NAS Enterprise Architecture

Infrastructure Roadmaps v19.0

BASELINE

February 2025

Infrastructure Roadmap Overview

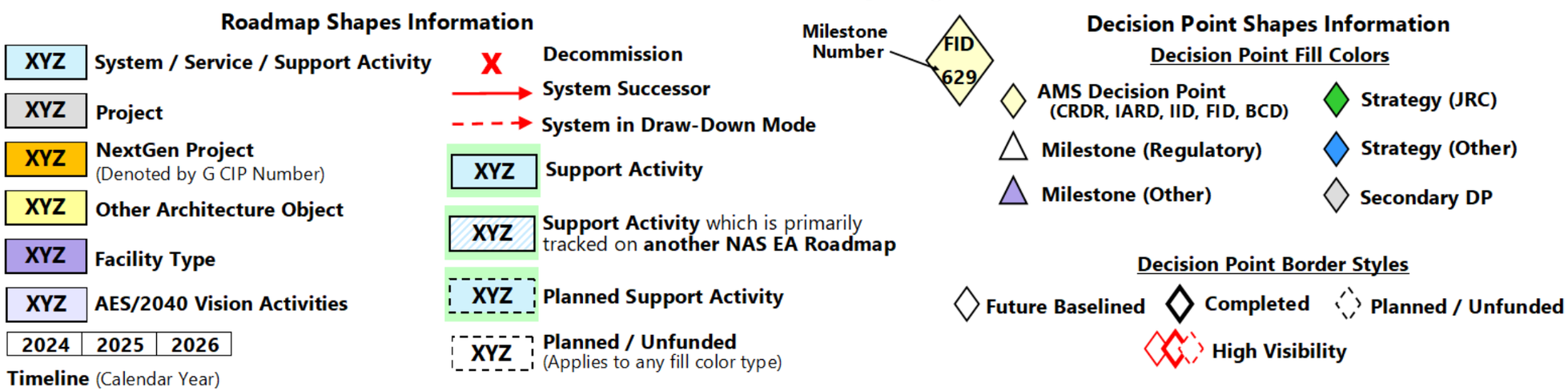
What are the Infrastructure Roadmaps?

- The FAA Infrastructure Roadmaps show the progression of system deployments, investments, and key decision points for major NAS acquisitions. They depict the acquisition strategy to evolve the NAS from the As-Is to the To-Be environment.
- The Infrastructure Roadmaps show all Capital Investment Plan (CIP) investment projects and systems identified in the NSIP that will deliver the necessary functionality to enable OIs and BTIs.

Guidelines for Understanding the Roadmaps

- The Infrastructure Roadmaps are organized by Domain (Automation, Communication, etc.) and depict projects, systems, services, decision points, and support activities.
- The timeline is in calendar years and shows a 17-year outlook.
- The roadmaps have swim lanes for Infrastructure (white), Support Activities (green), and Platform/Compute (purple).
- The DP diamonds represent the quarter in which a decision will occur.
- The Support Activity bars represent the dates that work is being performed on the activity.
- The Project bars represent the dates that CIP funding is allocated to a project.
- The System and Service bars represent the dates that a system or service is operational, with red lines indicating sustainment, drawdown, or convergence

