NAS Enterprise Architecture

Infrastructure Roadmaps v19.3

BASELINE

November 2025

Content Summary

Infrastructure Roadmap Overview

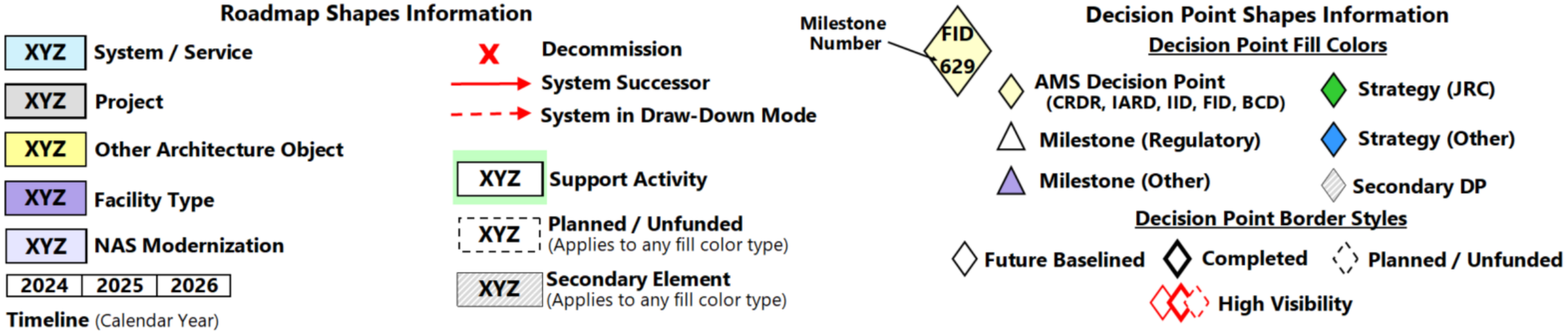
What are the Infrastructure Roadmaps?

- 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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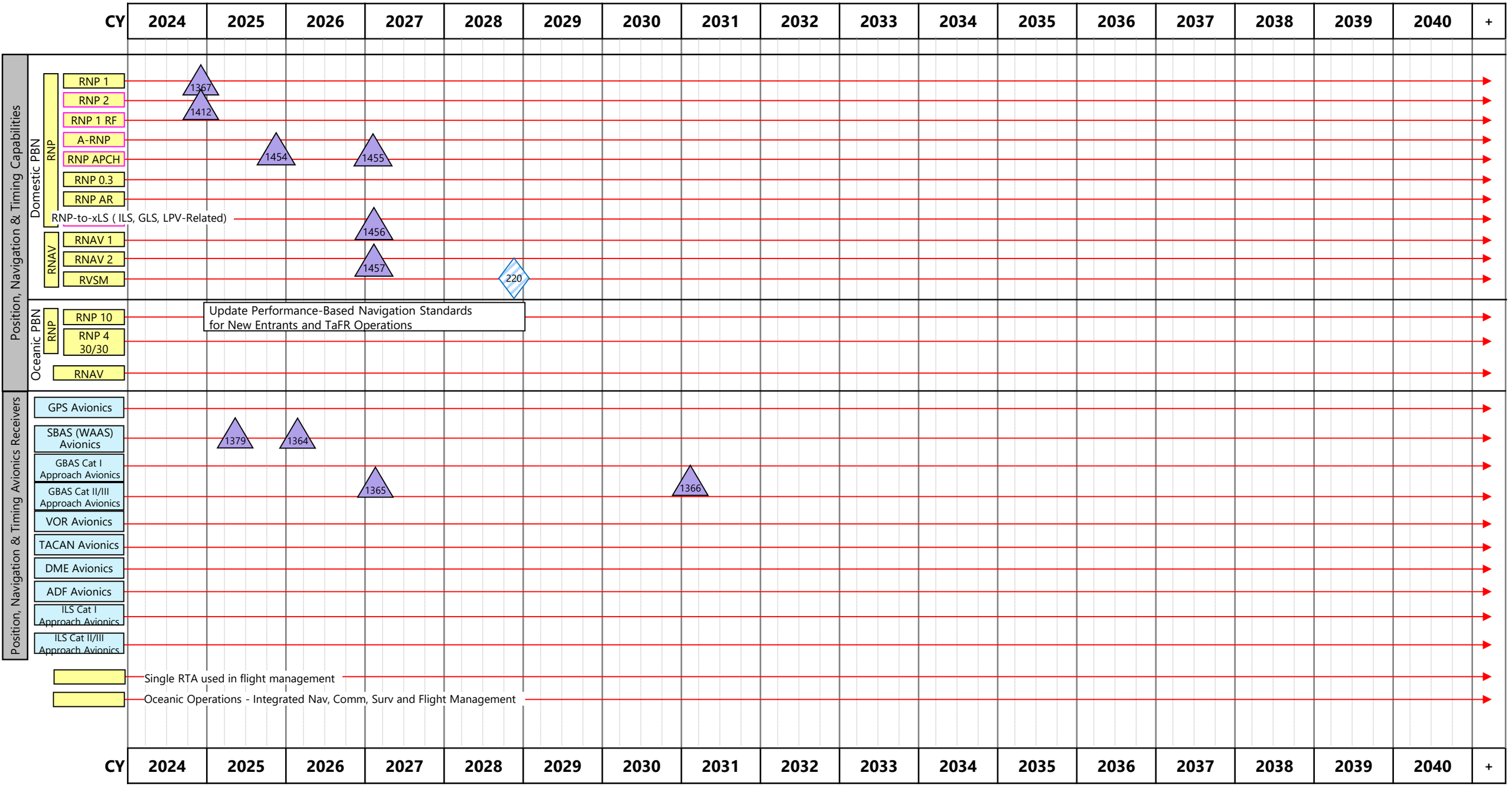
Aircraft

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

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

Aircraft Roadmap (1 of 5)



