



# NOAA Office of Space Commerce (OSC)

## Project Highlights

### Services:

- Engineering and Mission Operations Support
- Program Support
- Technical Studies
- User/Stakeholder/Enterprise Support

### Technical Capabilities:

- Orbital mechanics
- Astrodynamics
- Common analytical methodologies utilized in
  - Space Situational Awareness (SSA)
  - Space Traffic Coordination (STC)
  - Space Traffic Management (STM)
- Satellite operations
- Conjunction analysis

### Impacts:

- Transfer of Responsibility of TraCSS from DoD to NOAA
- Improved User/Stakeholder Engagement
- Integration of Space Debris Tracking

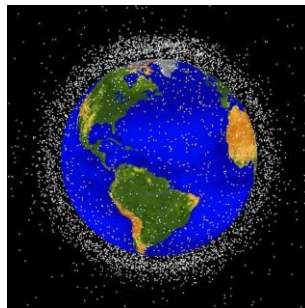
## GST Support for NOAA OSC

GST supports OSC, the principal unit for space commerce policy activities within the Department of Commerce (DOC). OSC's mission includes fostering the conditions for the economic growth and technological advancement of the U.S. commercial space industry. OSC is also responsible for tracking orbital space debris. GST's role is focused on supporting the Traffic Coordination System for Space (TraCSS) program including the transition of the TraCSS system from the Air/Space Force to the DOC.

As the OSC TraCSS representative, we collaborate regularly with OSC, NASA, and DoD leadership and stakeholders, prepare planning and tracking documents



(e.g., risk management, decision-matrices, project plans), identify areas for process improvement, and ensure that associated data collection and transfer activities are operationalized and monitored in preparation for implementation in TraCSS.



As the Technical Studies Lead, GST collects and analyzes relevant project data and ensures that data collected is rigorously examined to extract meaningful insights. We develop strategic recommendations to shape future acquisition strategies and operational decisions within the TraCSS program. We provide technical program support to provide recommendations and alternatives that enable operational effectiveness while ensuring cost efficiency, technical soundness, and compliance with program objectives. GST supported the pre-formulation and formulation phase of TraCSS. One objective of GST's work is to assess the viability of commercially available data to perform a

conjunction assessment as compared to the highly sensitive measurement produced with DoD radar. GST staff co-authored journal articles detailing the viability of using commercial Space Situational Awareness (SSA) data to manage the safety of civilian LEO satellites. The technologies that were assessed in the study were commercial space tracking radars and optical wide-field-of-view-searching sensors from two vendors.

GST has provided studies that support the prediction of potential satellite collisions and participated in the determination of DOC and OSC prototype satellite programs and algorithms in comparison to the DoD counterpart satellite programs. These studies include the NRL-Aero-space Improved Owner/Operator (O/O) Ephemeris Study, the Consolidated Pathfinder final report, and the GEO Pilot documentation. Additionally, we contributed as an author for a paper presented at the 75th International Astronautical Congress (IAC) International Astronautical Congress (IAC): "The TraCSS Consolidated Pathfinder: Leveraging Commercial Capability in LEO." We provide comprehensive technical program support to provide recommendations and alternatives that enable operational effectiveness while ensuring cost efficiency, technical soundness, and compliance with program objectives. We foster active stakeholder engagement, maintain effective data management practices, and establish reliable reporting mechanisms.