



ATO Space Collaborative Decision Making (SpCDM) Overview

March 2023



ATO SPACE CDM

“ ...BY SHARING INFORMATION, VALUES, AND PREFERENCES, STAKEHOLDERS LEARN FROM EACH OTHER AND BUILD A COMMON POOL OF KNOWLEDGE, RESULTING IN DECISIONS AND ACTIONS THAT ARE MOST VALUABLE TO THE SYSTEM...”

AAP ARC Report

ATO SpCDM Purpose

Recommendation of the Airspace Access Priorities Aviation Rulemaking Committee (AAP ARC)

– 8/21/19 report

ARC recommendation #3

“...the FAA establish a CDM like space operations committee to recommend appropriate information to be exchanged with the FAA for more dynamic airspace management and situational awareness and to help implement the details charted by the steering committee.” –p.21

Preview: CDM charter highlights

Scope

- Data and information exchange
- Integrated air and space operations and initiatives
- Access to the NAS (airspace), policies and procedures
- Tools and technology, and data quality

Executive Steering Committee (ESC) designations

Space Operations Committee (SpOC) formation

Sub teams

Handling of proprietary information – *(protect) to the full extent authorized by law*

Data and information exchange

- Utilize relevant data elements
- Further define the data sets
- Focus on methods

ATO SpCDM is and is not...

ATO SpCDM is

- ✓ Focused on space operations
- ✓ An operating paradigm and a philosophy through information exchange
- ✓ Follows best practices of 25+ history with Aviation CDM
- ✓ Allow space operators to build the collaboration framework with FAA – leverage existing industry bodies where appropriate rather than duplicate

ATO SpCDM is not

- ✗ Not about licensing and regulation
- ✗ ATO SpCDM is not a decision making body (e.g. FACA)
- ✗ Will not make decisions or consensus for FAA, rather inform ATO Space Operations
- ✗ Not creating data standards

The work is voluntary

ATO Space CDM Core Elements

Executive Steering Committee
(ESC)

Space Operations Committee
(SpOC)

Data Exchange Sub Team

International
Sub Team

Future Sub
Team(s)

DE 1: Space
Data
Integrator
(SDI)

DE 2: Mission
Planning &
Data
Exchange

FY21

- Launch ATO Space CDM ✓
- FAA leadership approval ✓
- Initiated charter ✓

FY22

- Pilot sub-teams ✓
- Initiate SpOC ✓
- Launch sub-teams ✓

FY22-24

- Host general meetings/sub teams

FY25

- Assess program for future SpOC programs

ATO SpCDM Sub Teams

Sub Teams provide a forum for the ATO service units within the FAA and industry to connect and address space-related issues. The collaborative nature of the sub team serves as a cornerstone to the CDM process.

Sub Teams:

- ✓ Consist of government and industry professionals with specific subject matter expertise from FAA and ESC member organizations
- ✓ Are charged by the ESC to explore specific tasks
- ✓ Provide recommendations and requests for tasks to the ESC and SpOC for deliberation, discussion, and approval

Executive Steering Committee
(ESC)

Space Operations Committee
(SpOC)

Data Exchange Sub Team

International
Sub Team

Future Sub
Team(s)

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Data
Integrator
(SDI)

DE 2: Mission
Planning &
Data
Exchange

ATO SpCDM 12-Month Schedule (as of March 2023)

	Key overall activities	Executive Steering Committee	SpOC	Location
	Significant meetings	Meet every 6 months	Meet every 2 months	Alternating locations
FY23 Q3	SpOC general meeting (V)		March 29-30, 2023	Dallas, TX
FY23 Q3	SpOC general meeting (VI)	June 29, 2023	June 27-28, 2023	Washington, DC
FY23 Q4	SpOC general meeting (VII)		August 23-24, 2023	TBD
FY24 Q1	SpOC general meeting (VIII)	October 26, 2023	October 24-25, 2023	TBD
FY24 Q2	SpOC general meeting (IVX)		February 7-8, 2024	TBD
FY24 Q3	SpOC general meeting (X)	April 25, 2024	April 23-24, 2024	Washington, DC

ATO SpCDM Space Operations Committee (SpOC)

Air Traffic Organization (ATO)

System Operations	Policy
NAS Operations	Program Management Organization
Space Operations	Strategy
Safety & Technical Training	Terminal Services
Air Traffic Services	Technical Operations
International	

Active Launch and Reentry Operators (LROs)

ABL Space Systems	Space Perspective
Blue Origin	SpaceX
Boeing	Stoke Space
Firefly Aerospace	United Launch Alliance
Relativity Space	Virgin Galactic
Rocket Lab	Other stakeholders as appropriate e.g., FAA Office of Commercial Space (AST), NASA, Space Force, and key associations
Sierra Space	

ATO SpCDM SpOC

Participants actively work with Space Operations

Launch and Reentry Operators

- Active intent to launch by 2025
- Actively working with Space Operations on launch and reentry operations
- Maintain launch and reentry operational vehicles
- Active with gov't agencies (NASA/DoD)

Will also include

- FAA Air Traffic Organization (ATO) representatives
- Key Associations

Include in future

- *International Organizations*
- *Stakeholders as appropriate*

Not expecting to include at this time

- *Spaceports*
- *Regional Space Agencies*
- *Facilitators of Space Ops*

ATO SPACE CDM

“ COLLABORATION IS THE ONLY WAY WE WILL
ACHIEVE COMPREHENSIVE SPACE INTEGRATION ”

Executive Steering Committee



QUESTIONS

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ATO Space CDM Roles

Executive Steering Committee (ESC)	Space Operations Committee (SpOC)	Sub Teams
<ul style="list-style-type: none">• Oversight for ATO Space CDM• Provide overall strategic direction/coordination of efforts related to the integration of Space launch and reentry operations• Direction, guidance and process to sub-teams and sub-team activities• Selects industry co-chair• Robust and productive discussion and debate, leading to consensus• Actively participate in a CDM data-sharing agreement with the FAA• Create and dissolve sub-teams, as needed	<ul style="list-style-type: none">• Collaborate through information exchange on policy and strategy regarding airspace access and integration• Discuss appropriate information to be exchanged with the FAA for more dynamic airspace management and situational awareness and to help implement the details charted <p>(As stated by the ARC p.21)</p>	<ul style="list-style-type: none">• Provide subject matter expertise• Provide reports, agendas and requests through the SpOC co-leads• Work with (not independently) of the ESC and SpOC

Priorities

Data Exchange

AAP ARC – 8/21/19 (p.21)

The CDM-like group should:

- **Utilize relevant data elements** and formats be specified and standardized to ensure efficiency and interoperability.
- **Further define the data sets** and metrics moving forward and assess applicability to NAS Users.
- **Focus on methods** of achieving near-term improvements in airspace operations.