

Launch Sites

[FIR boundaries](#)

Go TBC Hold Other

Current State



Increased competition for airspace (rockets, aircraft, drones, balloons)



Legacy systems and processes – AFTN, NOTAM



Regulators and ANSPs are facing staffing and funding challenges



Limited automation in approvals/cancellation processes



Launches/re-entry impact airlines (fuel, delays, connections etc)



Lack of effective coordination between airspace users, ANSPs and regulators



The Current systems are under pressure – the sector is growing and needs help



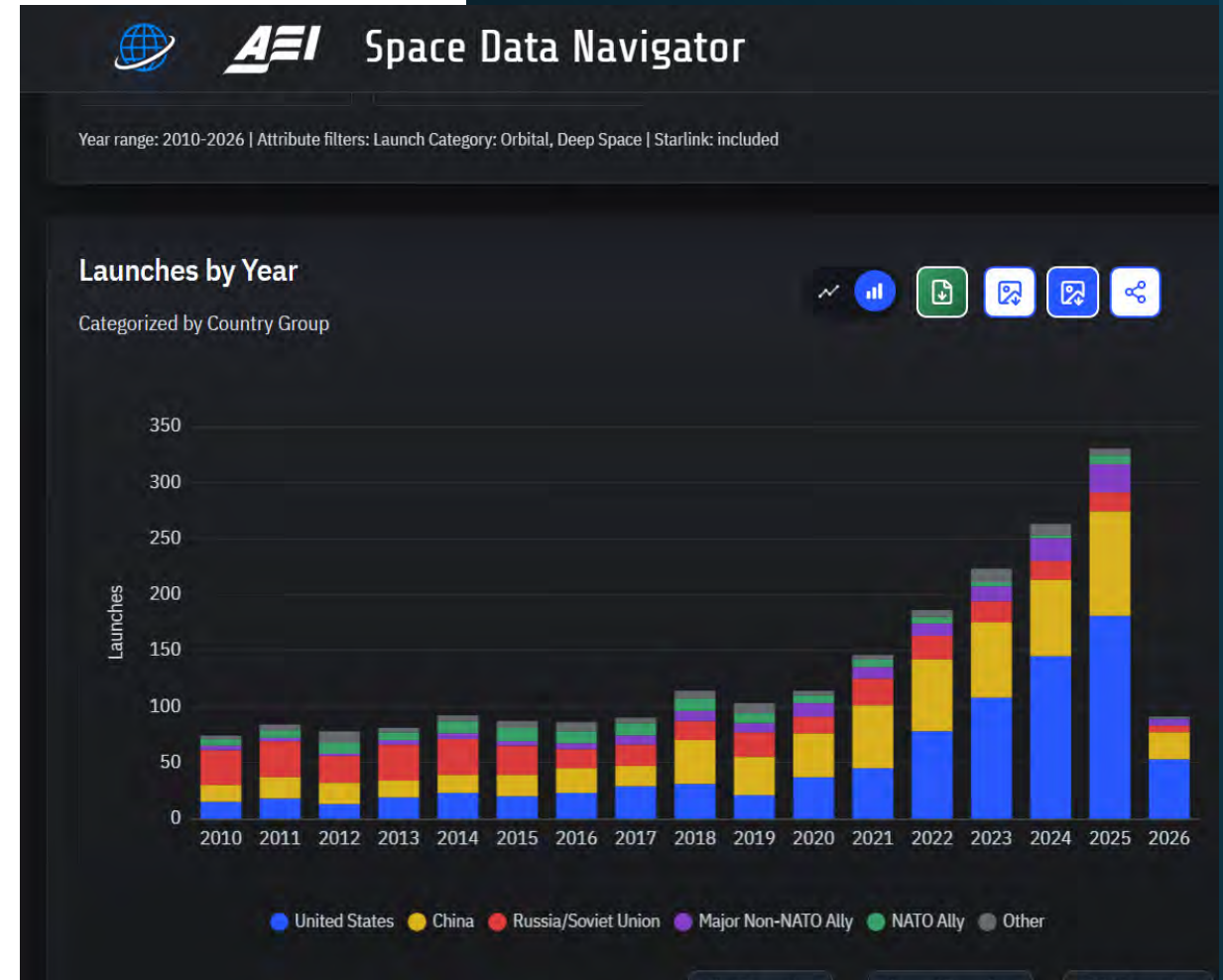
Launch companies want to reduce notification periods and move to “file and Fly” model.



