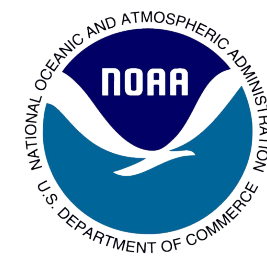




Office of Space Commerce Space Situational Awareness System

**Astronomy Enhancement Opportunities
Commercial Space and Astronomy Symposium
June 28, 2022**

**Mark Mulholland (MITRE)
Office of Space Commerce**



Today's Resident Space Objects

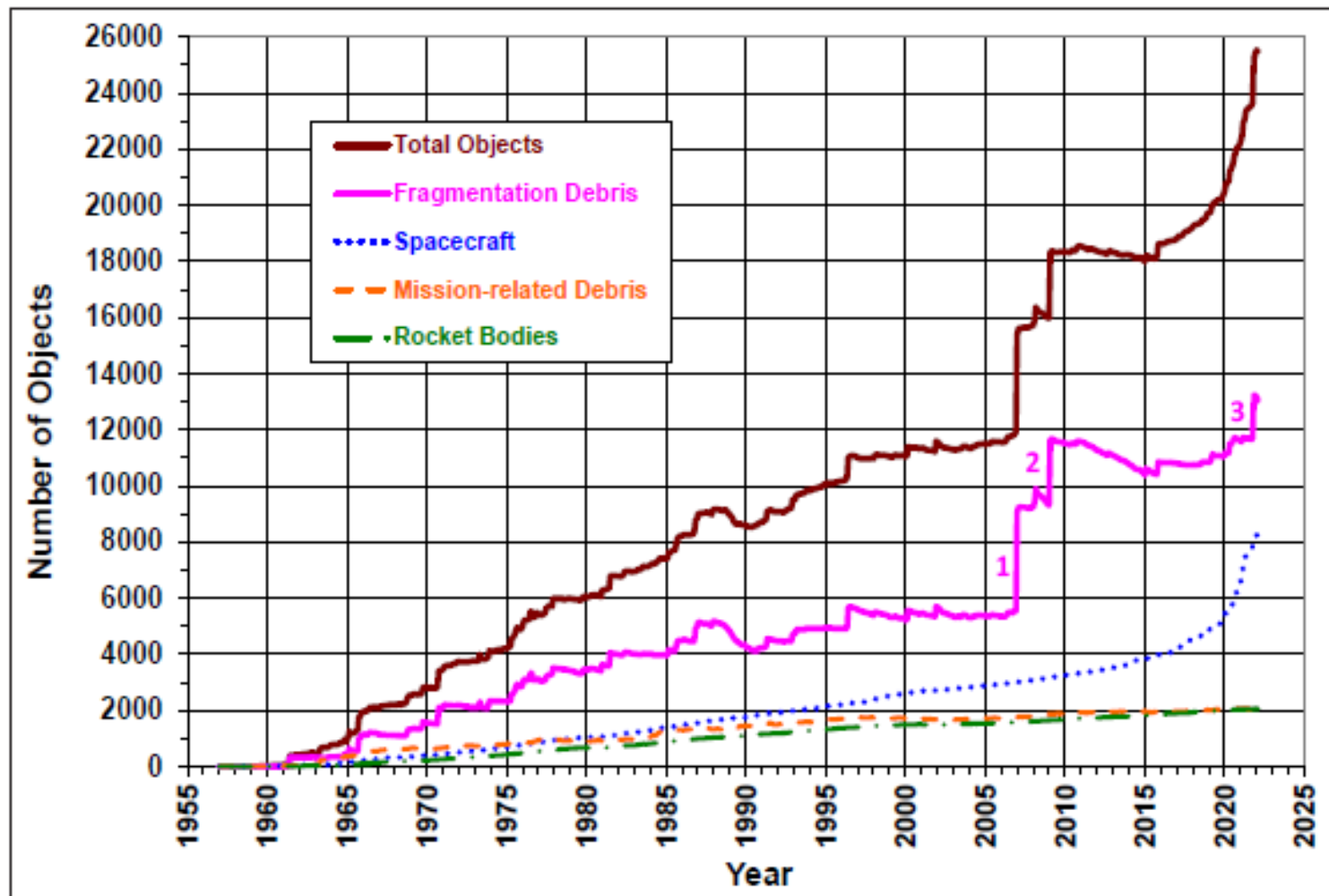


Figure 4. Historical increase of the cataloged objects based on data available on 1 March 2022. The three upward jumps in fragmentation debris correspond to (1) the ASAT test conducted by China in 2007, (2) the accidental collision between Iridium 33 and Cosmos 2251 in 2009, and (3) the ASAT test conducted by the Russian Federation in November 2021. More Cosmos 1408 fragments are expected to be added to the catalog in the coming weeks and months.