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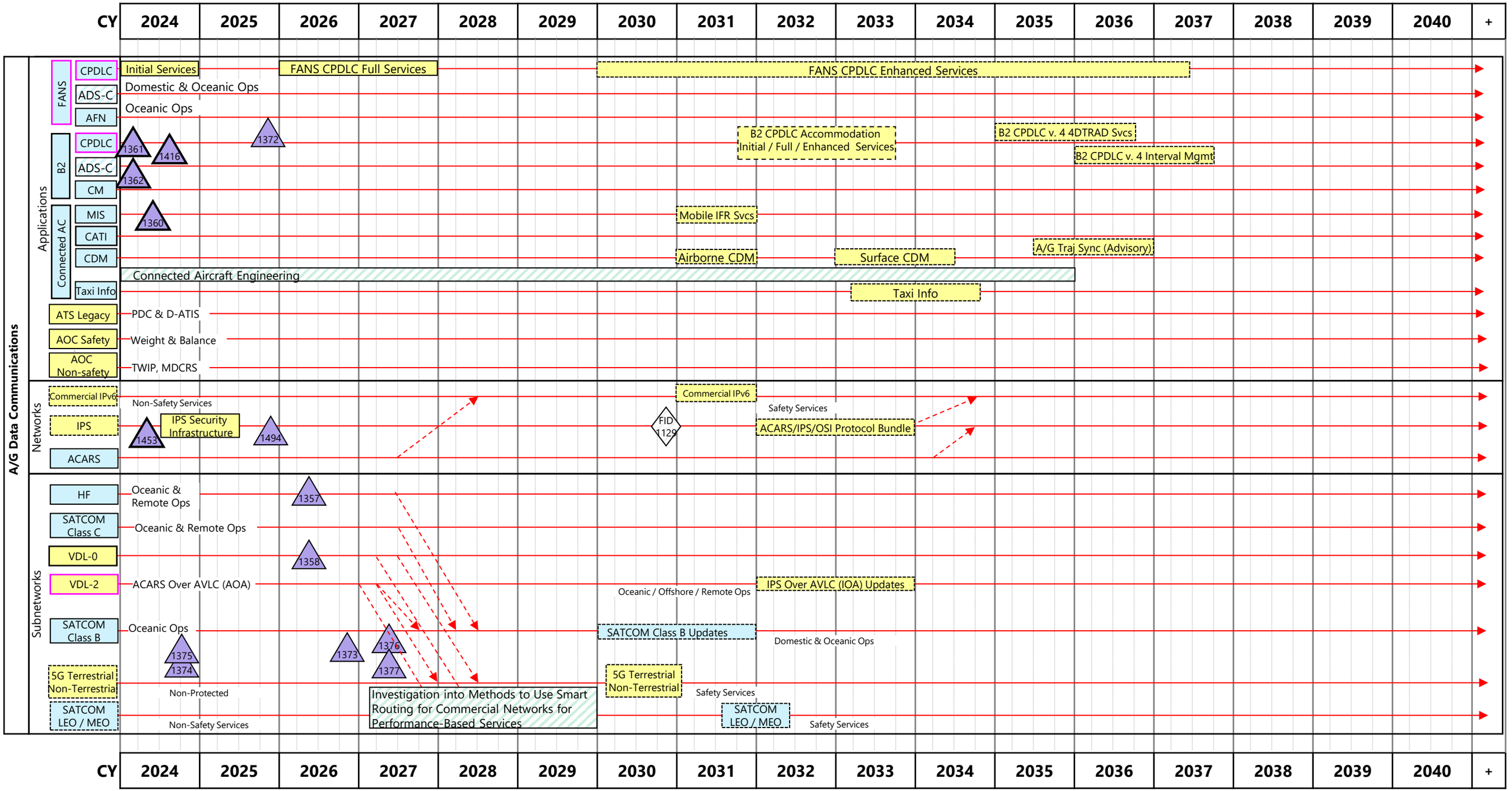
Aircraft Roadmap (2 of 5)



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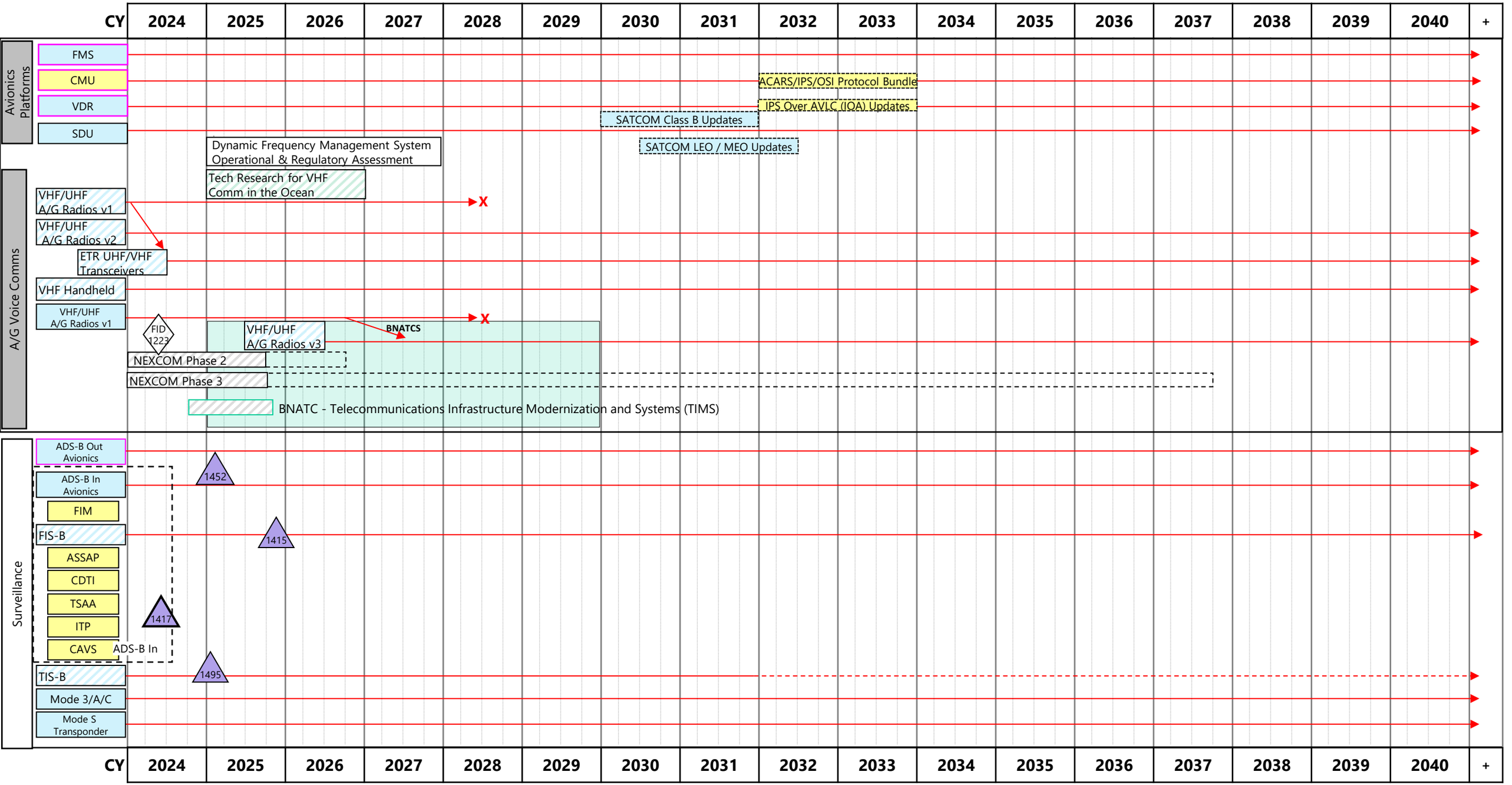
Items with a pink outline are components of the FAA Minimum Capability List (MCL)
Items with a green outline are part of Big New Air Traffic System (BNATCS)

Aircraft Roadmap (3 of 5)