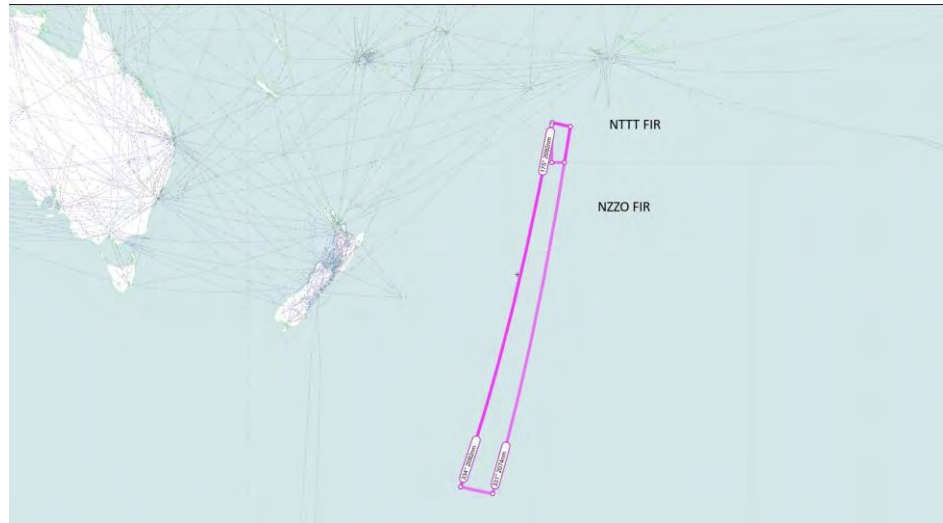
Launch Window
Real-time mission coordination

Launch Data

By 2030, the total annual launch count is expected to approach 350-400, and by 2035, projections exceed 900 annually.
(Global Information Inc.)



Hazard Areas and impact on flights



(B5410/25 NOTAMN

Q) NZO/QRDCA/IV/BO /W /000/999/4241S15248W999

A) NZO B) 2507170350 C) 2507170720

E) TEMPO DANGER AREA NZD028 (AUCKLAND OCEANIC FIR) IS PRESCRIBED AS FOLLOWS:

ALL THAT AIRSPACE BOUNDED BY A LINE JOINING:

30 00 S 155 20 W

59 40 S 164 45 W

59 13 S 168 58 W

25 41 S 157 00 W

30 00 S 157 00 W

30 00 S 155 20 W

ACTIVITY: SPACE DEBRIS RETURN

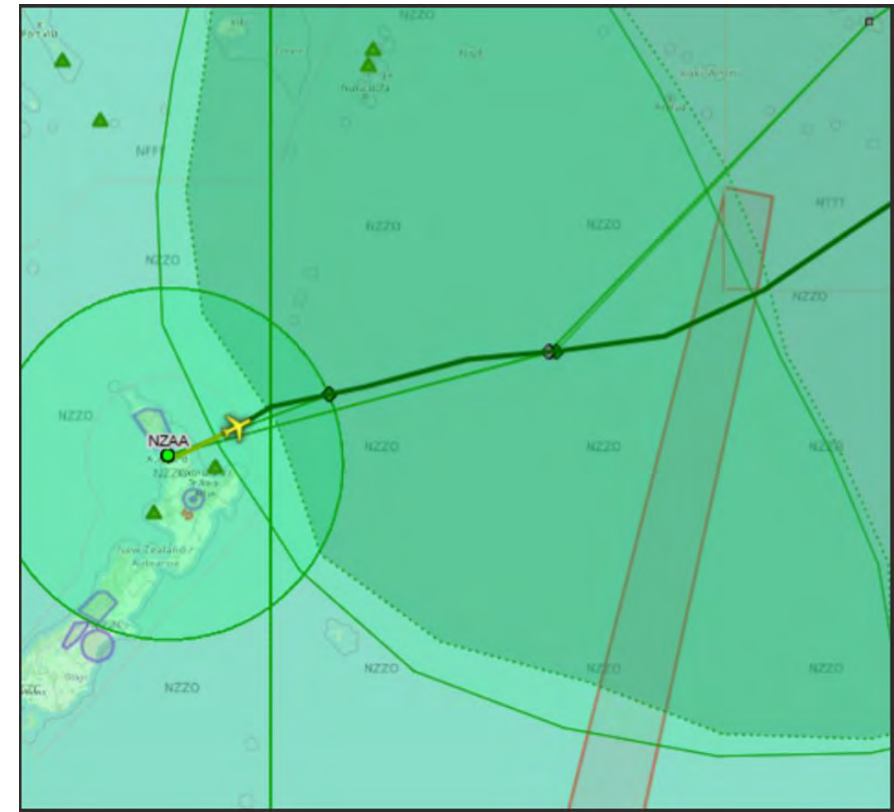
USER AGENCY: FOREIGN SPACE AGENCY

