

NAS Enterprise Architecture

Infrastructure Roadmaps v19.0



BASELINE

February 2025



Infrastructure Roadmap Overview

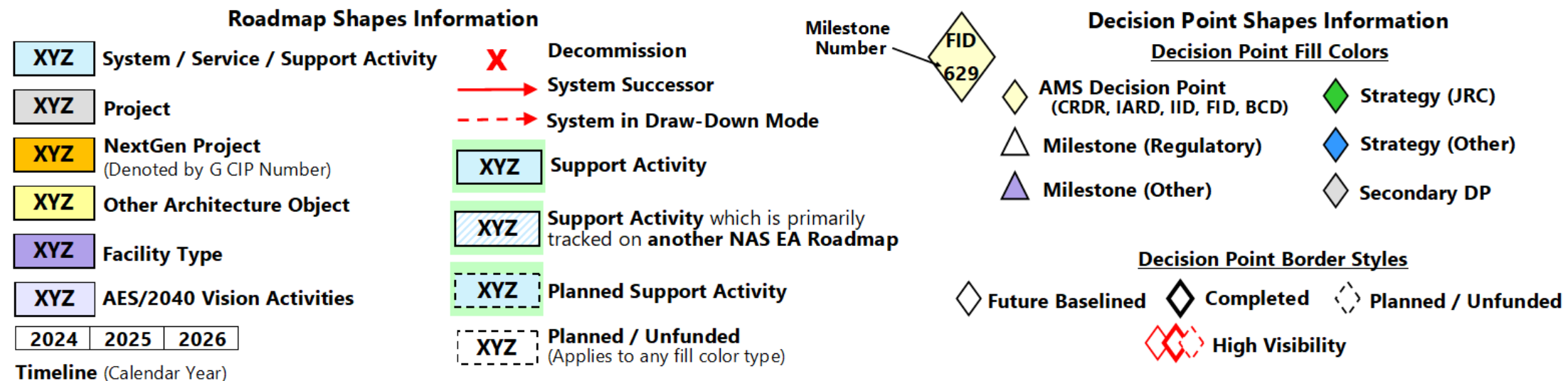
What are the Infrastructure Roadmaps?