Credit: NASA Orbital Debris Program Office

Office of Space Commerce



Space Policy Directive 3, June 2018

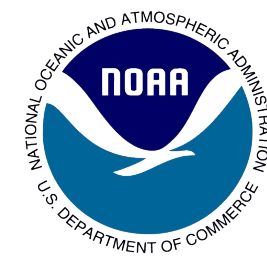


- **Transfers responsibility from Department of Defense (DoD) to Department of Commerce (DOC) for commercial and international missions**
- **Recognized the pressing need for more accurate and timely space situational awareness (SSA) data:**
 - **Supporting needs of commercial and international space operators**
 - **Enhancing data sharing and transparency among space operators**
 - **Promoting best practices and norms of behavior**
 - **Providing space traffic coordination for current and future missions**
- **Enables the DoD to concentrate on space domain awareness**

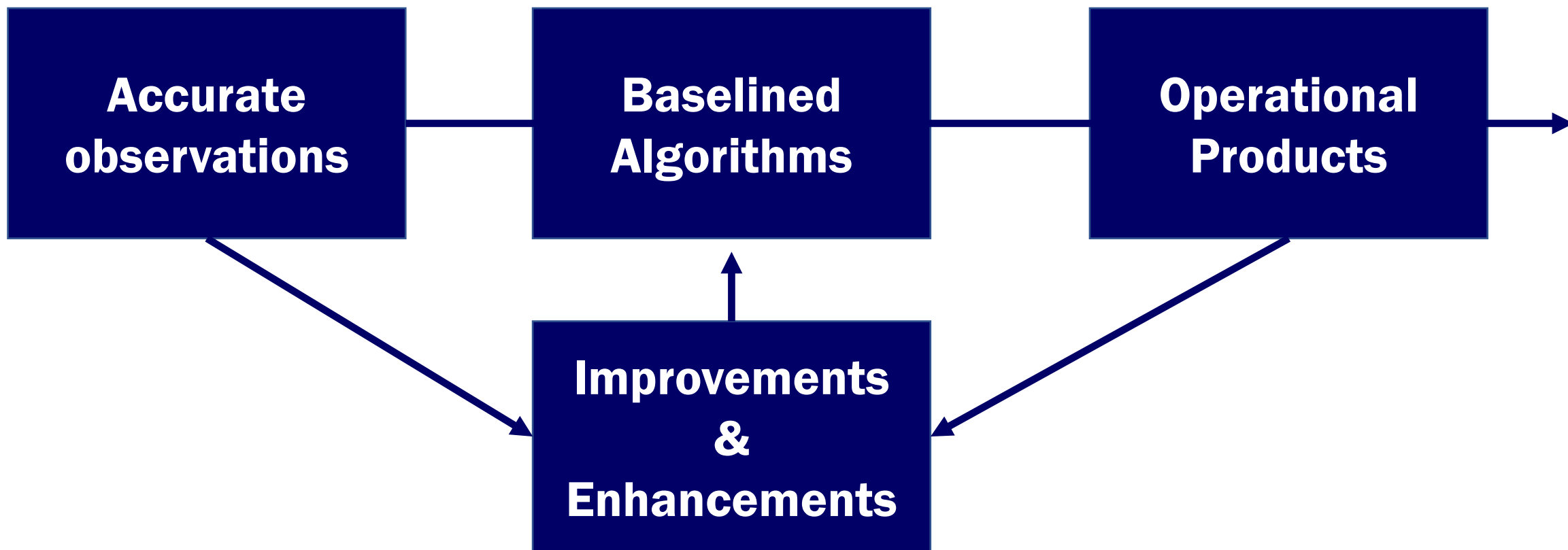


Astronomy Support Concept

- **Availability of highly accurate satellite and debris object ephemeris**
- **Enhanced additional observational data collected by SSA and astronomy sensors added as needed**
 - **Brightness**
 - **Radio frequency characteristics**
- **Facilitating partnerships with industry and academia to develop useful operational tools**
- **Likely categorized as an “advanced service” as defined in SPD-3**

