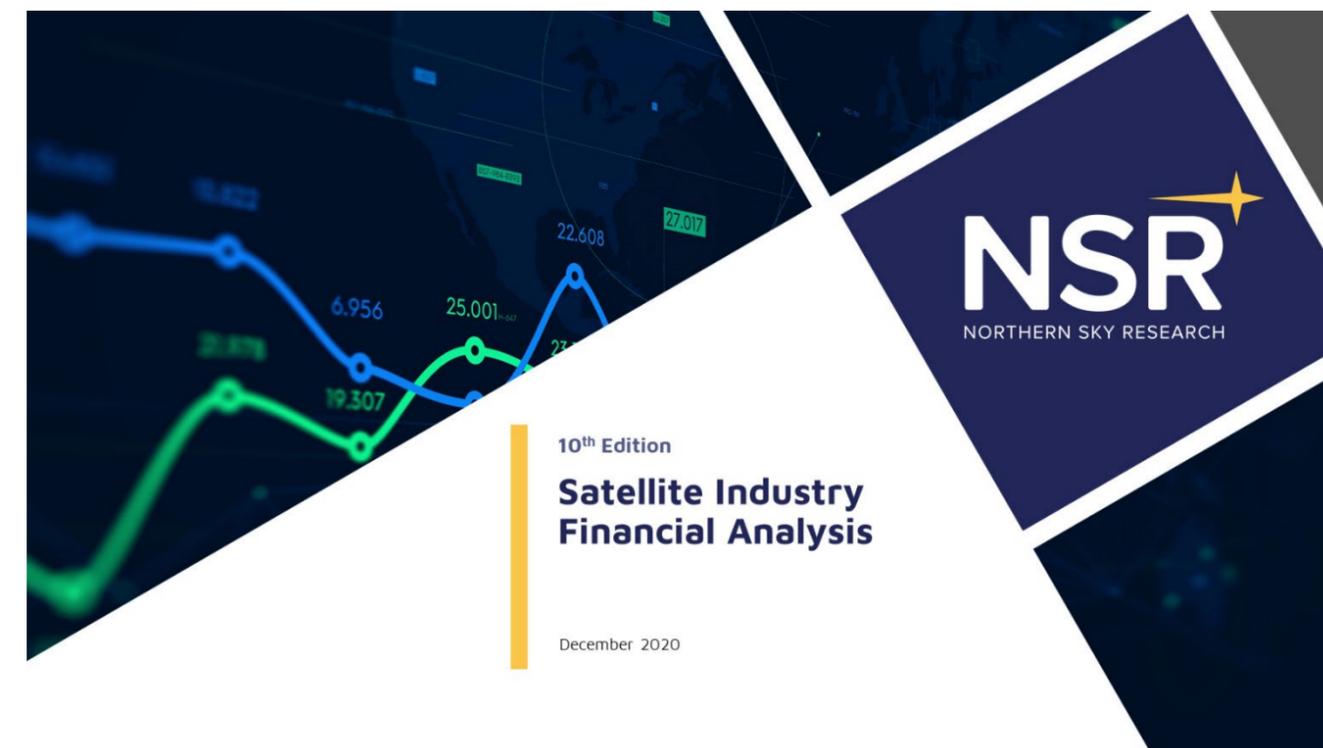
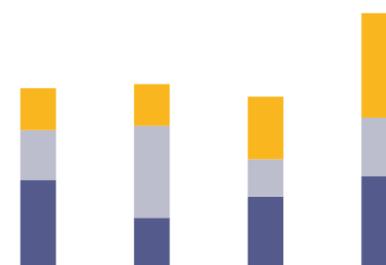
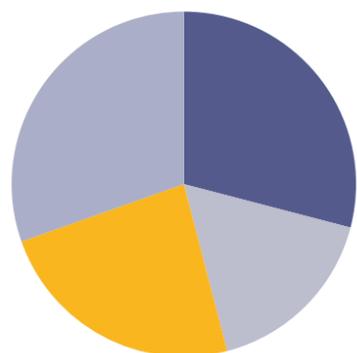
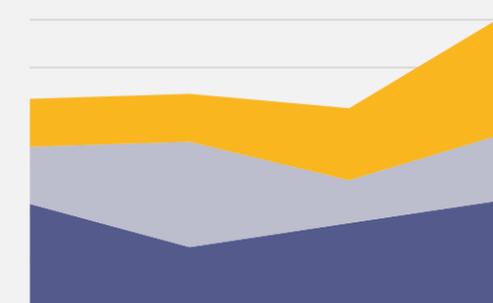
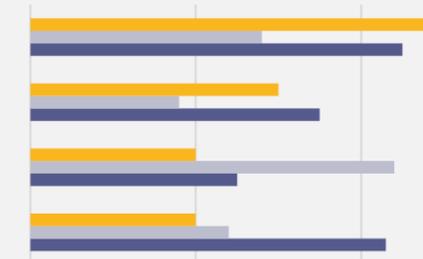
Earth Observation Players



