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**#1 – Invasion of Ukraine**

Russia's invasion of Ukraine has far-reaching industry impacts: commercial providers **Starlink**, **Maxar**, **Viasat**, **Iridium**, **BlackSky**, **Planet**, **Capella**, **HawkEye 360**, **Spire Global** and others provide services using satellite communications and Earth observation systems to Ukraine, its partners and humanitarian organizations to support defense and relief efforts; planned launches of **Soyuz** and **Proton** vehicles are suspended and remain on hold due to changes in sanctions and export controls and corresponding reactions by Russia, causing delays for international commercial and civil customers; a batch of **OneWeb** satellites is stranded at Baikonur; and **ESA's Rosalind Franklin** Mars rover is delayed, with launch now expected no earlier than 2028.

**#2 – Dawn of Direct-to-Mobile Connectivity**

Direct-to-mobile connectivity breaks through in 2022: **Globalstar** enables emergency connectivity for **Apple's** iPhone 14; **SpaceX** and **T-Mobile** partner up with plans to connect handheld devices on the T-Mobile network to the **Starlink** system; **AST SpaceMobile** launches and tests its **BlueWalker 3** prototype satellite; and **Lynk Global** receives **FCC** authorization to operate its planned constellation.

**#3 – Consolidation for Scale, Customers & Revenue**

Consolidation continues among both legacy and Newspace entities, as companies pursue scale, customers and revenue: **Eutelsat** and **OneWeb** agree to merge; **Viasat** purchases **Inmarsat**; **L3Harris Technologies** acquires **Aerojet Rocketdyne** and **Viasat's** Link 16 Tactical Data Links business unit; **Kongsberg** acquires **NanoAvionics**; **Raytheon** purchases **Northern Space and Security**; **SES** buys **DRS Global Enterprise Solutions**; **Antarctica Capital** acquires **Descartes Labs**; **Anuvu** agrees to purchase **Signal Mountain Networks**; and **Redwire** adds **QinetiQ Space** and so on . . . .

**#4 – Heavy Lift Launch Demand Surges**

Demand outstrips supply in the heavy lift launch services market, with forecasts indicating that unmet demand will continue through at least 2025. **Amazon's** Kuiper contracts for up to 83 heavy lift launches over a five-year period on **Arianespace's Ariane 6**, **Blue Origin's New Glenn**, and **United Launch Alliance's Vulcan** launch vehicles, the largest commercial procurement of launches in history, while **SpaceX** conducts 34 launches for its **Starlink** constellation.

**#5 – Investment Continues in Unsteady Economy**

Private placements proliferate despite economic conditions globally, as new venture funds, including **Stellar Ventures' SV Andromeda Fund**, UAE's National Space Fund, and **Boeing/AE Industrial Partners' AEI Horizon X**, begin investment activity and **Advent** agrees to buy **Maxar** in \$6.4 billion deal.

**#6 – Civil Space Achievements**

**James Webb Space Telescope** begins operations, **Artemis I** launches on the **SLS**, **NASA's DART** mission outperforms expectations, and China's **Tiangong** space station is crewed.

**#7 – Constellations Deploy & More Coming!**

**Starlink** and **OneWeb** continue to deploy, with roughly 3,335 and 500 satellites, respectively, now in orbit; **SES/O3b** launches first two **mPower** satellites; and **Kuiper** and **Telesat** prepare for deployment. **E-Space**, **Astra**, and others plan new constellations, while **SES/O3b** and **Eutelsat/OneWeb** work toward hybrid, multi-orbit networks. Who's and what's next?

**#8 – SPAC Pause**

Market conditions and new regulations overshadow the "SPAC track": only **Satixfy** and **Intuitive Machines** announce plans to go public via SPAC this year; **Satellogic** completes its SPAC merger; **D-Orbit** cancels its SPAC plans.

**#9 – Key 2022 Commercial Launch Missions**

**Arianespace Ariane 5**: MEASAT-3d, GSAT-24, KONNECT VHTS, Galaxy 35, Galaxy 36, MTG-I1; **Arianespace Soyuz**: 34 OneWeb satellites; **Arianespace Vega-C**: LARES-2; **ISRO PSLV**: EOS-04; **ISRO LMV3**: 36 OneWeb satellites; **Russian Proton-M**: AngoSat-2; **Russian Soyuz**: 3 Gonets satellites; **Rocket Lab Electron**: Strix β, Strix 1, 24 SpaceBEEs; **SpaceX Falcon 9**: Axiom Mission 1, Vigoride OTV, Sherpa-AC OTV, Nilesat 301, Globalstar FM-15, SES-22, BlueWalker 3, Galaxy 31, Galaxy 32, Galaxy 33, Galaxy 34, HOTBIRD 13-F, HOTBIRD 13-G, 40 OneWeb satellites, HAKUTO-R, 2 O3b mPower satellites, EROS C3, Transporter 3-5 and 34 Starlink missions; **ULA Atlas V**: SES-20, SES-21.

**#10 – Notable 2022 Commercial Satellite Orders**

**Boeing**: Nusantara Lima; **Maxar**: SXM-11, SXM-12; **MDA Corporation**: 17 Globalstar satellites; **Thales Alenia**: Intelsat 41, Intelsat 44, SES-26, Arabsat-7A, KOREASAT 6A; **SWISSto12**: Intelsat 45.

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