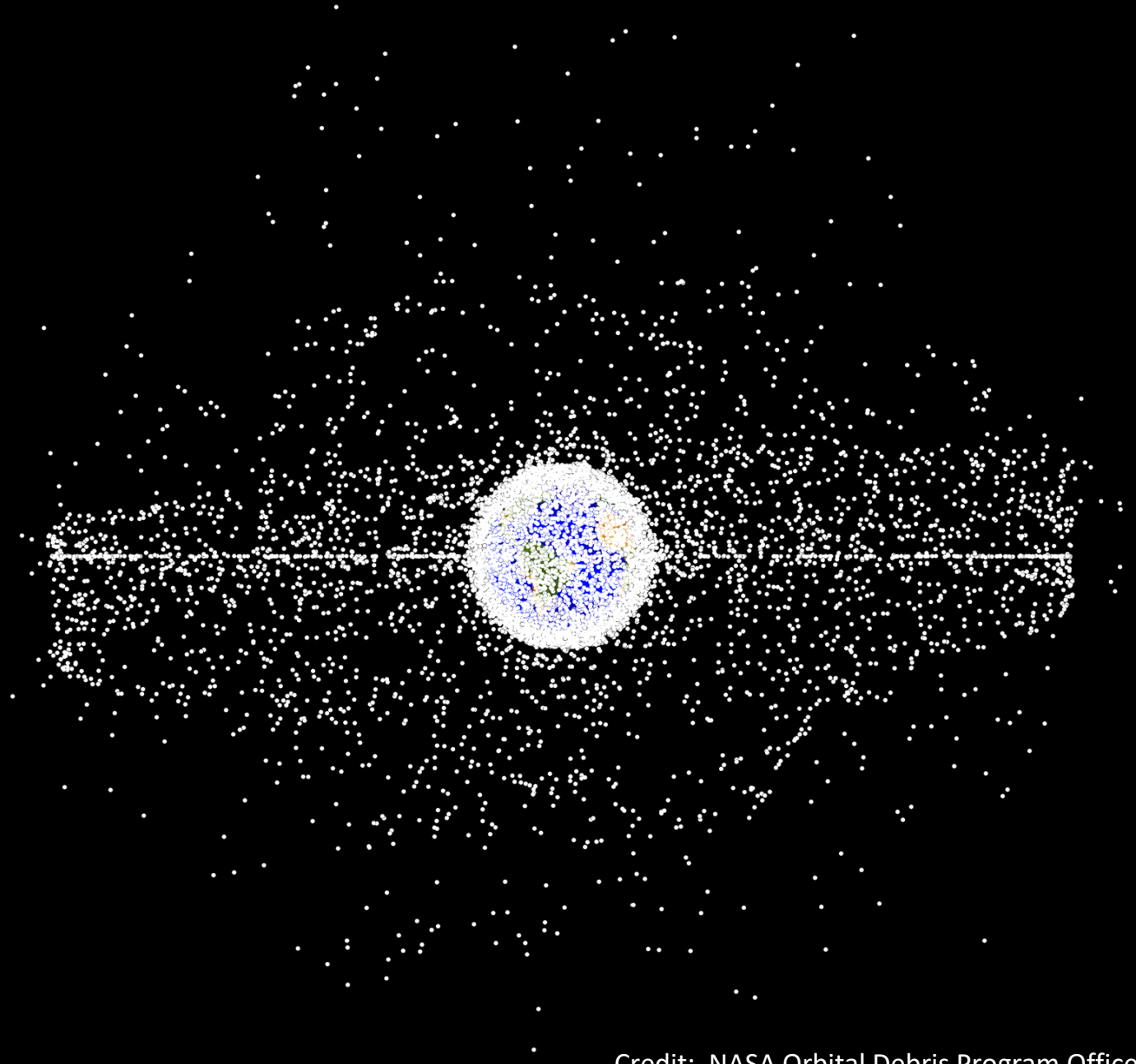


Conceptual Data Flow



Thank you!

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Credit: NASA Orbital Debris Program Office