Satellite Operators



- NSR has performed well **over 5,000 in depth interviews** in more than **100 countries** in the past decade **alone.**
- **NSR coined “HTS” & First to Market Studies**
 - HTS is now the industry standard
 - NSR was first analyst firm to provide HTS quantitative/qualitative analysis across all markets
 - First to publish studies covering:
 - **HTS, incl GEO/MEO/LEO**
 - **Capacity Pricing**
 - **Aeronautical and Maritime Satcom**
 - **M2M/IoT**
 - **Smallsats**
 - **Flat Panel Satellite Antennas**
 - **Satellite Constellations**
 - **Wireless Backhaul via Satellite**
 - **Space Tourism & Travel**
 - **And MANY more**





From Off-the-Shelf Data



To Custom Advisory Services Tailored to Your Needs,



NSR Has The Solution



Custom Market Research & Strategic Advisory

Tailored solutions designed to meet your **unique needs**, ranging from market forecasting and business case analysis to market due-diligence and end-user advisory

Our clients range from **Fortune 500 companies** to small **start-ups**



1

Data Gathering & Market Forecasting:

Market sizing; market segmentation; transponder supply/demand forecasting by region, application and band; deployed and shipped units; market shares; retail and wholesale revenues; and any other quantitative aspect of the satellite market.

NSR's forecasts and quantitative analyses typically utilize a scenario-based approach to navigate a wide range of future possibilities, in addition to a combination of bottom-up and top-down detailed models based on all drivers and restraints.



2

Market Trends & Insights:

Trend analysis regarding current and future market opportunities, market drivers, technical and business validation of specific markets and industry sectors, and 360 degree assessments across any aspect of the satellite industry.



3

Benchmarks:

Quantitative benchmarking analysis tailored to specific companies and industry sectors, allowing for an in depth understanding of market size, potential and positioning both today and in the future.



Business Plan Analysis & Development:

Comprehensive range of strategic services, including complete business plan development and analysis, CAPEX and OPEX assessments, revenue projections, SWOT analysis, pricing model critiques and assessments of all items contained within any business plan.



Due Diligence:

Complete business, technical and financial analysis support for due diligence exercises across the satellite value chain.



"Go-to-Market" Strategies:

Development of successful market entry strategies, including addressable market sizing, service/product offerings, pricing, technology, partners and sales channels.



End User Advisory Services:

Validation of end user technical and business requirements, RFP development, bidder identification and validation, proposal evaluation, contract negotiation and implementation support



Technology Assessments:

Extensive technical expertise relevant to all segments of the satellite market on the ground and in orbit, with services including technology validations and assessments, roadmap assistance, market positioning, OEM relationships and both RF and networking engineering support.



Competitive Positioning and Assessments:

Market share assessments, SWOT analyses and quantitative and qualitative analysis of competition.



Multi-Client Reports

In-depth dives on key satellite, space and related industries, going **beyond headlines**.

Actionable intelligence in PowerPoint and Excel-based formats designed to **maximize insights** and help you **go beyond** the data points

NSR delivers clarity - Critical market insight giving Market Leaders the edge over the competition...

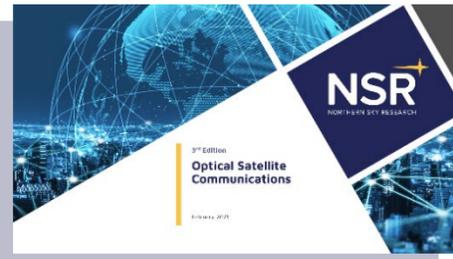
Reformatted from the ground up with your needs in mind, NSR's reports deliver trusted NSR analysis in a clearer, concise package. The format complements NSR's legacy of detailed analysis, merging a clean modern presentation with generations of knowledge.