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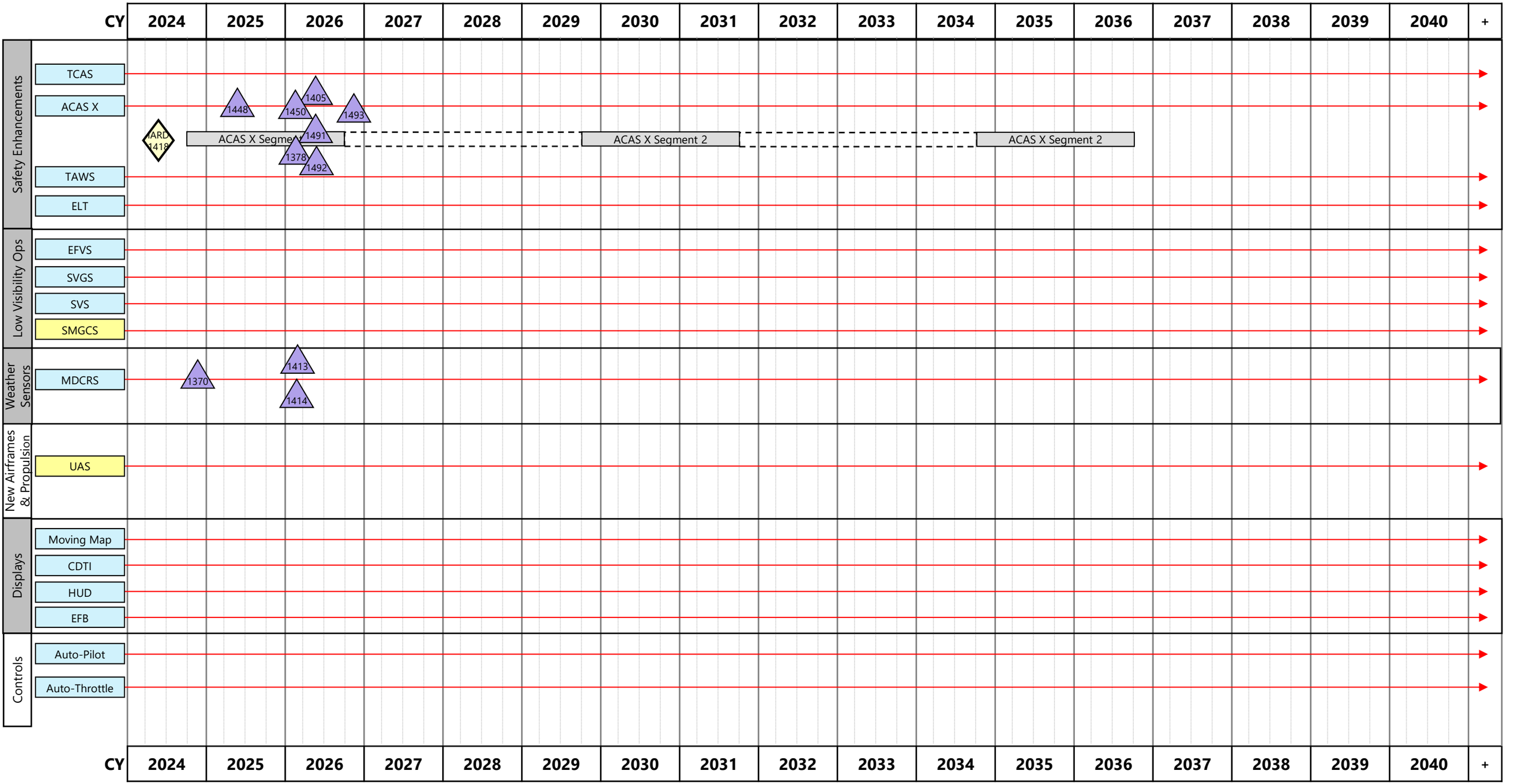
Aircraft Roadmap (4 of 5)



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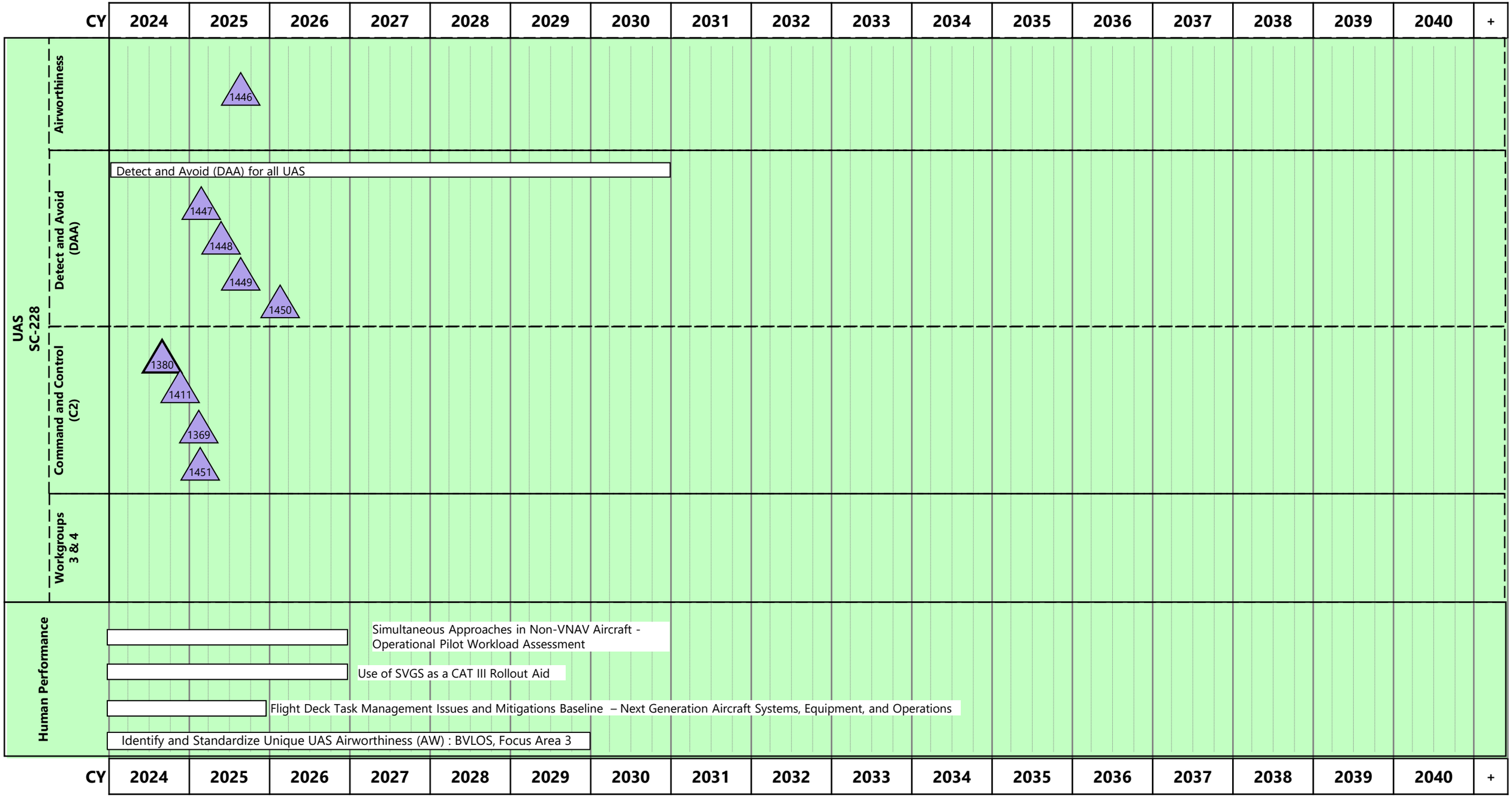
Aircraft Roadmap (5 of 5)