- 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

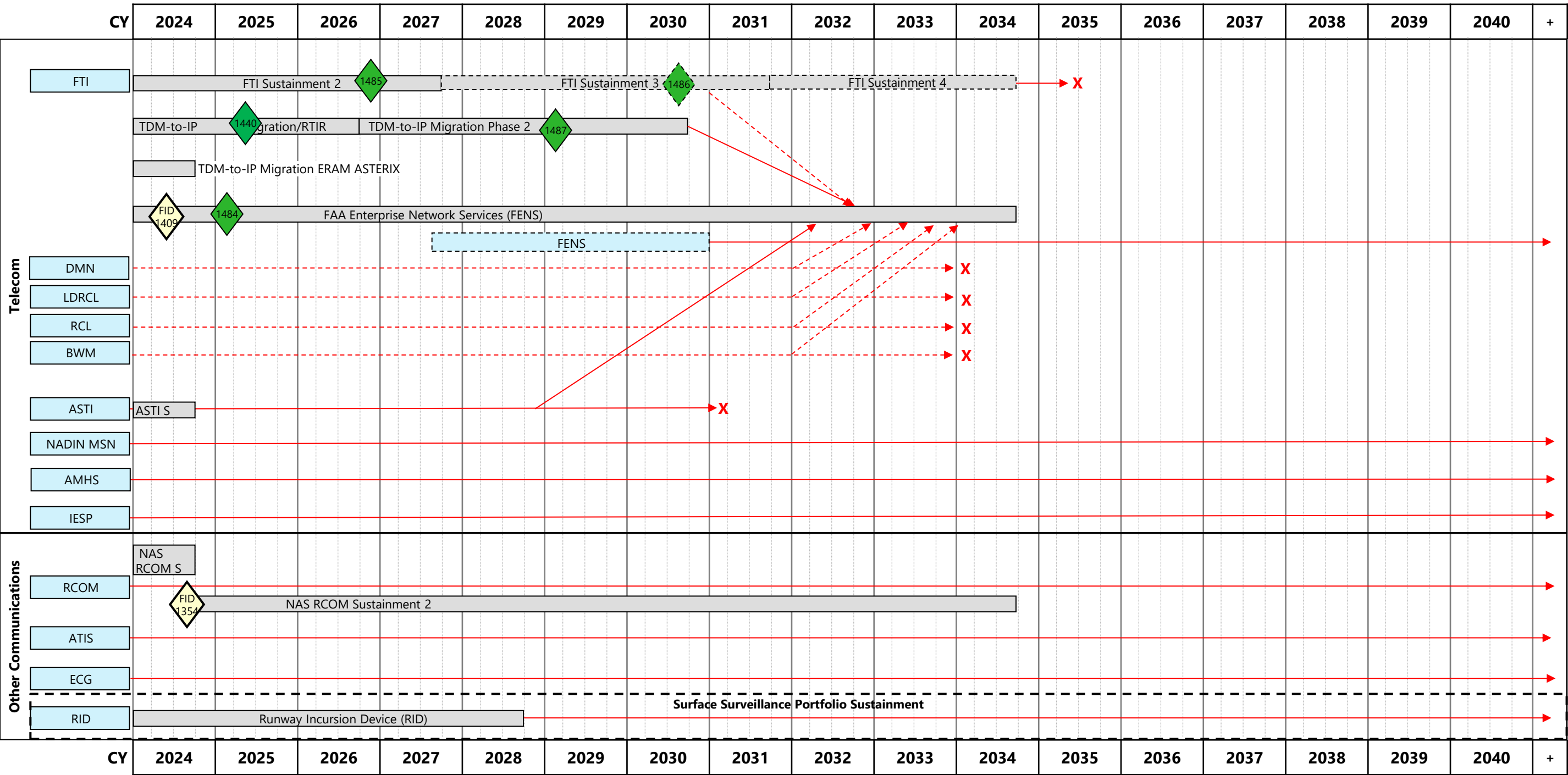
Infrastructure Roadmap Legend



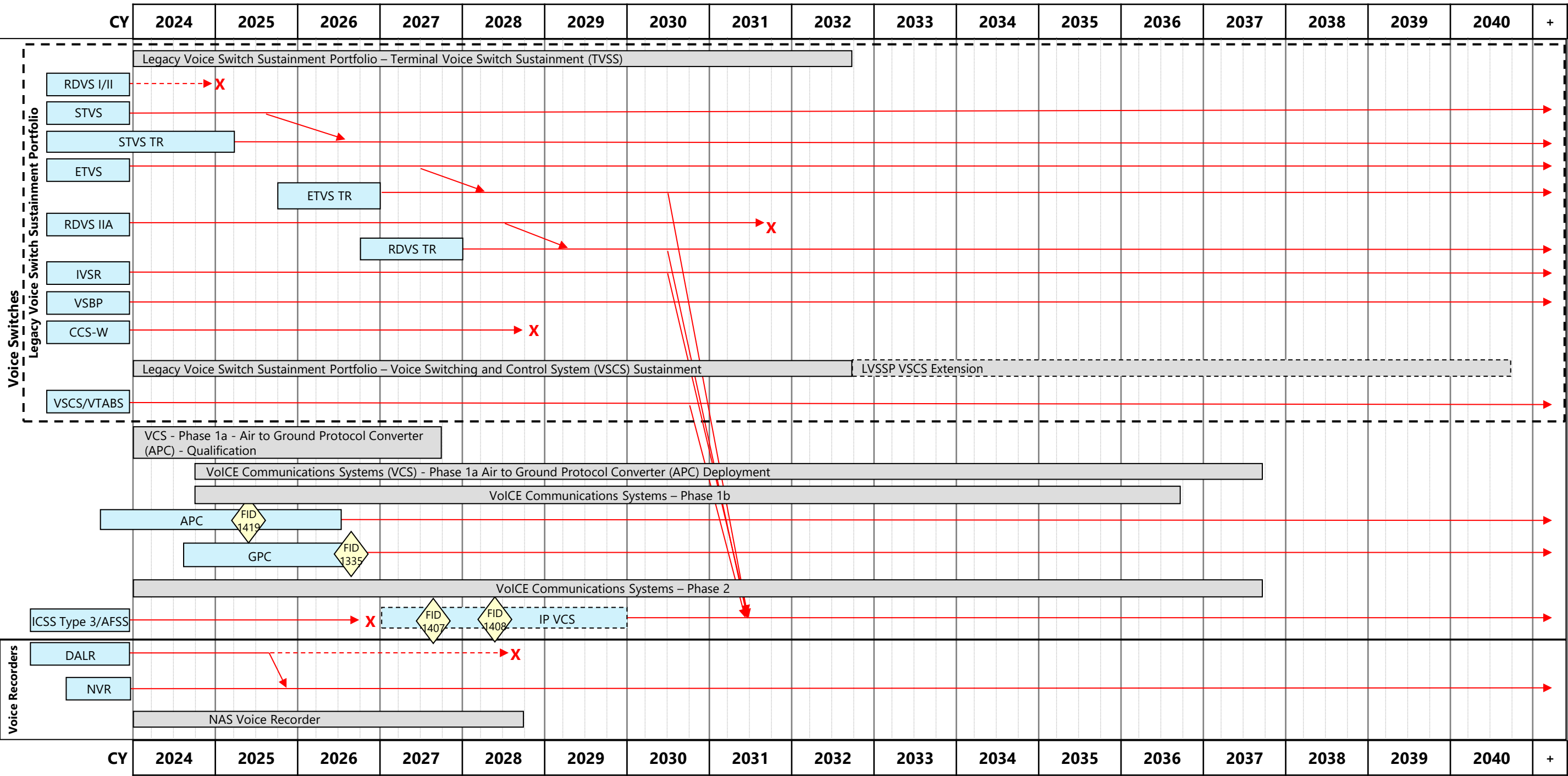
Communication

The Communication Roadmap presents an Executive View (EV) of the current communication systems supporting the National Airspace System and their enhancement, sustainment or replacement