- A **Complete PowerPoint report** document containing all quantitative and qualitative analysis
- An **Excel file** containing all data and graphs so the client can easily use this work as a basis for their own internal market projections
- **Four (4) hours of consulting time** with the NSR analyst who authored the report to review report findings and interpret market forecasts



Market analysis in Satellite Communications, Space & Satellite Applications, Financial Analysis, and Satellite & Space Infrastructure has never been so accessible.

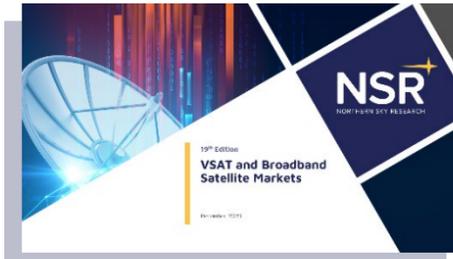
NSR's Multi-Client Report Lineup



Optical Satellite Communications, 3rd Edition



In-orbit Servicing and SSA, 4th Edition



VSAT & Broadband Satellite Markets, 19th Edition



Global Satellite Ground Segment, 5th Edition



Government and Military Satellite Communications, 17th Edition



Big Data Analytics via Satellite, 4th Edition



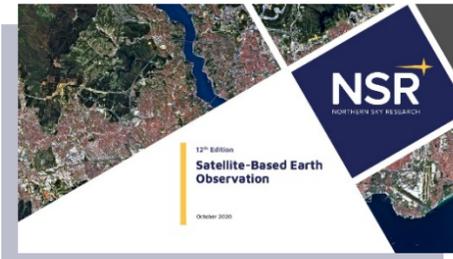
M2M and IoT via Satellite, 11th Edition



Satellite Industry Financial Analysis, 10th Edition



Space Travel & Tourism, 2nd Edition



Satellite-Based Earth Observation, 12th Edition



5G via Satellite



HTS Satellite Constellations, 3rd Edition



Global Satellite Manufacturing and Launch Markets, 10th Edition



Global Satellite Capacity Supply and Demand, 17th Edition



Land Mobile Satellite Markets, 8th Edition



Flat Panel Satellite Antenna Analysis, 5th Edition



Cloud Computing via Satellite



High Altitude Platform Markets, 4th Edition



Maritime Satellite Markets, 8th Edition



Aeronautical Satellite Markets, 8th Edition



Satellite Capacity Pricing Index, 6th Edition



Wireless Backhaul and Trunking via Satellite, 14th Edition

NSR's Clients Access Content via **Report Purchases** or **Subscriptions**, which include Enhanced Discounts and Other Unique Benefits



Other NSR Products & Services

Stay **Ahead of the Curve** by participating in NSR's industry-leading event content, both in person and online.

NSR's interactive and customizable data solutions, such as the **NSR Data Visualization Portal** and the **Non-GEO Constellations Analysis Toolkit** allow clients to focus on the areas and information they need for success.

NSR Continues to **lead the discussion**, with a wide array of industry leading events, both live and digital; webinars; briefings; and podcasts.

NSR - Satellite 2020 Breakfast Briefing
Burning Questions v5.0
NSR
 NORTHERN SKY RESEARCH
 20th Anniversary
 Tuesday, March 10th, 2020
 7:00 - 8:30 AM
 Room 145 A/B
RSVP Required

Free NSR Webinar
NSR Showcase: New Satcom Markets
 October 14th, 2020
 10AM EDT
 #NSRinsights #AheadOfTheCurve

NSR SATELLITE 2020
 Monday Finance Forum
The Great Satellite Financing Debate
 Monday, March 9th
 9:30AM-10:30AM
 Room 146 A/B
 #NSRinsights #AheadOfTheCurve

SPACENEWS
OneWeb's Bankruptcy:
 Impacts and Implications for the Satellite Industry
 April 7th, 2020
 11AM ET
 #NSRinsights #AheadOfTheCurve

Podcast with NSR Senior Analyst, Dallas Kasaboski
NewSpaceVision
 The EU Earth Observation Market & Funding Mentality
<http://newspace.vision/>
 #NSRinsights #AheadOfTheCurve

NSR KRATOS
 Satellite Ground Segment:
Ready for the New Space Revolution
 Thursday, November 19th
 11AM EST
 #NSRinsights #AheadOfTheCurve

Free NSR Webinar
In Orbit Servicing:
 Space Tugs & Gas Stations
 April 21st, 2020
 10AM EDT
 #NSRinsights #AheadOfTheCurve

