Commercial Space and Sustainability

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Nations Led the Space Age
Today, Companies Dominate the Global Space Economy
What Do Commercial Space Companies Do?
Global satellite industry grew 3% in 2018, tracking worldwide economic growth (3%) and U.S. growth (2.9%).

*Reported since 2017 and including years beginning with 2012, ground equipment revenues include the entire GNSS segment: stand-alone navigation devices and GNSS chipsets supporting location-based services in mobile devices, traffic information systems, aircraft avionics, maritime, surveying, and rail.
Smallsats Reduce Required Investment

- **Dove**
  - Planet (Customer)
  - Maxar/SSL (Manufacturer)
  - In-house
  - 5 kg

- **SkySat**
  - Planet (Customer)
  - Maxar/SSL (Manufacturer)
  - 120 kg (Mass)

- **OneWeb**
  - OneWeb
  - Airbus/OneWeb
  - 150 kg

- **O3b**
  - SES O3b
  - Thales Alenia Space
  - 700 kg

- **WorldView-3**
  - Maxar (DigitalGlobe)
  - Ball Aerospace
  - 2,800 kg

- **Telstar 19V**
  - Telesat
  - Maxar SSL
  - 7,070 kg
Major Investor Type by Investment (2000-2018)
The worry: new systems might create so much debris that it diminishes usability of Earth orbits
- Smaller sats, limited ability to control their position
- Lots of sats
- Lower reliability sats
- Compliance with regulations (lower cost systems, new actors)

The reality: not all proposed satellites will launch – but many more will launch than in the past

Key actors seeking solutions
- USG/DOC
- ESA
- UN COPUOS
- Secure World Foundation
- World Economic Forum
- Companies removing debris
- Others

Source: Bryce analysis for AIA Engine for Growth report, 2017