through major development programs and support activities. The Communications Roadmap is intended to convey the major communication program strategy and acquisition decision points as well as program funding. The roadmap serves as a summary view of more detailed plans within each development program.

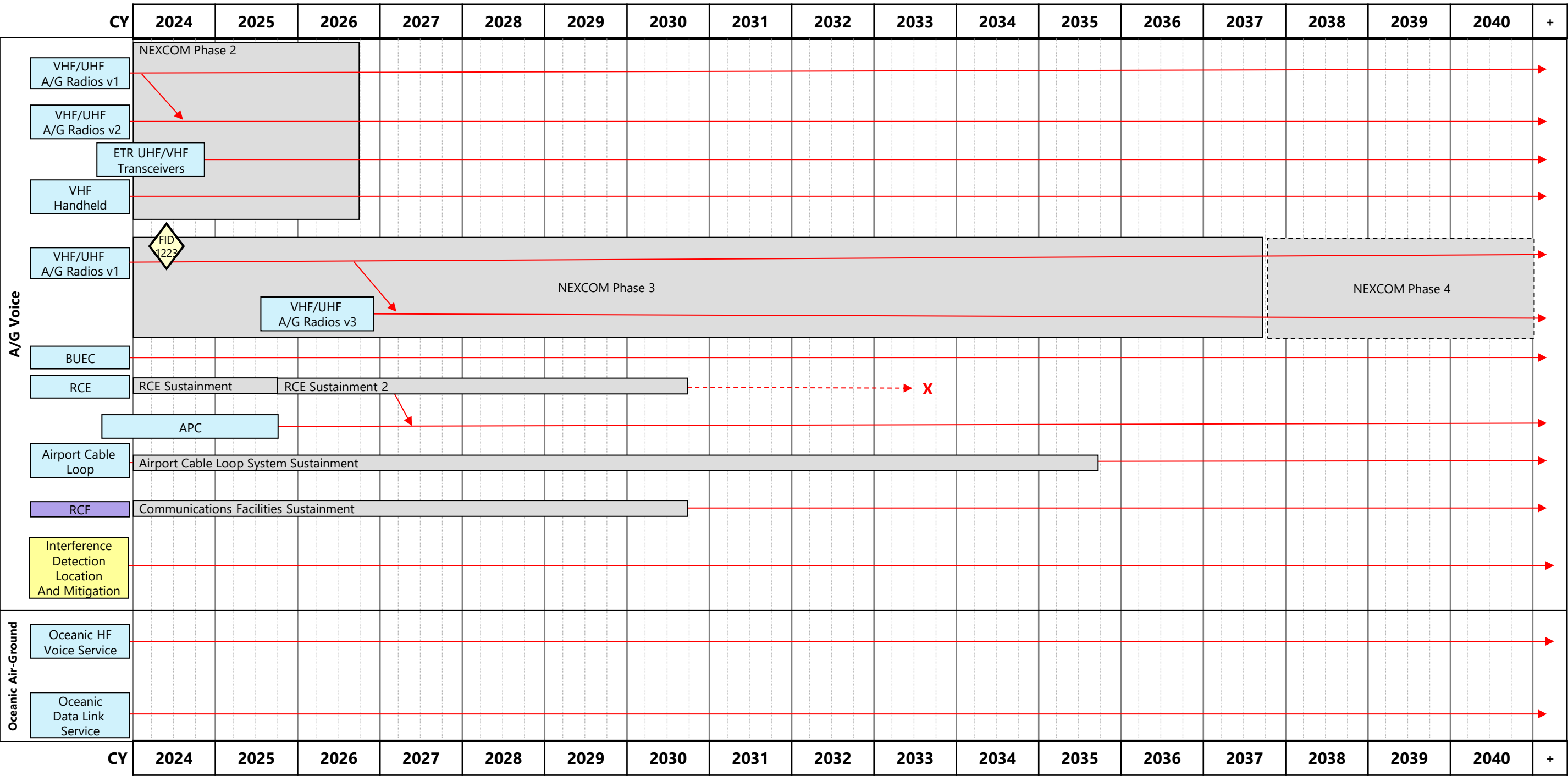
Communication Roadmap (1 of 5)