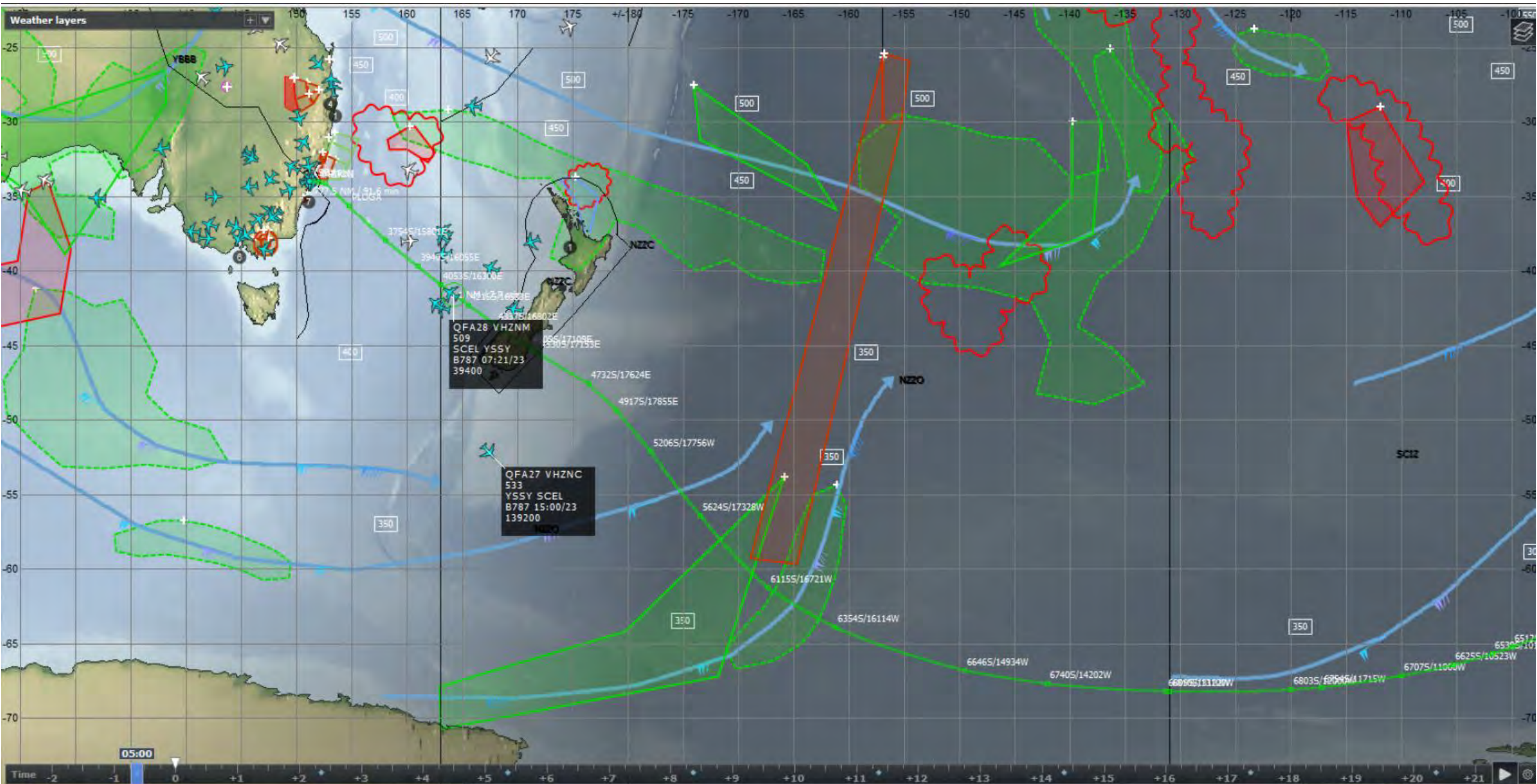
PRESCRIBED PURSUANT TO CIVIL AVIATION RULE PART 71 UNDER A DELEGATED

AUTHORITY ISSUED BY THE DIRECTOR OF CIVIL AVIATION

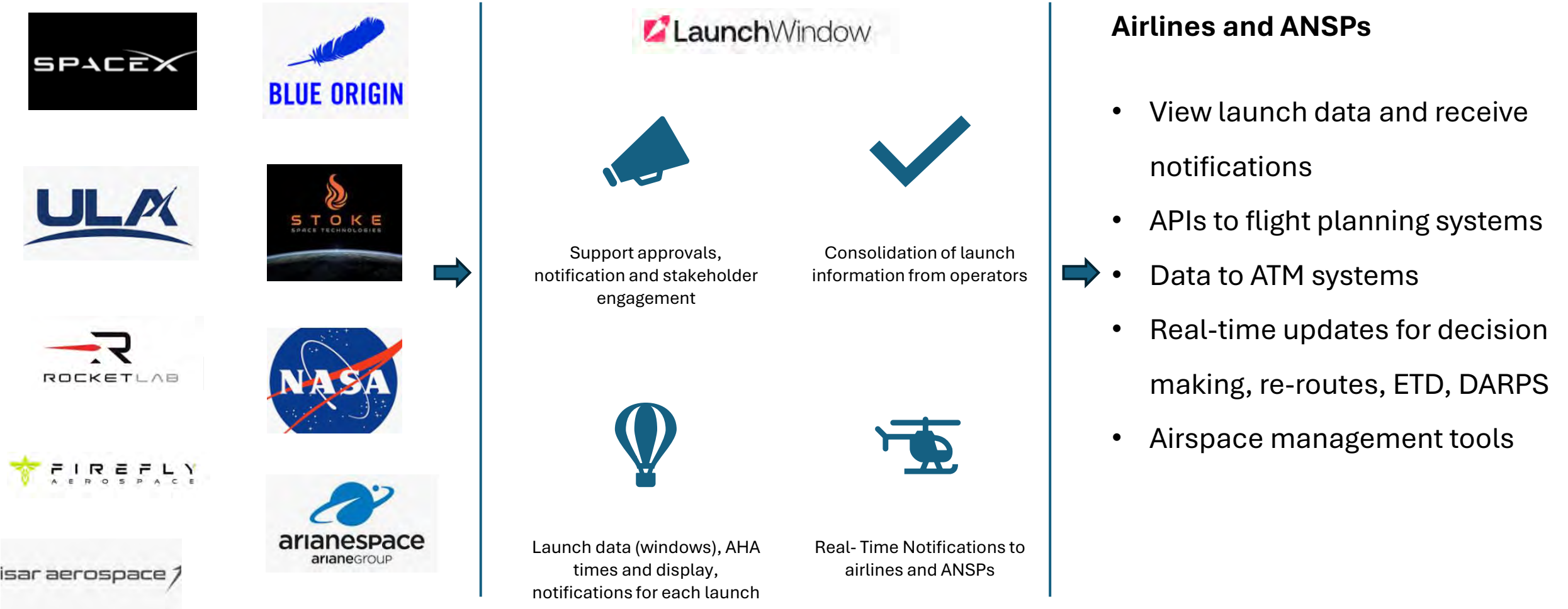
F) SFC G) UNL)