Infrastructure Roadmap Legend



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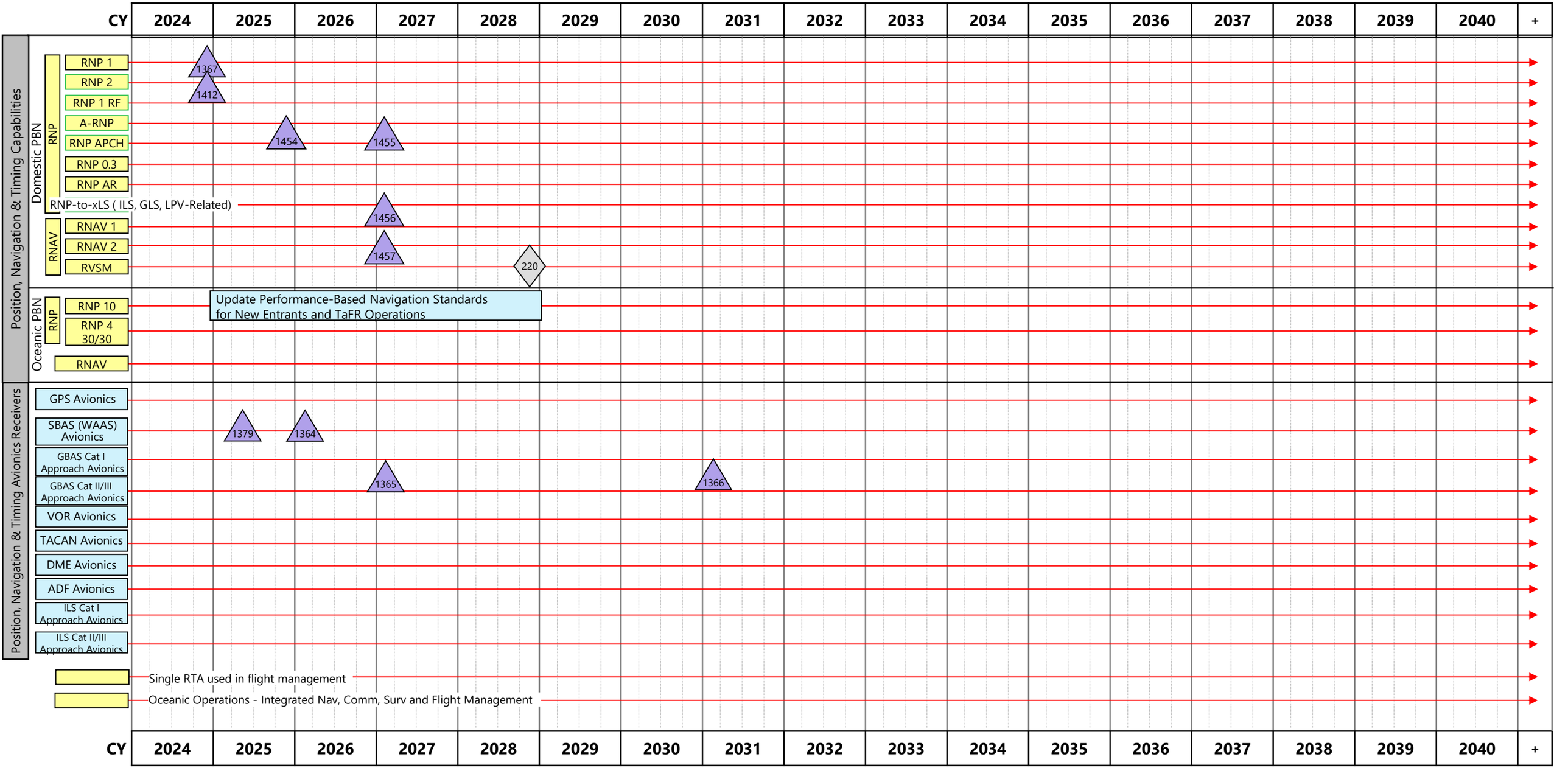
Aircraft

The Aircraft roadmap presents planned advances in Airframe and Avionics in coordination with NAS NextGen improvements.

Items with a green outline are components of the FAA Minimum Capability List (MCL)

Aircraft Roadmap (1 of 5)