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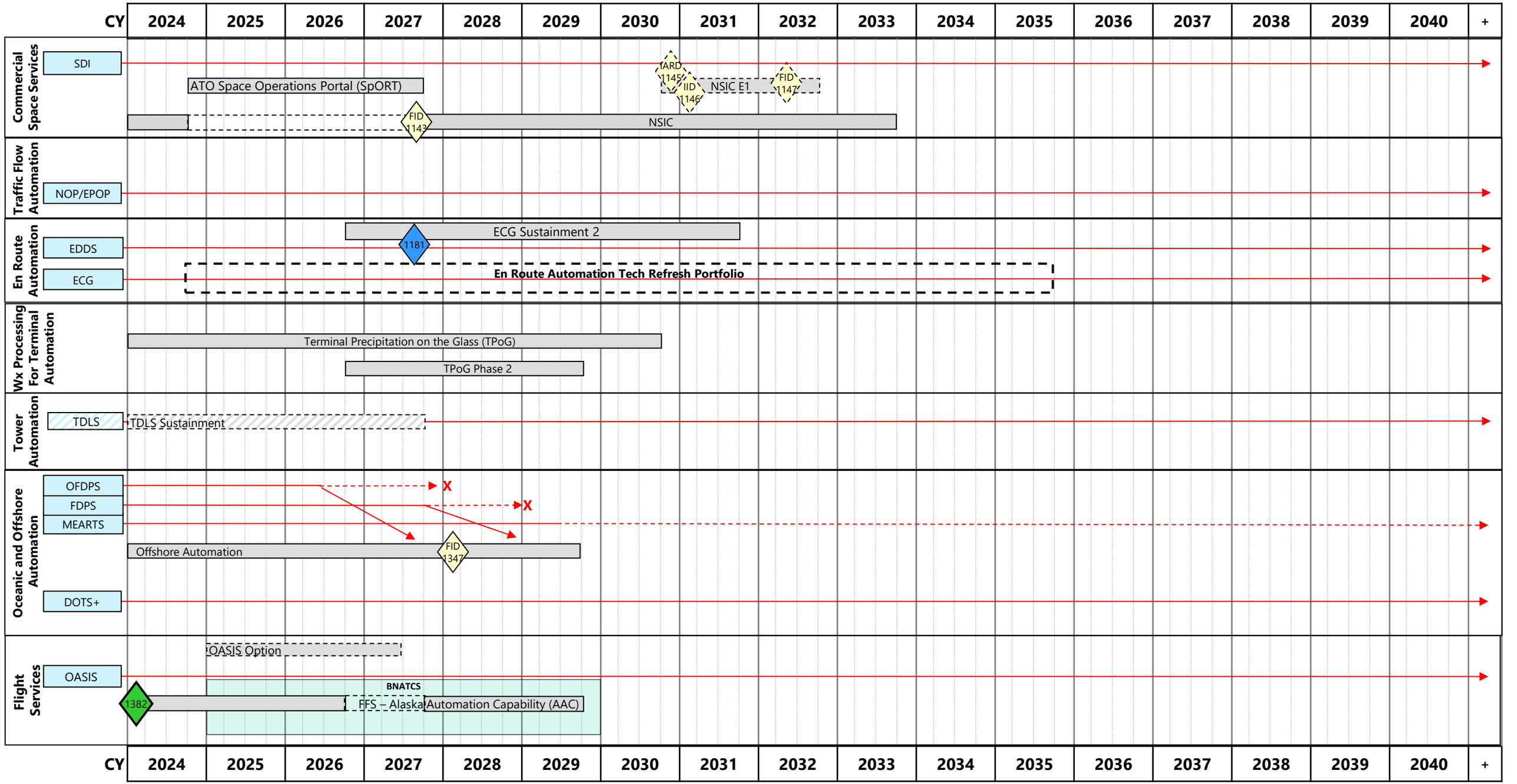
Automation

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

Items with a green outline are part of Big New Air Traffic System (BNATCS)

Automation Roadmap (1 of 5)



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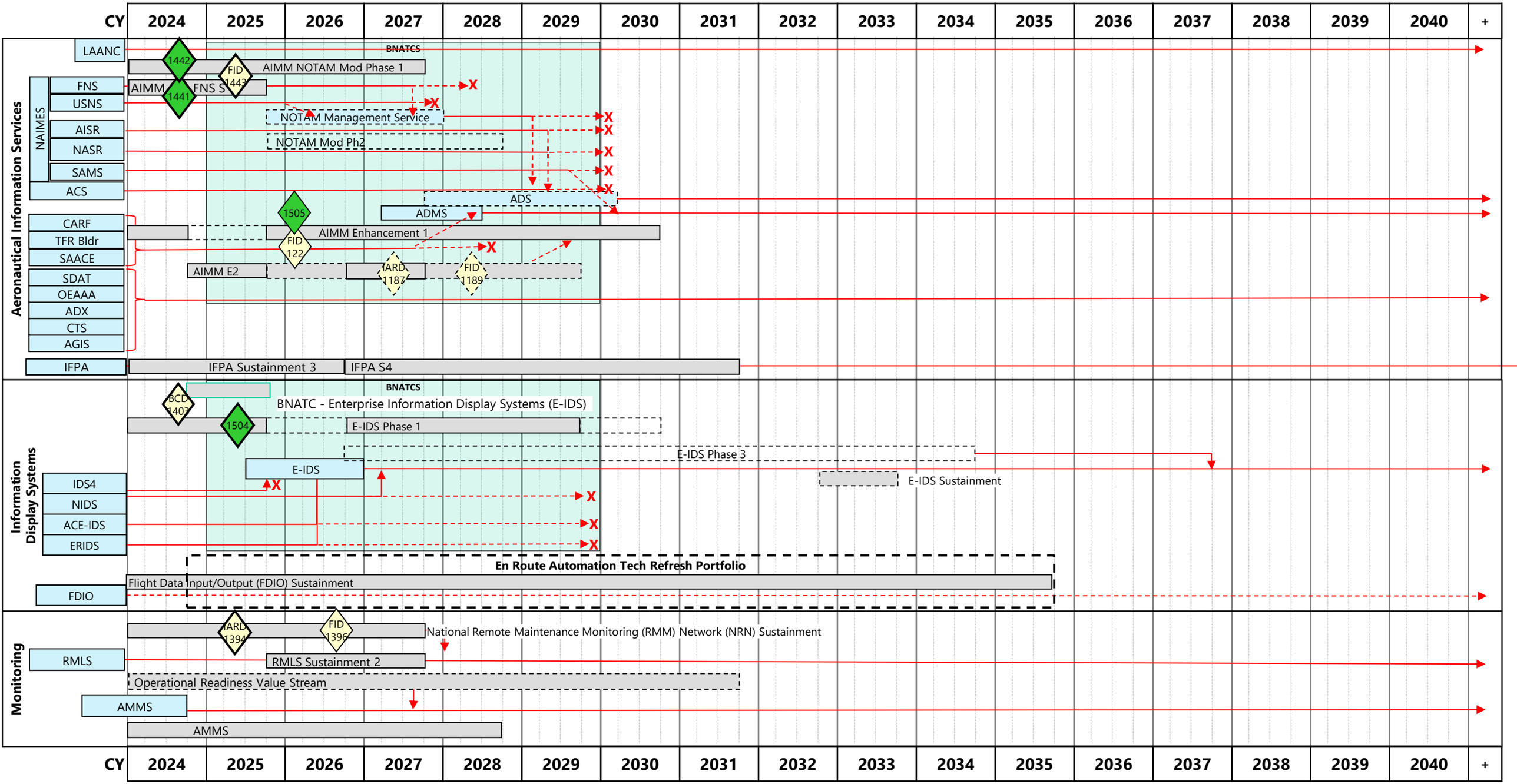
Automation Roadmap (2 of 5)