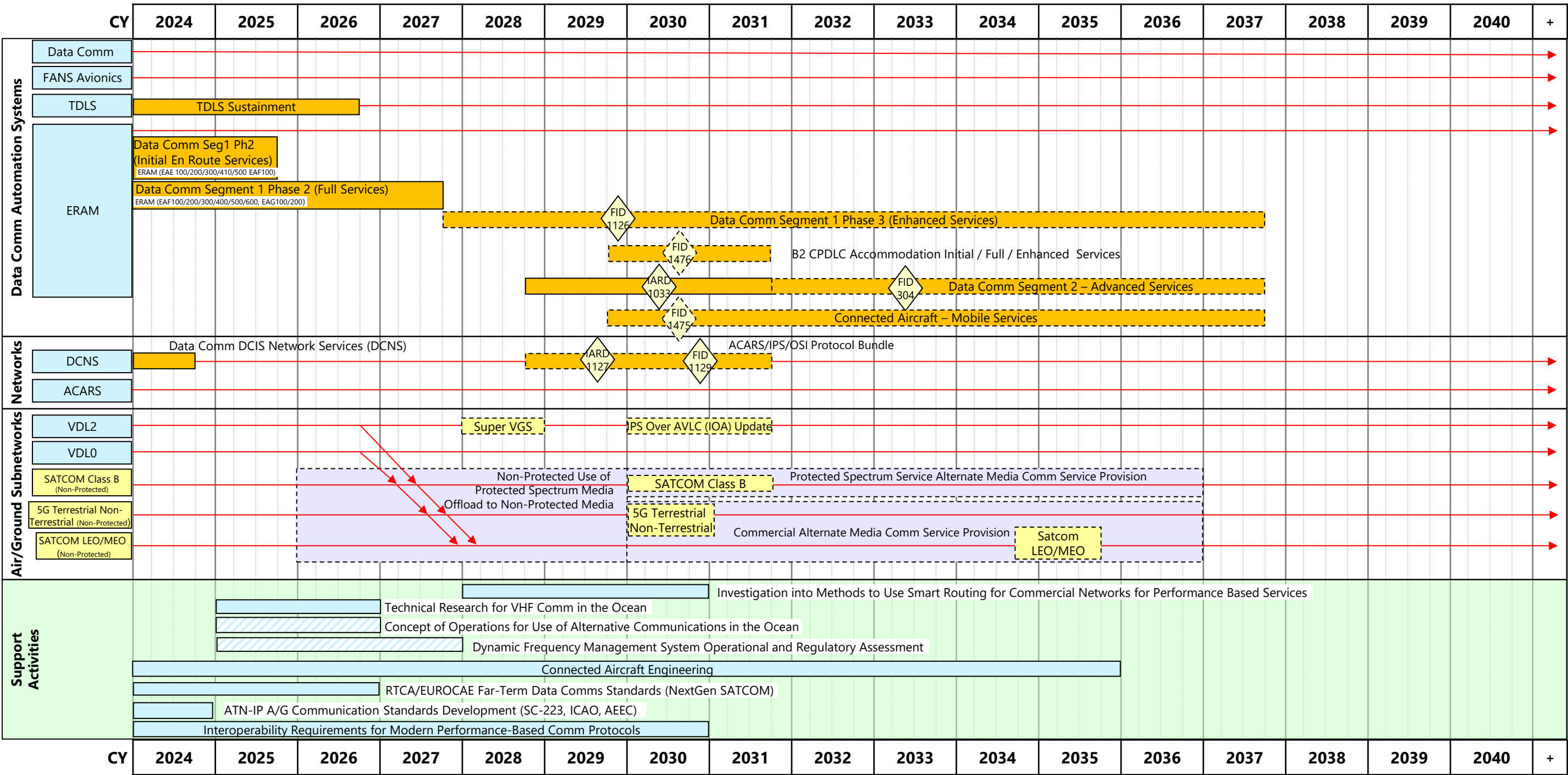
Communication Roadmap (2 of 5)



