

# ***Ground System Architectures Workshop***

Leaping into New Space:  
How to Leverage and Integrate  
with Traditional Aerospace

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February 26–29, 2024  
Renaissance Los Angeles Airport Hotel  
Classified Session—February 29, 2024

*Working Group B Outbrief*

*Leveraging New Space for Ground  
System Enterprise Evolution*

*Michael Bonadonna, NOAA/NESDIS/SAE and  
Stephen Marley, The Aerospace Corporation*

*February 29, 2024*



## Session Goals

The WG discussed the progress to realize mission-agnostic ground enterprises from several government agencies. Building on the successful panel discussions hosted at GSAW since 2021, this year the WG, in addition to updates from government agencies, provided a forum for commercial service providers to give their perspective on leveraging New Space within government, discussions focused around:

- How does the government take advantage of rapid innovations and commoditization of commercial space services?
- How does government position itself to effectively to acquire ground services rather than developing and purchasing ground systems?
- How does government take advantage of industry's willingness to invest in new ideas and take business and technological risks?

The WG will be focused around two key topics:

- Data Acquisition and Ground Station Services
- Satellite Operation Services

*Working Group B*



# ***Presenters/Panelists***

## **Topic**

### **Government Update**

- **NOAA/NESDIS– Steve Marley, Justin Gronert**
- **NASA/CIS Commercial Innovation & Synergies – Devin Bitner**
- **USSF/SSC/CM Commercial Services Office (COMSO) – Aaron Stevenson**

### **Commercial Update**

- **MAXAR – Jarad Gil**
- **Azure Space – Juan Carlos López**
- **Xplore – Ashish Mishra**
- **GMV – Jose Miguel Lozano**
- **Parsons – Ed Baron**



# Key Points



- Each Government agency has a different strategy for engaging with commercial service providers
  - *NOAA is focused on leveraging commercial service to “greenfield” specific problem areas through low operational risk pilots of medium TRL*
  - *NASA leverages commercial services to provide high TRL operational services to meet agency needs*
  - *USSF has a broad engagement strategy to select both operational needs and innovative approaches*
- Significant variety of commercial service offering ranging from traditional to turn-key solutions, to Ground Segment as a Service, and Ground Operations as a Service, as well as hybrid solutions.
  - *New space opportunities drive a need for quicker , more agile ground systems development*
  - *Government should always consider commercially available solution first. The capability probably already exists.*
- Challenges
  - *USG willingness to engage with Commercial providers as partners rather than as a vendor*
  - *Ability of USG to identify opportunities where they can assume more risk, less documentation, novel acquisitions*
  - *Frequency Licensing in the US is a barrier to provisioning services at the speed of need*
- Concerns
  - *Risk of commercial services devolving into a new version of vendor lock*
  - *How to mash business horizons (1-3 yrs) with government budgeting needs (5-10 yrs)*



# Conclusions



- There is a rich community of commercial service providers that can meet government needs
  - *There is little justification for USG to continue to build bespoke ground segment solutions*
- USG approaches to engaging with industry needs to evolve
  - *Reimagining of the government/contractor relationship, including the exploration of relevant technology and business services.*
  - *Strategic business issues such as the acquisition, regulatory, and cultural transformations to exploit commercial technology and services effectively, affordably and securely.*
- Industry needs stability/certainty
  - *A publicly know strategy (with stable funding) where the agencies provide enough visibility to create a feasible business plan*
  - *Contractual framework balancing opportunities for new companies with mid-term investment by incumbents.*
  - *Standardize service needs & consider “Allied by design” strategies to include commercial service providers*