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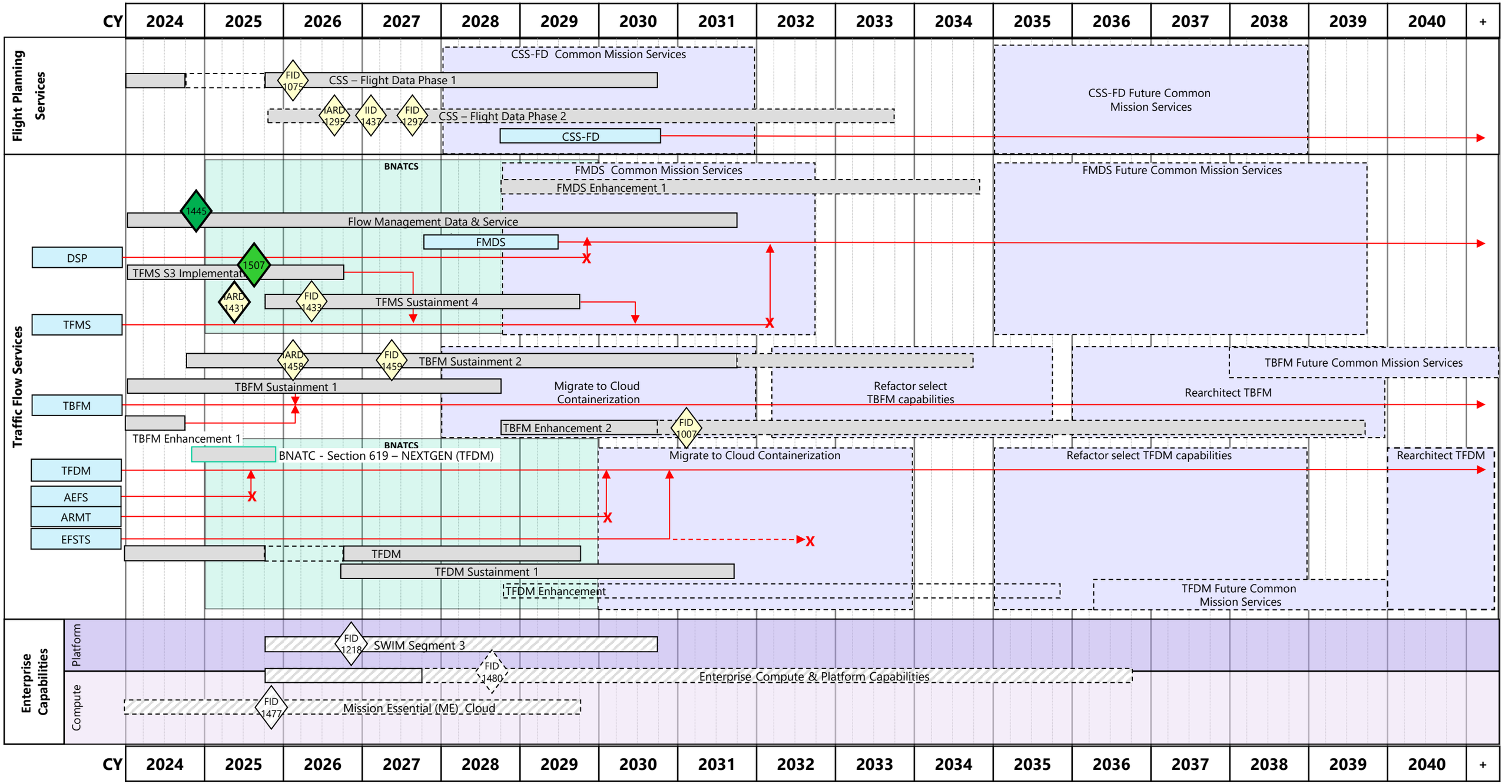

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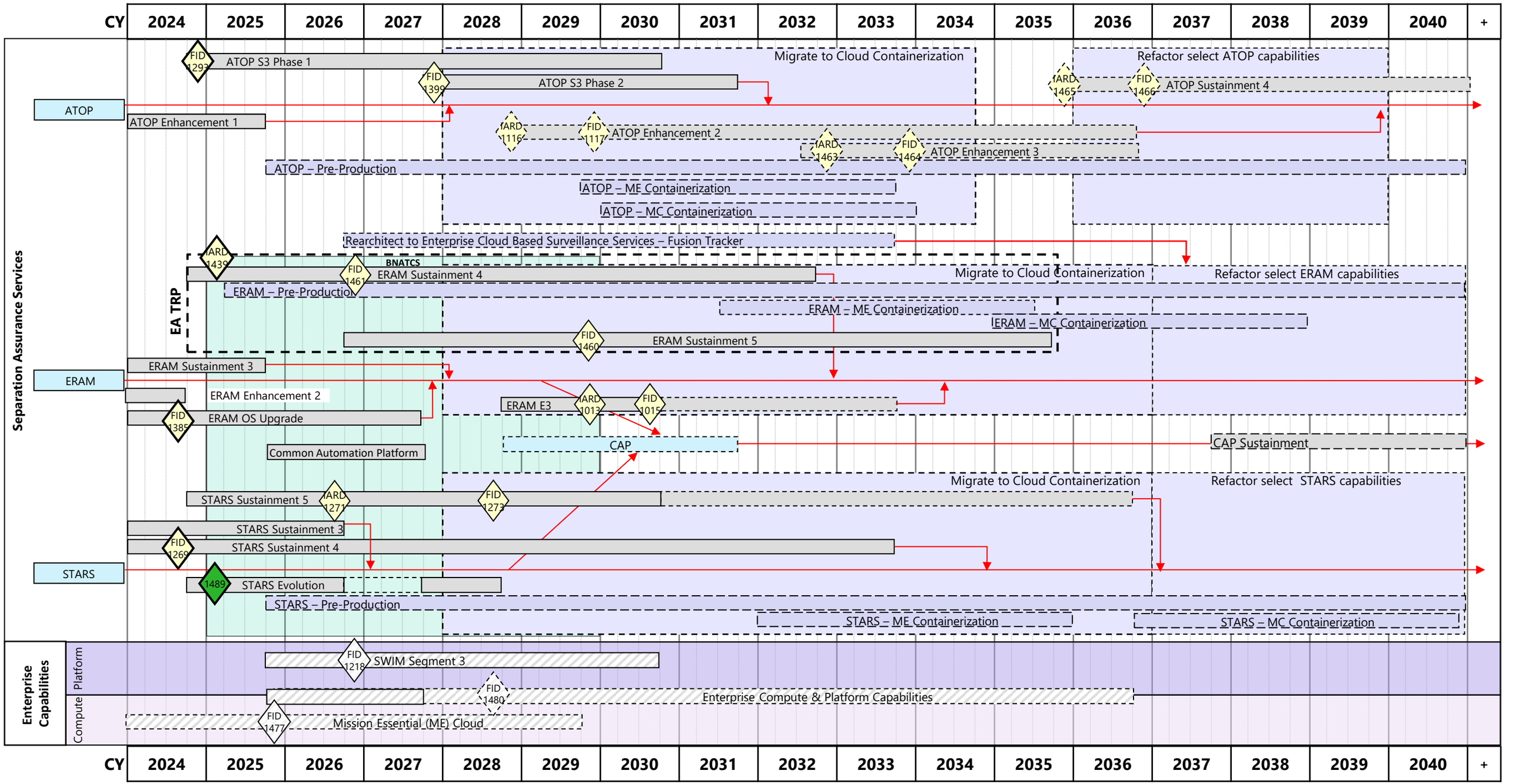
Automation Roadmap (4 of 5)