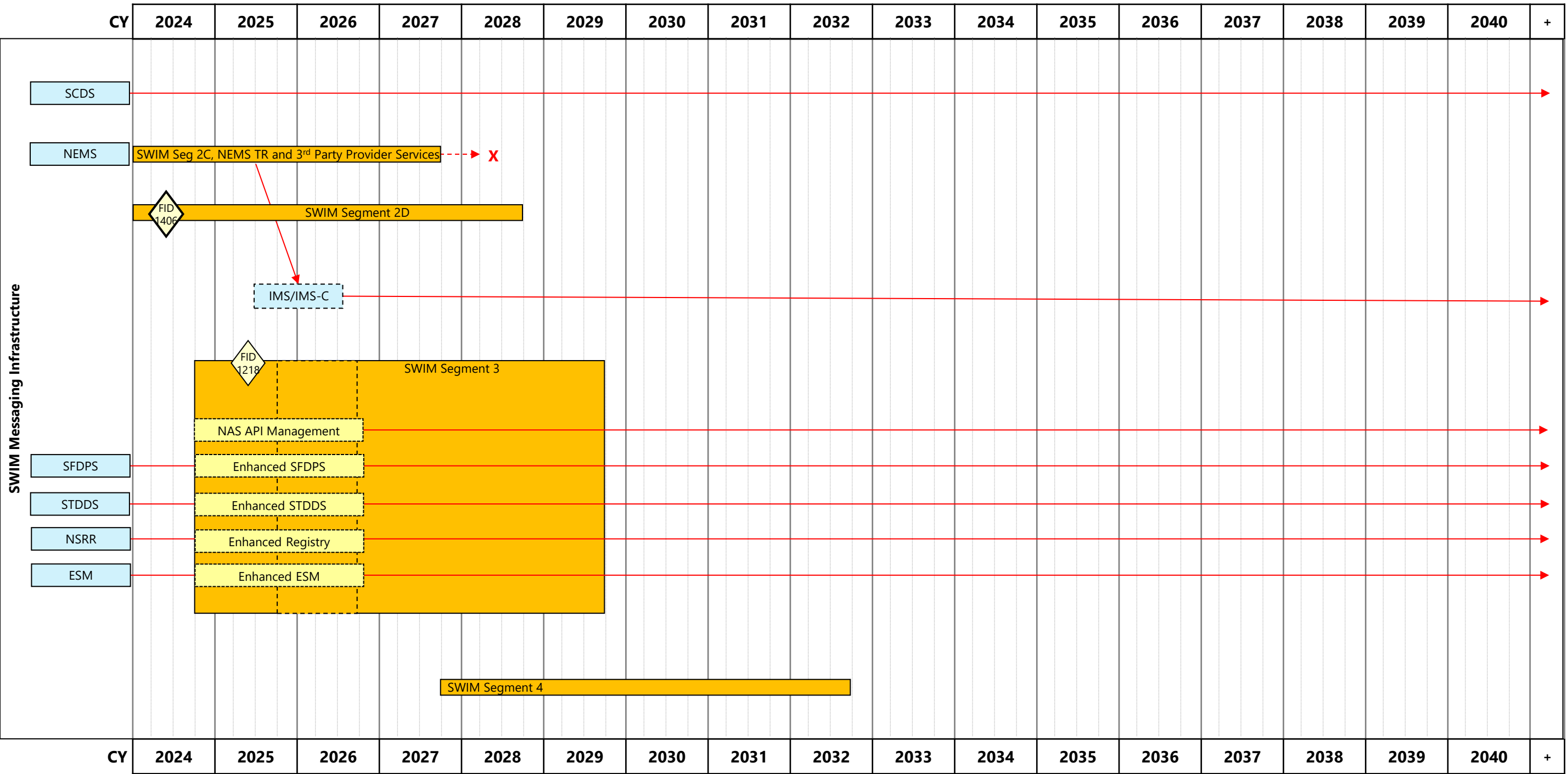
Communication Roadmap (3 of 5)