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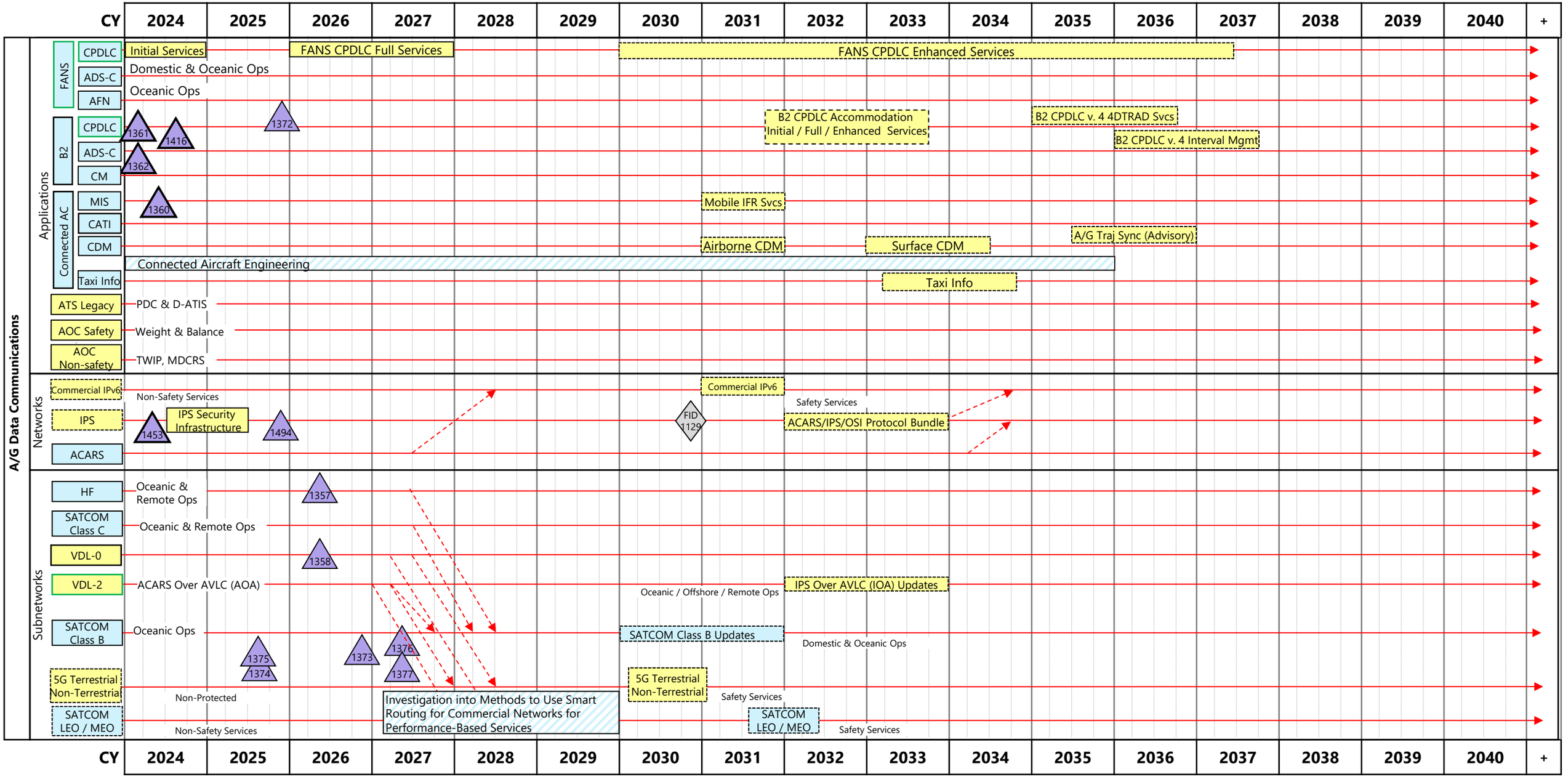
Aircraft Roadmap (2 of 5)

Items with a green outline are components of the FAA Minimum Capability List (MCL)