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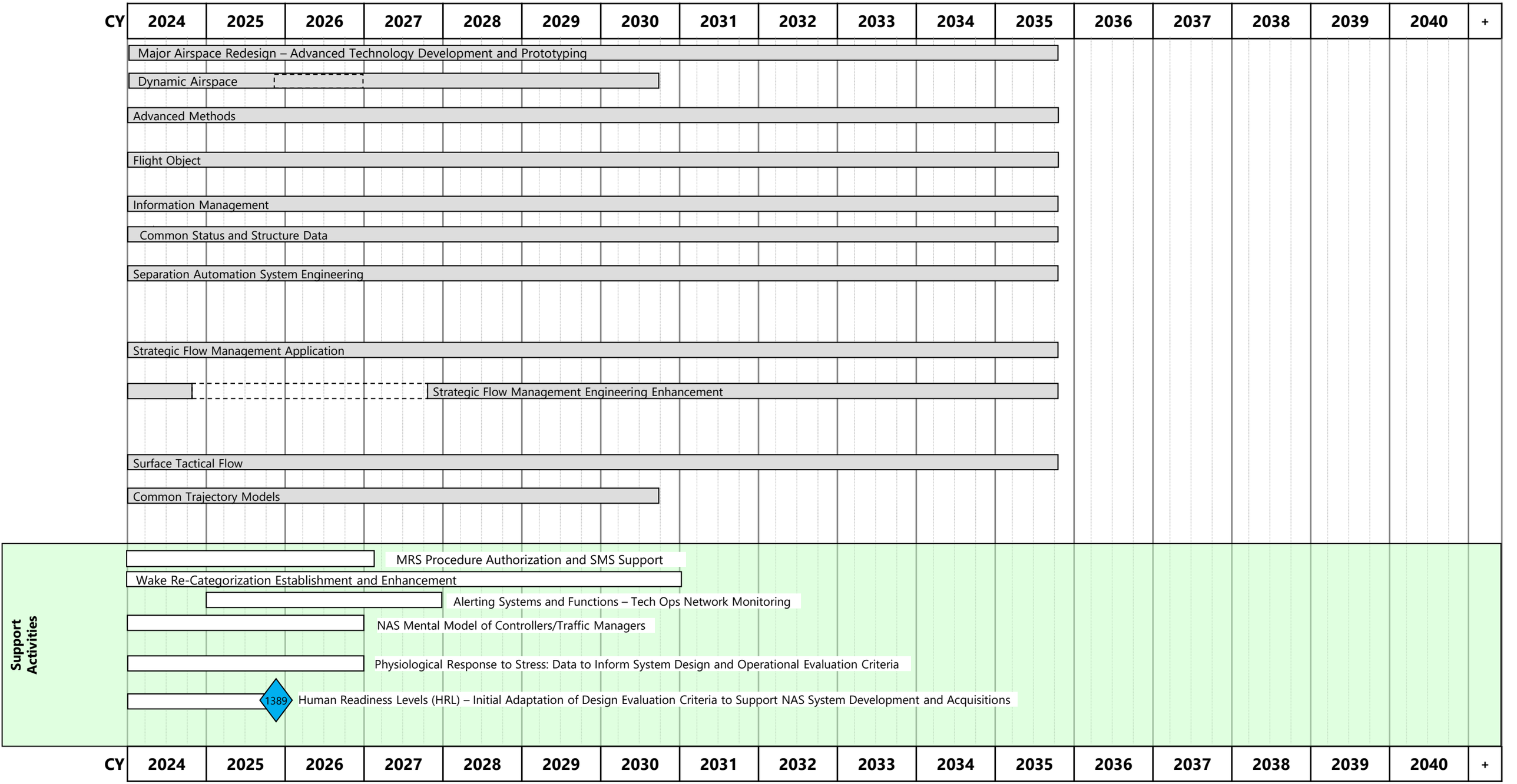
Automation Roadmap (5 of 5)



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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.

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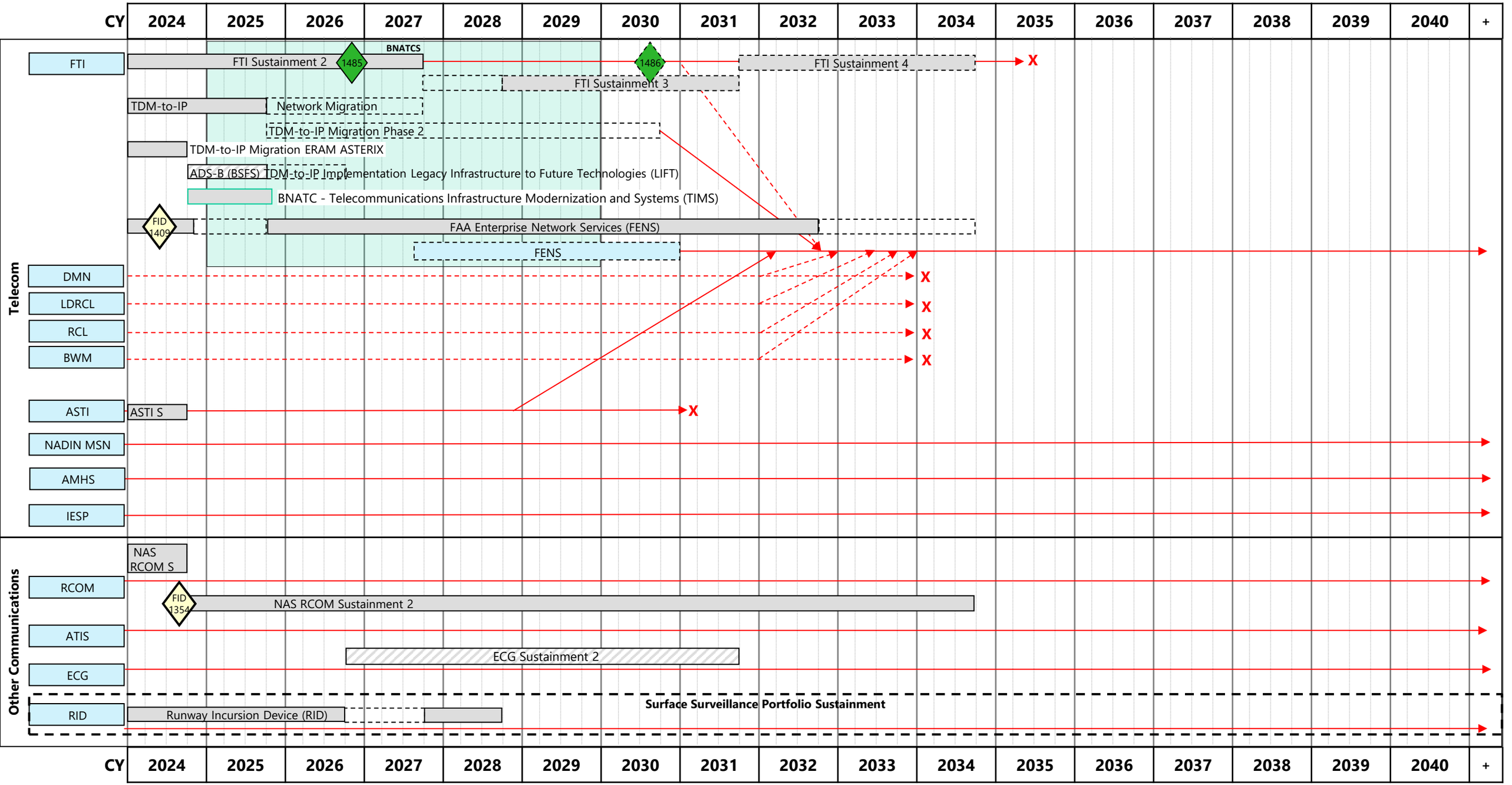
Communication Roadmap (1 of 5)



