

#1 – COVID-19 Pandemic: Scourge and Silver Linings

The pandemic rattles the space industry, creating challenges – with in-flight connectivity in a holding pattern, leisure industry connectivity on a prolonged siesta and launch providers and satellite manufacturers suffering shut-downs and delays – yet causing an explosion in demand for remote connectivity. Along the way, industry leaders aid the fight against the virus, with **Virgin Orbit** building ventilators, **DISH Network** contributing spectrum, and **Airbus**, **ULA** and **Virgin Galactic** making PPE.

#2 – Financial Markets Prove Resilient and Responsive

Capital markets recover and private equity and venture investments abound, with significant fundraising activity by **Astranis**, **Astroscale**, **ICEYE**, **Kymeta**, **Ligado**, **Relativity**, **SpaceX**, **Spire Global**, **DISH Network** and **Viasat**. **Momentus** and **AST SpaceMobile** become the latest space companies to go public via SPACs.

#3 – Bankruptcies and Restructurings Abound

OneWeb files for Chapter 11 bankruptcy and emerges eight months later under new owners **Bharti Global** and the UK government; other U.S. bankruptcies include **Global Eagle Entertainment**, **Intelsat** and **Speedcast International**; non-U.S. bankruptcies include **Sky and Space Global** in Australia, **UrtheCast** in Canada and **Phasor Solutions** in the UK.

#4 – M&A in Space: Vertical Integration Takes Hold

Rocket Lab acquires **Sinclair Interplanetary**; **Astroscale** purchases IP assets of **Effective Space Solutions**; **Maxar** takes over full ownership of **Vricon** JV from **Saab**; **Intelsat** acquires **Gogo** commercial aviation division; **AAC Clyde Space** purchases **Hyperion Technologies** and **SpaceQuest**; **Raytheon** acquires **Blue Canyon**; **Viasat** takes sole ownership of **Euro Broadband Infrastructure** JV from **Eutelsat** and agrees to acquire **RigNet**; secured creditors receive bankruptcy court approval to buy **Global Eagle Entertainment**; **Telesat** and **Loral Space & Communications** announce they will combine to form a new Canadian public company; and **Lockheed Martin** agrees to acquire **Aerojet Rocketdyne**.

#5 – C-Band Spectrum Repurposing Cornucopia

The **FCC** approves \$9.7b in incentives for C-band spectrum clearing and schedule for accelerated action; 13 new GEO procurements boost U.S. satellite manufacturing and global launch services sectors; auction interest surges, with bids approaching \$70b in gross proceeds as of yearend.

#6 – SpaceX Reaches New Heights

SpaceX in 2020: achieves 100-launch milestone for **Falcon 9** and sets new high marks for first stage reusability; debuts the manned **Crew Dragon** capsule, with two successful missions to the ISS; nears 1,000 satellites on-orbit for **Starlink**, with public beta testing underway; receives a contract from **NASA** to transport cargo to and from the lunar Gateway; raises almost \$2b in new equity funding; and scores \$885.5m from the FCC's Rural Digital Opportunity Fund to bridge the digital divide.

#7 – LEO Constellation Shakeout

The clouds continue to disperse in 2020, with the finalist track for LEO broadband constellations shaping up: **SpaceX's Starlink**, **Amazon's Kuiper**, **Telesat LEO** and restructured **OneWeb** lead the field.

#8 – Launch Services Sector Continues to Grow

Newer companies, including **Blue Origin**, **Exolaunch**, **Firefly**, **Relativity**, **Rocket Lab** and **Virgin Orbit**, and start-ups **ABL Space Systems**, **Aevum**, **Generation Orbit**, **Gilmour**, **Isar**, **Landspace**, **OneSpace**, **Orbex**, **Skyrora**, **SpinLaunch** and **PLD Space**, make strides in an increasingly populous sector, with forecasts of a launch market exceeding \$32b by 2027.

#9 – Notable 2020 Commercial Satellite Orders

Airbus: **BADR-8**, **Optus 11** and **Thuraya 4-NGS**; **Boeing**: **SES-20**, **SES-21** and four **O3b mPower** satellites; **Northrop Grumman**: **SES-18**, **SES-19** and two C-band satellites for **Intelsat**; **Maxar**: **Galaxy 37**, **Intelsat 40e** and four C-band satellites for **Intelsat**; **Thales Alenia**: **Amazonas Nexus**, **SES-22**, **SES-23** and two prototype satellites for **Omnispace**.

#10 – Key Commercial Launch Missions in Record Year

Highlights from among 85 orbital launch missions: **Arianespace Ariane 5**: **BSAT-4b**, **EUTELSAT KONNECT**, **Galaxy-30**, **GSAT-30**, **JCSAT-17** and **MEV-2**; **Arianespace Soyuz**: 104 **OneWeb** satellites; **Arianespace Vega**: 12 **SpaceBee** cubesats and 26 **SuperDove** satellites; **ExPace**: **Yinhe-1**; **ISRO PSLV**: four **Lemur** cubesats and four **Scouting Mission** satellites; **Long March 3B**: **Apstar-6D**; **Long March 6**: 10 **NuSat** satellites; **Russian Proton**: **Express-80** and **Express-103**; **Russian Soyuz**: two satellites for **Kepler** and four **Lemur** cubesats; **Rocket Lab Electron**: **Sequoia** and 24 **SpaceBee** cubesats; **SpaceX Falcon 9**: **Global 7**, **Global 8**, **SXM-7**, six **SkySat** satellites and 14 missions for **Starlink**.

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