Free NSR Webinar
Satcom Pricing in 2020 & Beyond
 May 13th, 2020
 10AM EDT
 #NSRinsights #AheadOfTheCurve

Free NSR Webinar
Space Tourism & Travel:
 Are We There Yet?
 April 1st, 2020
 10AM EDT
 #NSRinsights #AheadOfTheCurve

Free NSR Webinar
Global Satellite Markets: Outlook In The COVID-19 Era
 September 15th, 2020
 10AM EDT
 #NSRinsights #AheadOfTheCurve

NSR
 Satellite and the Cloud:
Cloud Deployments Across the Satellite Driven Value Chain
 Moderated by:
NSR Senior Analyst, Shivaprakash Muruganandam
 January 20th, 2021
 9:00AM ET
 C21 Connected World Series
 #NSRinsights #AheadOfTheCurve

NSR
Will COVID-19 Impact Your Company In 2020 To 2021?
 #NSRinsights #AheadOfTheCurve

| Impact Category | Percentage |
|--------------------|------------|
| Significant Impact | 48% |
| Low Impact | 39% |
| No Impact | 7% |
| Positive Impact | 3% |
| Other | 3% |

NSR INTEGRASYS
The Revolution of Capacity Price and Network Deployment
 19th January, 2021
 16:00h (GMT+1) / 07:00h (PT)
 #NSRinsights #AheadOfTheCurve

The NSR Data Visualization Portal



The NSR Data Visualization Portal is a **comprehensive, interactive tool** for NSR forecast data encompassing NSR Report market segments, regions, and satellite & space coverage areas.

NSR's **Data Visualization Portal** puts YOU in the driver seat, giving you the flexibility to compare the data that is the most **important to your bottom line.**



The **NSR Non-GEO Constellations Analysis Toolkit** provides clients with the same set of analytical instruments that NSR leverages internally to holistically assess LEO/MEO HTS constellations in support of focused research studies and consulting projects.

The toolkit is meant for both **business & technical professionals** seeking in-depth understanding of Non-GEO high-throughput SATCOM.

NSR Main Architectural Aspects: SpaceX Starlink - 53° Incl. 550 Km Alt.