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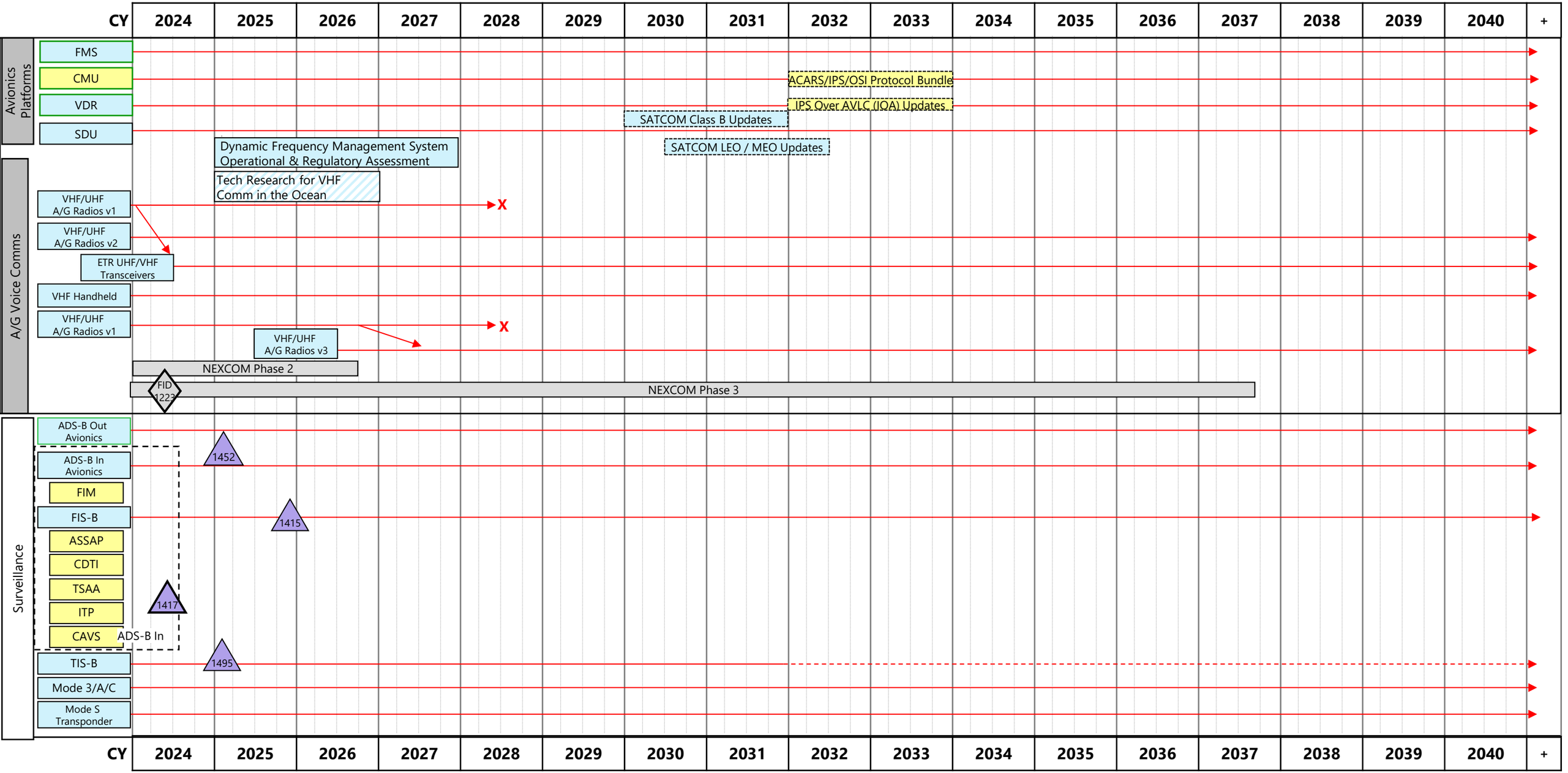
Aircraft Roadmap (3 of 5)