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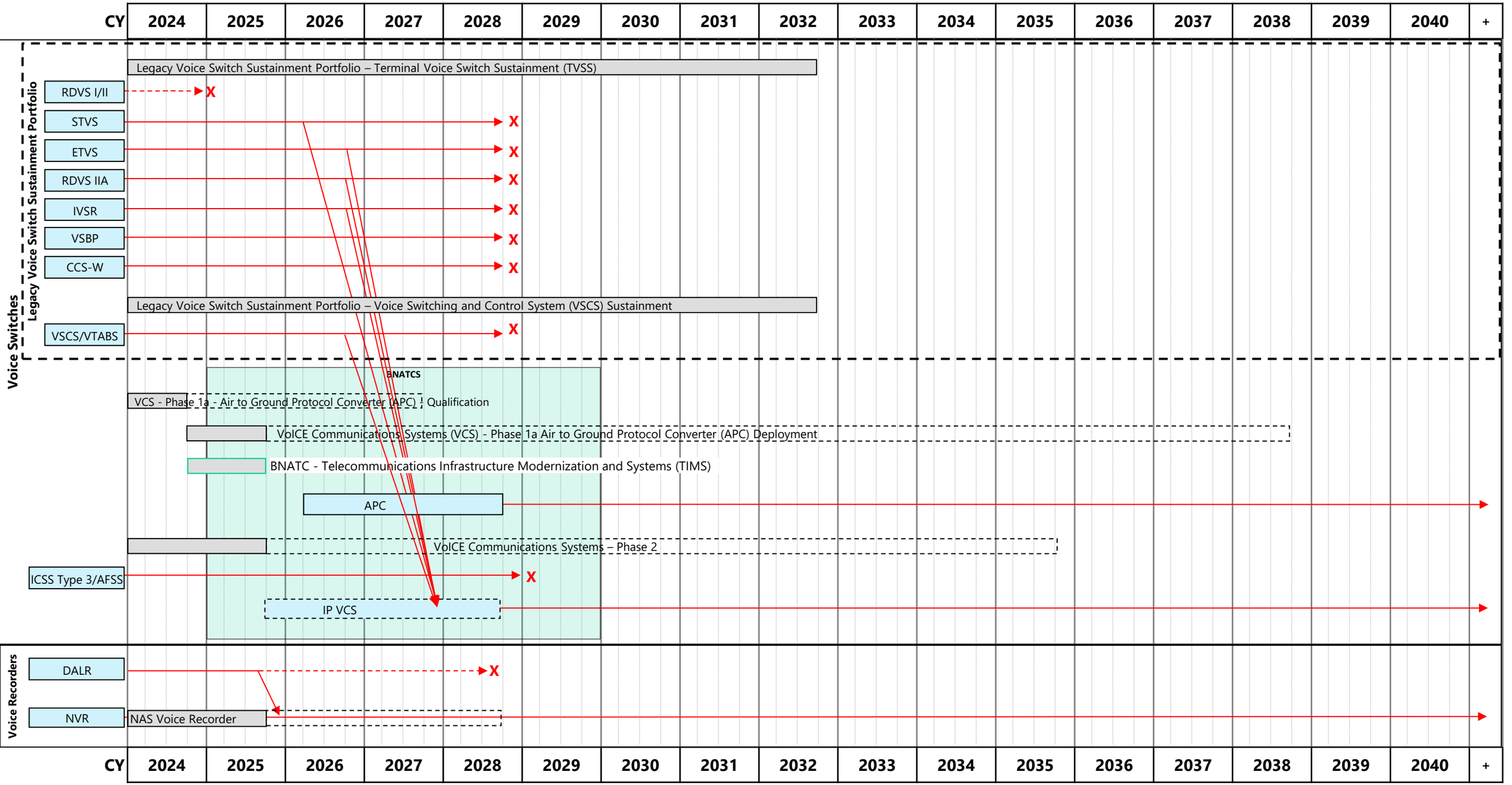
Communication Roadmap (2 of 5)



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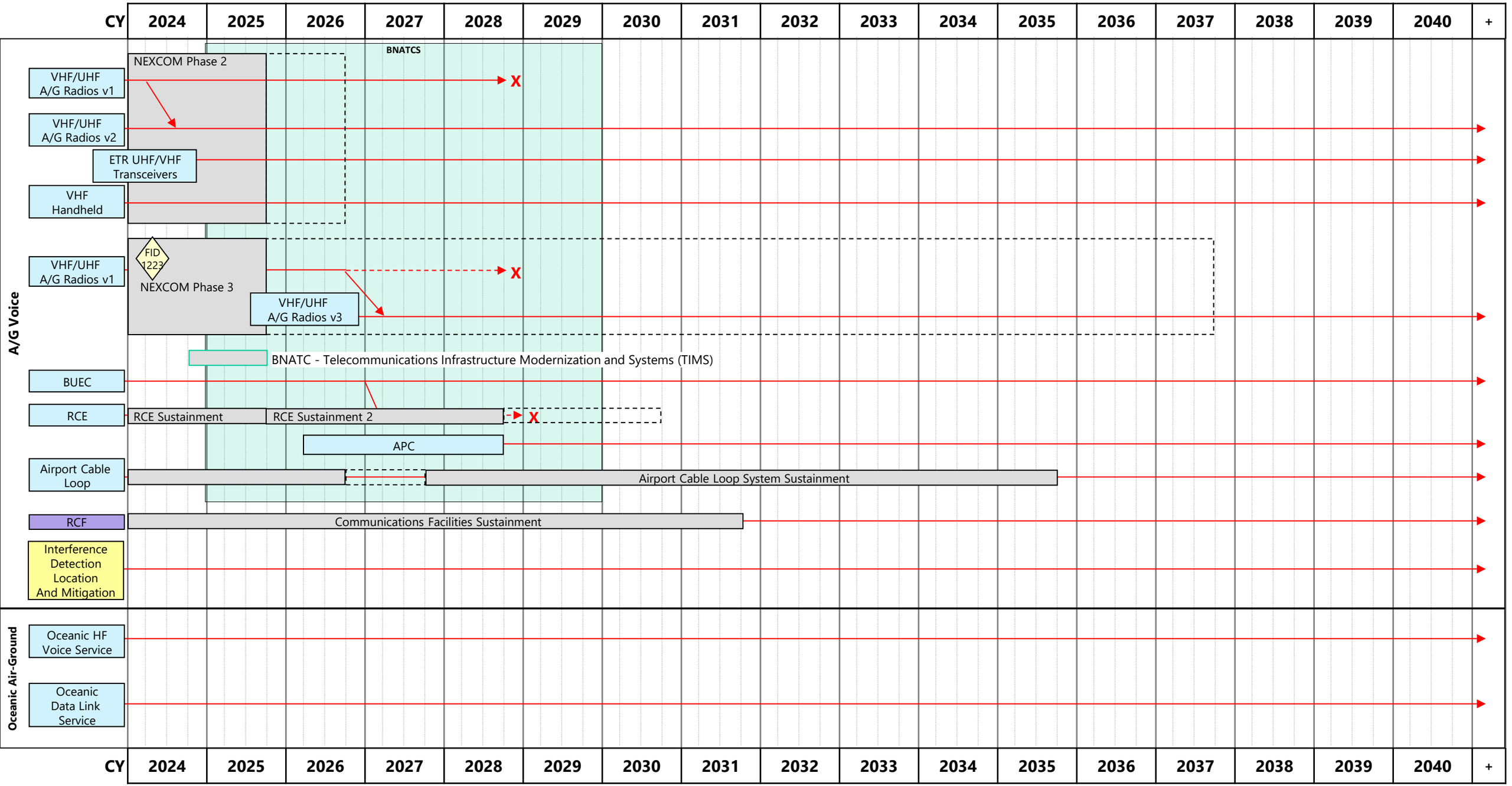