Backup REENTRY day:	18 Jul 25 / 0350Z	thru	18 Jul 25 / 0720Z
Backup REENTRY day:	19 Jul 25 / 0350Z	thru	19 Jul 25 / 0720Z
Backup REENTRY day:	20 Jul 25 / 0350Z	thru	20 Jul 25 / 0720Z
Backup REENTRY day:	21 Jul 25 / 0350Z	thru	21 Jul 25 / 0720Z
Backup REENTRY day:	22 Jul 25 / 0350Z	thru	22 Jul 25 / 0720Z
Backup REENTRY day:	23 Jul 25 / 0350Z	thru	23 Jul 25 / 0720Z





Launch Window process



Step 1

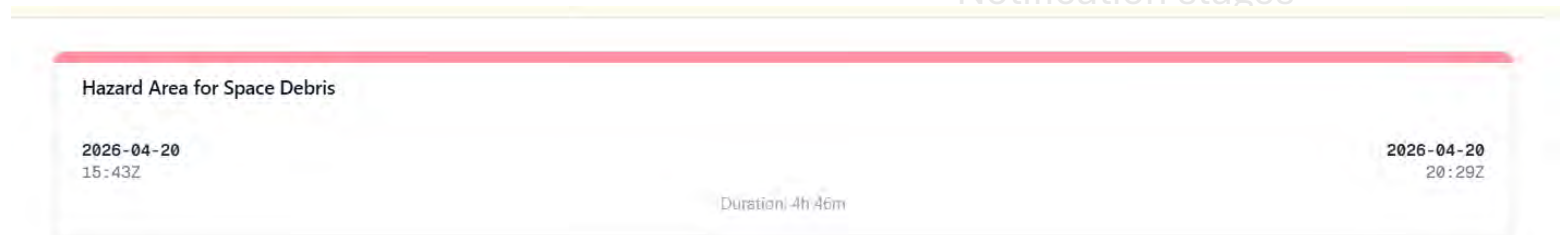
Hazardous Space Debris Coordination

Attempt	Hazardous Window Open	Hazardous Window Close
Primary	04/19 1543Z	04/19 2029Z
Backup	04/20 1543Z	04/20 2029Z
Backup	04/21 1543Z	04/21 2029Z
Backup	04/22 1543Z	04/22 2029Z
Backup	04/23 1543Z	04/23 2029Z
Backup	04/24 1543Z	04/24 2029Z
Backup	04/25 1543Z	04/25 2029Z

Hazard Area Coordinates

Latitude (dms)	Longitude (dms)
25° 23' S	156° 56' W
26° 3' S	153° 24' W
43° 4' S	157° 3' W
59° 49' S	163° 34' W
59° 13' S	168° 58' W
42° 28' S	161° 17' W

Notification stages



Space Exploration Technologies, Corp. (SpaceX) would like to inform you of the potential for space debris from reentry of Starlink g17-22

We expect the final hazardous window after lift off to be 46 minutes in duration.

Step 2

Prelaunch De-orbit notification

SpaceX Starlink g17-22 is targeting to lift off from Vandenberg, CA at Apr 19, 14:34:20 UTC. End of launch window is Apr 19, 18:00:00 UTC.

The deorbit hazard area should be considered dangerous from Apr 19, 16:17:20 UTC until Apr 19, 20:29:00 UTC



2. For stationary ALTRVs issued for the purpose of space launch or reentry operations, ensure aircraft remain clear of the peripheral boundary.

c. Clear aircraft on airways or routes whose widths or protected airspace do not overlap the peripheral boundary.

d. For stationary ALTRVs and temporary flight restrictions (TFR) issued for the purpose of space launch or reentry operations to protect aircraft hazard areas (AHA):

1. Do not allow nonparticipating aircraft to operate in an AHA unless real-time notifications of the actual start of activity and end of activity of the AHA is provided to affected facilities via ATO Space Operations coordination.
2. Do not provide ATC services to aircraft at airports that lie within an AHA unless real-time notifications of the actual start of activity and end of activity of the AHA is provided to affected facilities via ATO Space Operations coordination.