Communication Roadmap (4 of 5)



Communication Roadmap (5 of 5)



Communication Roadmap: Assumptions

Identifier	Description
COMM-01	FENS will become the primary ground-based Voice/Data transport system.
COMM-02	All domestic flight safety critical A/G communications are over VHF based systems. Advisory communications (e.g. Weather, NAS Status, NOTAMS) can be supported by VHF A/G Communication or by commercial communications services through airborne access to SWIM services.
COMM-04	Relationship between SWIM and Communications: SWIM Dataflows all leverage NAS OPS IP service and initial SWIM Segment 2 infrastructure is being implemented with FTI & FENS.
COMM-06	ASTI (ANICS) will not be integrated into FAA Telecommunications Infrastructure contract.
COMM-07	FIDI TR will develop IP communication protocols between automation systems (e.g. ERAM, terminal clients) which end systems will provide the investment necessary to implement required changes.
COMM-08	JRC approved a joint IID for Data Comm Segment 1 and 2 in 2008; therefore, it is projected that IID for Segment 2 will be waived.

Communication Roadmap: Decision Points (1 of 1)

DP #	Target Date CY	Primary Domain	Type	Name
304	2033 Q2	Communication	FID	Final Investment Decision (FID) for Data Comm Segment 2
1033	2030 Q2	Communication	IARD	Investment Analysis Readiness Decision (IARD) for DataComm Segment 2
1126	2029 Q4	Communication	FID	Final Investment Decision (FID) for Data Comm Segment 1 Phase 2 Enhanced Services
1127	2029 Q3	Communication	IARD	Investment Analysis Readiness Decision (IARD) for Data Comm IP Gateway
1129	2030 Q4	Communication	FID	Final Investment Decision (FID) for Data Comm IP Gateway
1218	2025 Q2	Communication	FID	Final Investment Decision (FID) for SWIM Segment 3
1223	2024 Q2	Communication	FID	Final Investment Decision (FID) for NEXCOM Phase 3
1335	2026 Q3	Communication	FID	Final Investment Decision (FID) for VCS Ph1 - GPC
1354	2024 Q3	Communication	FID	Final Investment Decision (FID) for NAS Recovery Communications (RCOM) Sustainment 2
1406	2024 Q2	Communication	FID	Final Investment Decision (FID) for SWIM Segment 2D
1407	2027 Q3	Communication	FID	Final Investment Decision (FID) for VoICE Communication Systems (VCS) Phase 2 IP #1
1408	2028 Q2	Communication	FID	Final Investment Decision (FID) for VoICE Communication Systems (VCS) Phase 2 IP #2
1409	2024 Q2	Communication	FID	Final Investment Decision (FID) for FAA Enterprise Network Services (FENS) #2
1419	2025 Q2	Communication	FID	Final Investment Decision (FID) for VoICE Communications System (VCS) Air to Ground Protocol Converter (APC) #2
1440	2025 Q2	Communication	Strategy	JRC Strategy Decision for Time-Division Multiplexing to Internet Protocol (TDM-to-IP) Migration
1475	2030 Q3	Communication	FID	Final Investment Decision (FID) for Connected Aircraft – Mobile Services
1476	2030 Q3	Communication	FID	Final Investment Decision (FID) for B2 CPDLC Accommodation Initial / Full / Enhanced Services
1484	2025 Q1	Communication	Strategy	JRC Strategy Decision for FENS
1485	2026 Q4	Communication	Strategy	JRC Strategy Decision for FTI S2
1486	2030 Q3	Communication	Strategy	JRC Strategy Decision for FTI S3
1487	2029 Q1	Communication	Strategy	JRC Strategy Decision for TDM-IP Phase 2