Satellite Pass Time: 4.1 Minutes

Flight Velocity: 7.5 Km/Sec

Orbit Type & Inclination: Inclined; 53°

Number of Orbital Planes: 72

Satellites per Plane: 22

Total # Satellites in Shell: 1584

Altitude: 550 Km

Field of View: 2,774,581 Sq.Km

Beamwidth radius: 8 Km

Slant: 1,123 Km

Min EL: 25°

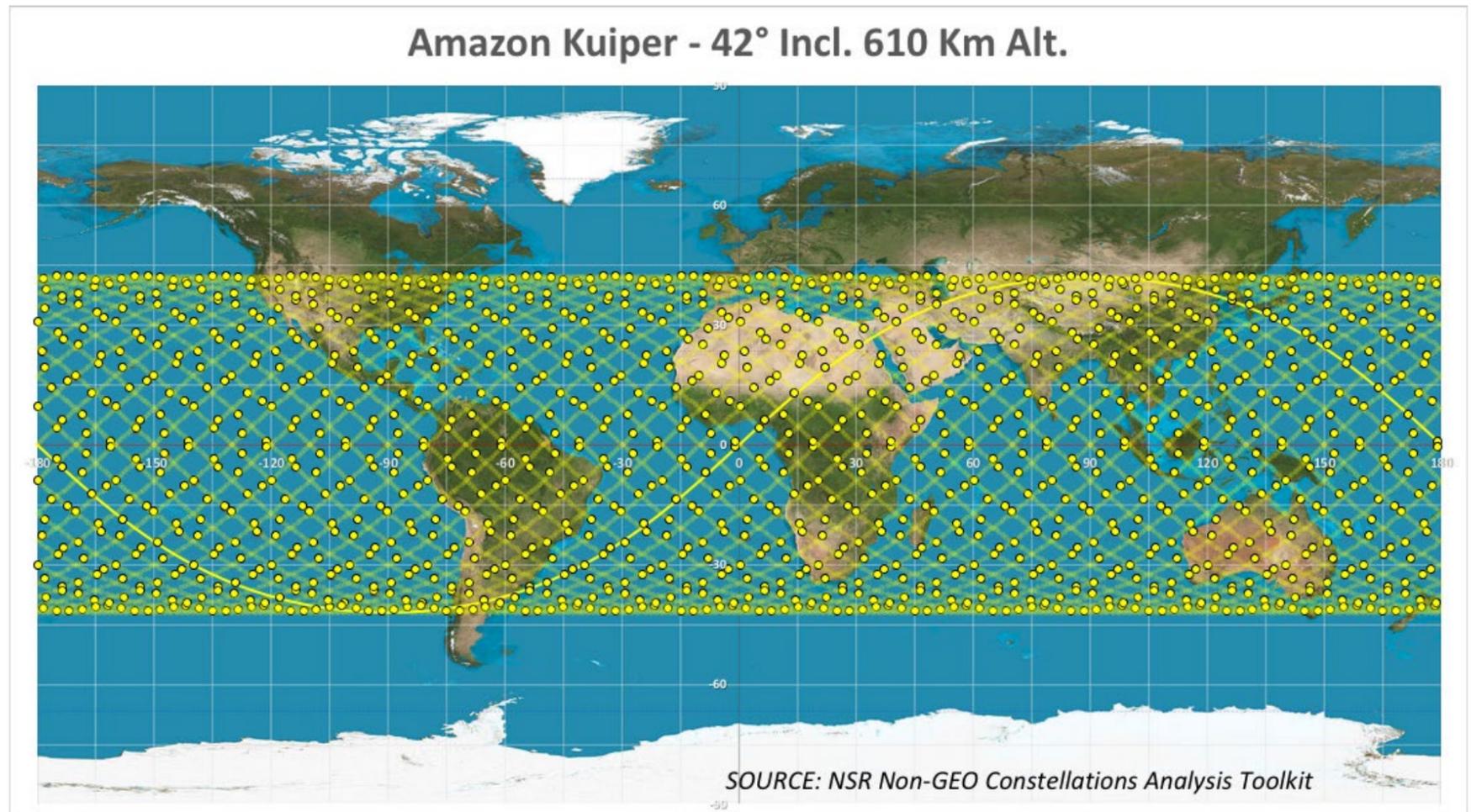
Maximum Latitude Reached: 61° N/S

Source: NSR Non-GEO Constellations Analysis Toolkit. Based on FCC filing information and orbital dynamics calculations.

Configurable toolkit for the analysis and simulation of a multiplicity of LEO and MEO HTS scenarios

- Comparison Tables & Calculators
- Constellation Shell Maps
- Antenna Look Angles
- Satellites in Line of Sight
- Beam & Satellite Capacity
- Addressable Population & Area
- Fiber Optics vs Satellite Latency
- Fiber vs Sat Business Case
- Capital Cost per Usable Mbps

Source: NSR Non-GEO Constellations Analysis Toolkit

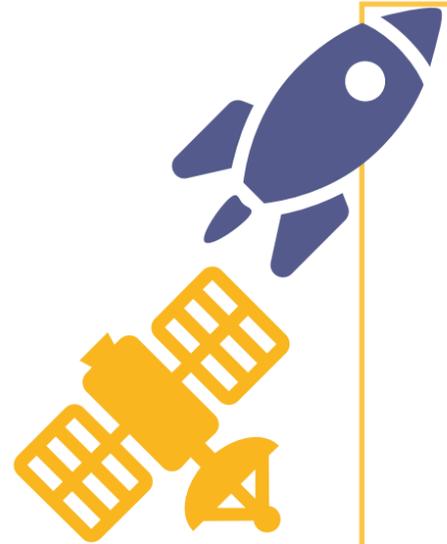


NSR is pleased to have an unique and active working relationship with the International Space University (ISU), the world's premier higher education institution dedicated to space, located in Strasbourg, France.

NSR and ISU's active partnership affirms both organizations common commitment and interest in pursuing the highest quality standard in both education and research.



The NSR-ISU cooperation includes a formal NSR internship program offered to ISU Masters of Space Studies (MSS) participants, providing ISU students with a great opportunity for real world experience in one of the top space and satellite industry consultancies.



Get a comprehensive picture of developments across the complete satellite & space industry

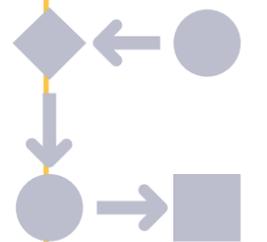
Anticipate trends early in order to get a head start on emerging opportunities



Join market leaders who rely on NSR insights for their most important strategic decisions:

Accelerate market research to get up to speed on key business opportunities

Obtain a knowledgeable, independent view of your market assumptions and business strategies



NSR

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