REFERENCE-

FAA Order JO 7210.3, Para 20-7-4, Airports within Aircraft Hazard Areas and Transitional Hazard Areas.

Step 3

Lift off De-orbit notification

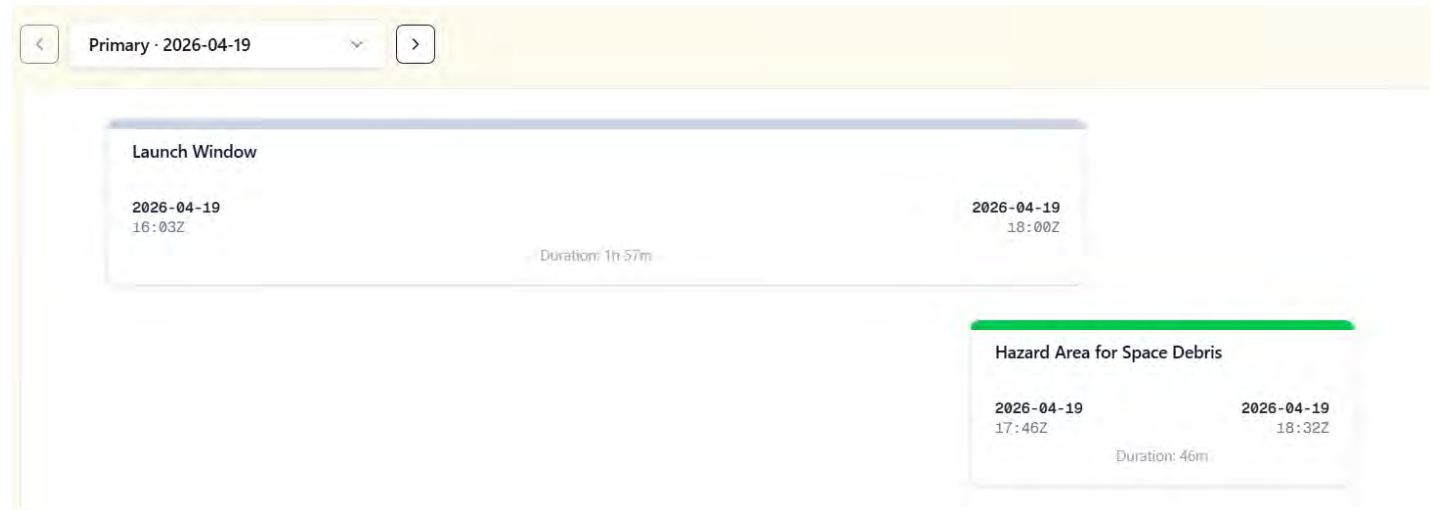
SpaceX Starlink g17-22 has lifted off from Vandenberg, CA at Apr 19, 16:03:09 UTC.

The deorbit hazard area should be considered dangerous from Apr 19, 17:46:09 UTC until Apr 19, 18:32:09 UTC

(B2063/26 NOTAMN

Q) NZZO/QRDCA/IV/BO /W /000/999/4245S15220W999

A) NZZO B) 2604181540 C) 2604182030



The airspace is available for use 1 hour 58 mins prior to the end time of the NOTAM

Key benefits of Launch Window include:



Centralized Process: A single platform for ANSPs and Regulators to manage and view rocket activities.



Automation: Automated processes for data input, notifications, cancellations, and amendments.



"File and Fly" Support: Real-time data to support launch company requests for shorter launch notification windows.



Deconfliction: Increased awareness of concurrent operations. Launch Window helps operators deconflict such schedules as use of airspace increases.



Stakeholder Management: Tools to manage information and monitor stakeholder activity and responses.



Regulatory Support: Provides data to help regulators manage hazard area times and guide future decisions on airspace requirements and AHA volumes.