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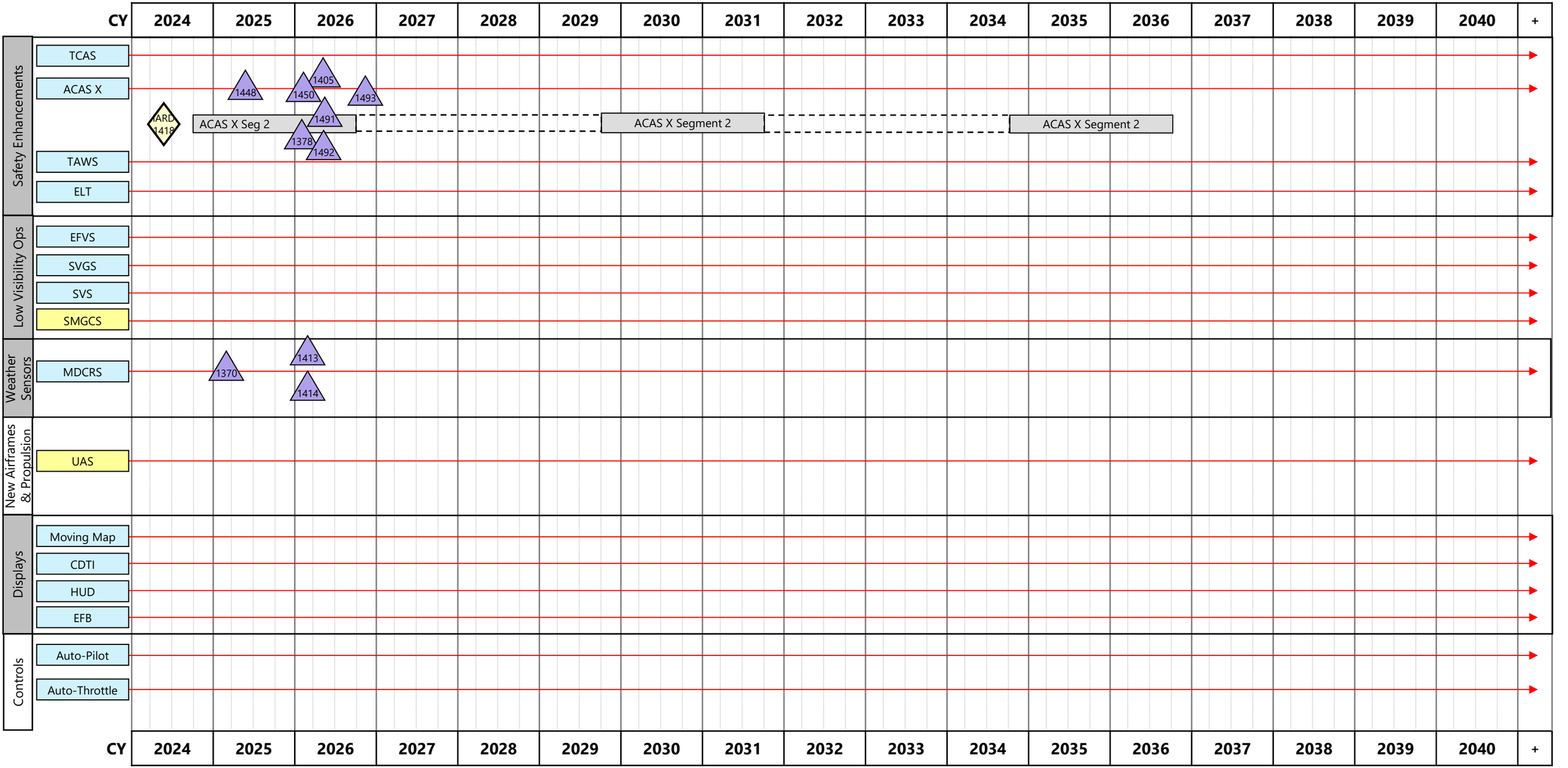
Aircraft Roadmap (4 of 5)



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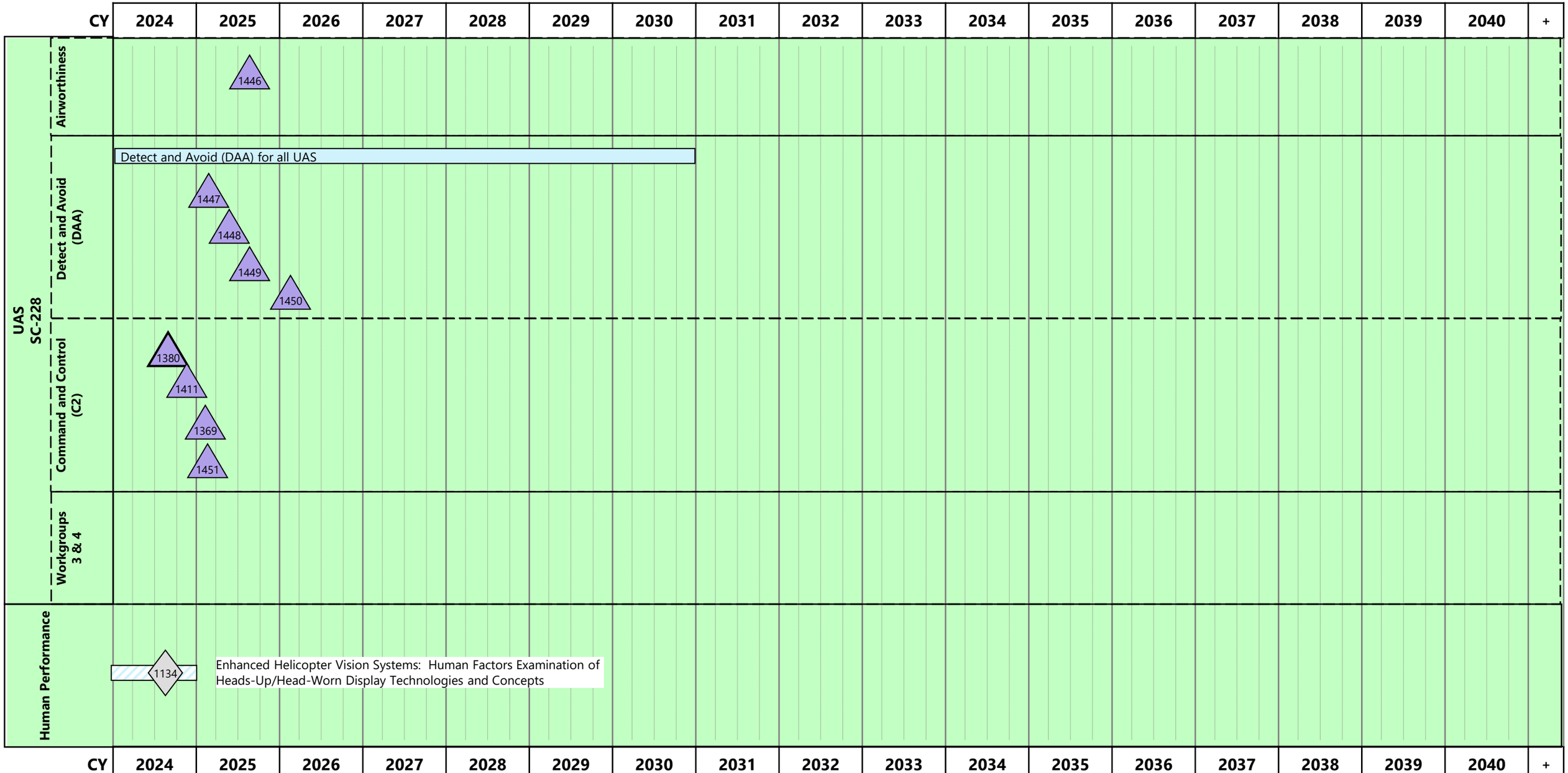
Items with a green outline are components of the FAA Minimum Capability List (MCL)

Aircraft Roadmap (5 of 5)



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Aircraft Roadmap: Assumptions

Identifier	Description
AC-01	The roadmap identifies four phases a) CONOPs development and R&D in required areas b) Standards development c) AVS Approval d) ATC Procedure development e) Deployment. After the standards process is complete, and manufacturers have developed, integrated, fully tested and made new avionics available, aircraft, engines and fuels available, an additional 7 to 10 years is needed to achieve wide scale equipage of a new capability 1. Different aircraft are expected to equip with different equipment. This roadmap does not currently distinguish between aircraft types.
AC-02	The aircraft roadmap includes environment research areas and assumptions and linkage to Mission Support EA.
AC-03	Any aircraft to include any UAS that participates in the NAS must operate in a way that is transparent to the ANSP and ATSP.
AC-04	The Minimum Capability (MCL) items documented in the Aircraft roadmap are accurate as of the September 2019 draft of the MCL.
AC-05	The Minimum Capabilities List (MCL) provides clear and comprehensive guidance to support equipage across all fleets operating in the National Airspace System (NAS). The MCL's purpose is to: • Define the minimum aircraft capabilities and associated equipment needed to maximize benefits from FAA investment and operational improvements • Guide "forward-fit" aircraft equipage and inform operator investment decisions • Maximize the return on investment for both the FAA and airspace users
AC-06	The yellow roadmap symbol is being utilized as aircraft operational capabilities on this roadmap.

Aircraft Roadmap: Decision Points

DP #	Target Date CY	Primary Domain	Type	Name
220	2028 Q4	Navigation	Strategy (Other)	Decision to cut over to Dual Frequency IOC Operations
1129	2030 Q4	Communication	FID	Final Investment Decision (FID) for Data Comm IP Gateway
1134	2024 Q3	Human Systems Integration	Strategy (Other)	Decision on the Approval and Implementation Strategy of Human Factors Guidance for Helicopter Advanced Vision Systems
1223	2024 Q2	Communication	FID	Final Investment Decision (FID) for NEXCOM Phase 3
1360	2024 Q2	Aircraft	Other Milestone	DO-351B, Interoperability Standard for Baseline 2 ATS Data Communications (Baseline 2 Interop Standard)
1361	2024 Q1	Aircraft	Other Milestone	DO-352B, Interoperability Standard for Baseline 2 ATS Data Communications, FANS 1/A Accommodation (FANS 1/A - Baseline 2 Interop Standard)
1362	2024 Q1	Aircraft	Other Milestone	DO-353B, Interoperability Standard for Baseline 2 ATS Data Communications, ATN Baseline 1 Accommodation (ATN Baseline 1 - Baseline 2 Interop Standard)
1364	2025 Q4	Aircraft	Other Milestone	GNSS (SBAS) L1/L5 MOPS Update to GPS/Galileo/SBAS MOPS for dual-frequency equipment
1365	2027 Q1	Aircraft	Other Milestone	GNSS (GBAS) L1/L5 MOPS and ICD Initial MOPS and ICD for Verification and Validation
1366	2031 Q1	Aircraft	Other Milestone	GNSS (GBAS) L1/L5 MOPS and ICD Validated GPS/Galileo/GBAS MOPS and ICD for dual-frequency equipment
1367	2024 Q4	Aircraft	Other Milestone	MOPS DO-283C
1369	2025 Q1	Aircraft	Other Milestone	C2 Link MOPS for Cellular Networks
1370	2025 Q1	Aircraft	Other Milestone	DO-364A / ED-XXX Minimum Aviation System Performance Standards (MASPS) for Aeronautical Information / Meteorological Data Link Services
1372	2025 Q4	Aircraft	Other Milestone	DO-XXX, ATS Data Communication Verification Test Standard
1373	2026 Q4	Aircraft	Other Milestone	DO-383A, Guidance on VDL Mode 2 Air/Ground Interoperability
1374	2024 Q2	Aircraft	Other Milestone	DO-343E MASPS – Inmarsat SBB and Iridium Certus Updates
1375	2024 Q2	Aircraft	Other Milestone	DO-262G MOPS - Inmarsat SBB and Iridium Certus Updates
1376	2027 Q2	Aircraft	Other Milestone	DO-343F MASPS – Iridium Certus updates for network update
1377	2027 Q2	Aircraft	Other Milestone	DO-262H MOPS – Iridium Certus updates for network update
1378	2026 Q1	Aircraft	Other Milestone	Minimal Operational Performance Standards (MOPS) for Active Surveillance Systems
1379	2025 Q2	Aircraft	Other Milestone	White Paper on BeiDou System and BeiDou SBAS
1380	2024 Q3	Aircraft	Other Milestone	DO-406 - Minimum Operational Performance Standards for Ultra High Frequency Airborne Radio Systems Supporting UAS C2 Link Systems
1405	2026 Q1	Aircraft	Other Milestone	Minimal Operational Performance Standards (MOPS) for ACAS Xr
1411	2024 Q4	Aircraft	Other Milestone	C2 Link MOPS (Terrestrial) (DO-362B)
1412	2024 Q4	Aircraft	Other Milestone	MASP DO-236E

Aircraft Roadmap: Decision Points

DP #	Target Date CY	Primary Domain	Type	Name
1413	2026 Q1	Aircraft	Other Milestone	DO-XXX / ED-XXX Minimum Aviation System Performance Standards (MASPS) for Automated Atmospheric Turbulence Derivation Techniques
1414	2026 Q1	Aircraft	Other Milestone	RTCA Report - Recommendation(s) Regarding Possible Standards to Support Aircraft-Based Meteorological Observation Dependent Applications
1415	2025 Q4	Aircraft	Other Milestone	DO-358C Minimum Operational Performance Standards (MOPS) for Flight Information Services Broadcast (FIS-B) with Universal Access Transceiver (UAT)
1416	2024 Q3	Aircraft	Other Milestone	DO-280B Change 2: Interoperability Requirements Standard for Aeronautical Telecommunication Network Baseline 1 (ATN B1 Interop Standard) Change 2
1417	2024 Q2	Aircraft	Other Milestone	Change 1 to DO-317C, Aircraft Surveillance Applications (ASA) MOPS
1418	2024 Q2	Aircraft	IARD	Investment Analysis Readiness Decision (IARD) for ACAS-X Segment 2
1446	2025 Q3	Aircraft	Other Milestone	MASPS: Navigation for Automatic Taxi (DO-VVV)
1447	2025 Q1	Aircraft	Other Milestone	DAA MOPS (DO-365C Change 1)
1448	2025 Q2	Aircraft	Other Milestone	DAA Radar MOPS Update (DO-366B)
1449	2025 Q3	Aircraft	Other Milestone	MASPS for DAA Supporting Taxi Operations (DO-WWW)
1450	2026 Q1	Aircraft	Other Milestone	DAA MOPS (DO-365D)
1451	2025 Q2	Aircraft	Other Milestone	RTCA Report (RR) for Users of DO- 377B for Deriving C2 Link System Requirements
1452	2025 Q1	Aircraft	Other Milestone	DO-260C
1453	2024 Q3	Aircraft	Other Milestone	DO-379A - Technical Standard of Aviation Profiles for Internet Protocol Suite Update
1454	2025 Q2	Aircraft	Other Milestone	MOPS DO-ZZT
1455	2027 Q1	Aircraft	Other Milestone	MOPS DO-"ZZT" Revision A
1456	2027 Q1	Aircraft	Other Milestone	MOPS DO-283D
1457	2027 Q1	Aircraft	Other Milestone	MASPS DO-236F
1491	2026 Q2	Aircraft	Other Milestone	Minimum Operational Performance Standards (MOPS) for Cooperative Surveillance Systems
1492	2026 Q2	Aircraft	Other Milestone	Minimum Operational Performance Standards (MOPS) for ACAS Xu Revision A DO386(A)/ED275(A)
1493	2026 Q4	Aircraft	Other Milestone	Guidance for Validation of Collision Avoidance Systems
1494	2026 Q4	Aircraft	Other Milestone	Internal Report IR-XXX
1495	2025 Q1	Aircraft	Other Milestone	Change 2 to DO-260C, 1090MHz ADS-B / TIS-B MOPS