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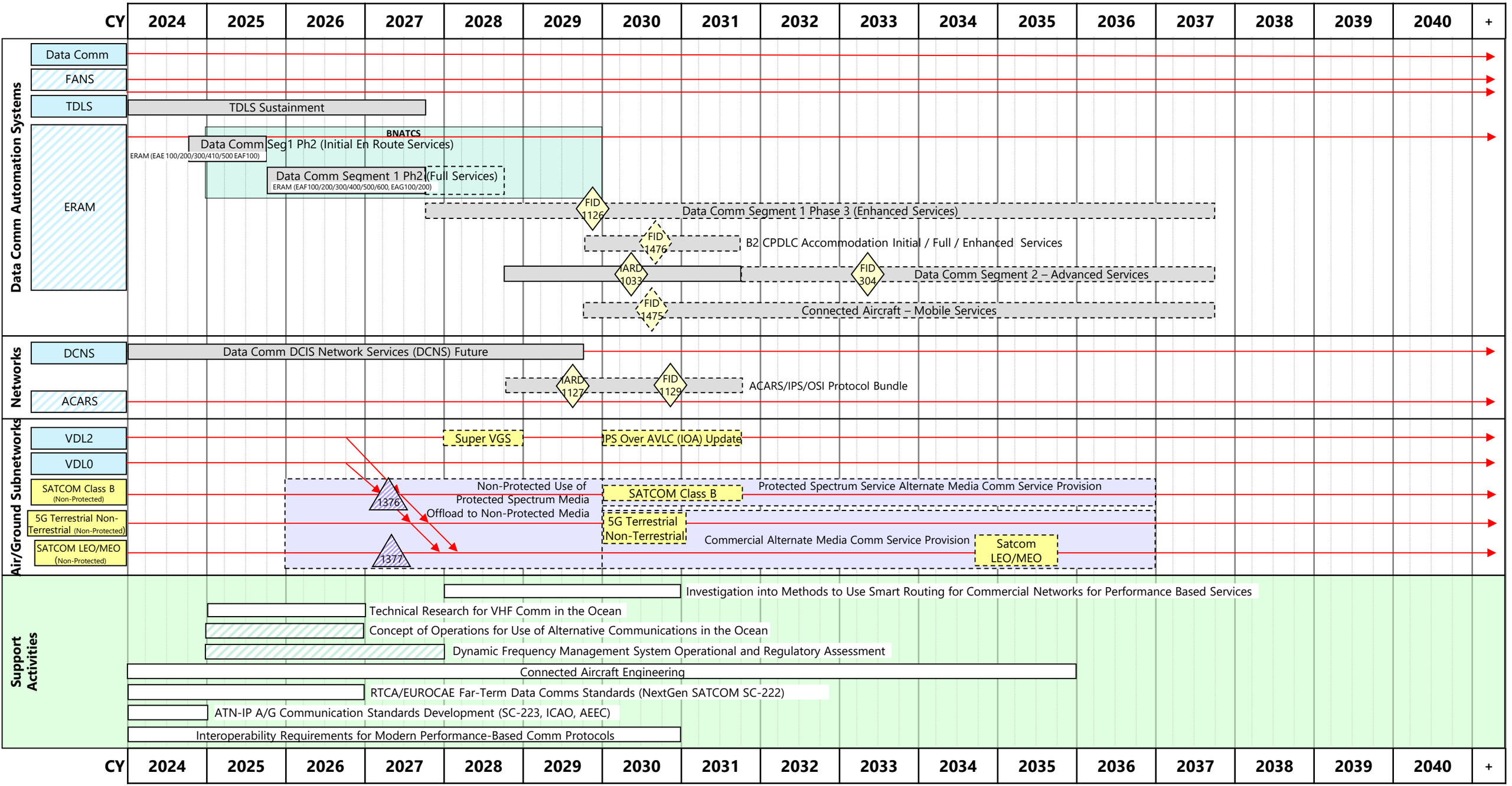

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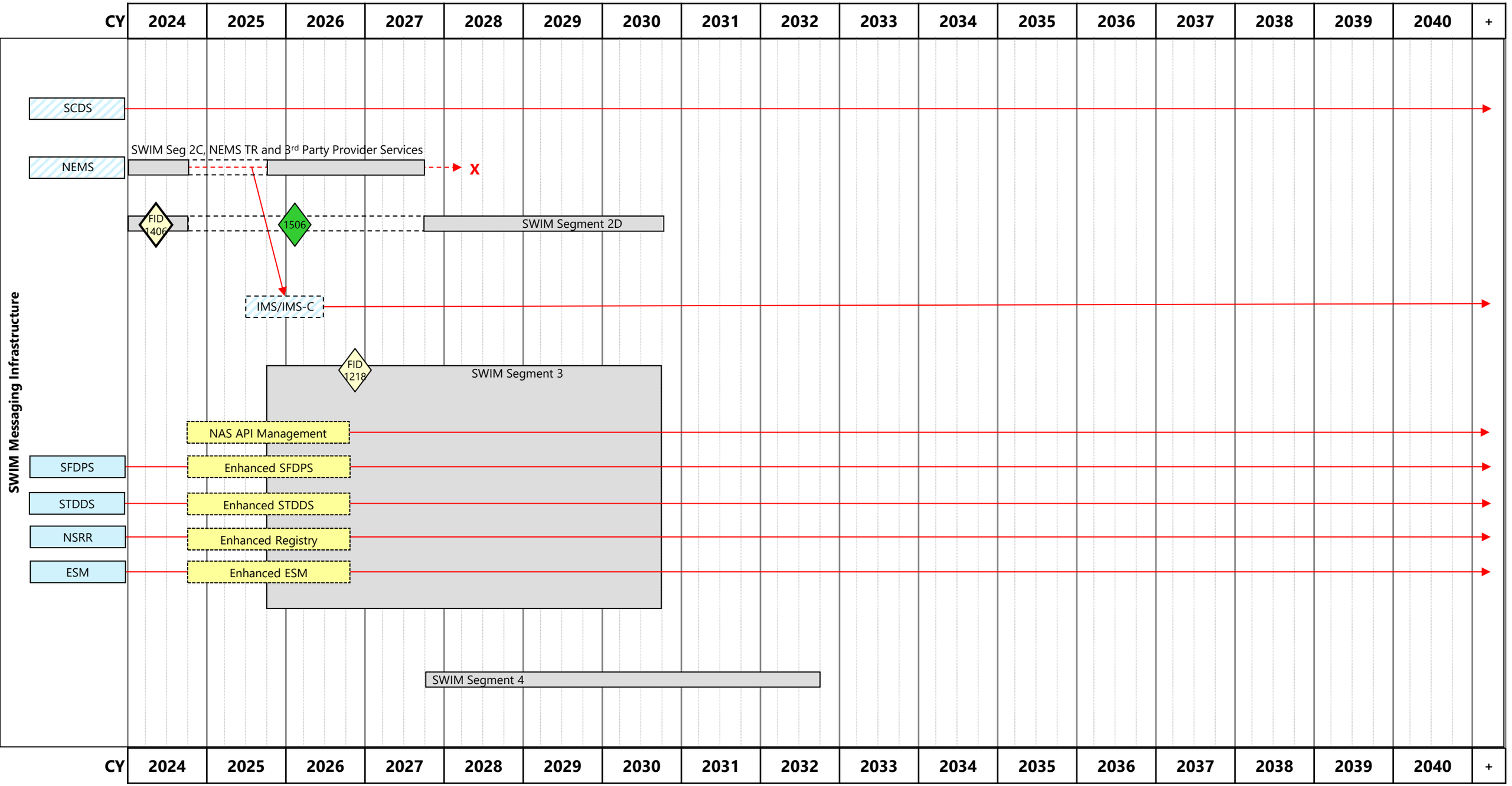
Communication Roadmap (5 of 5)



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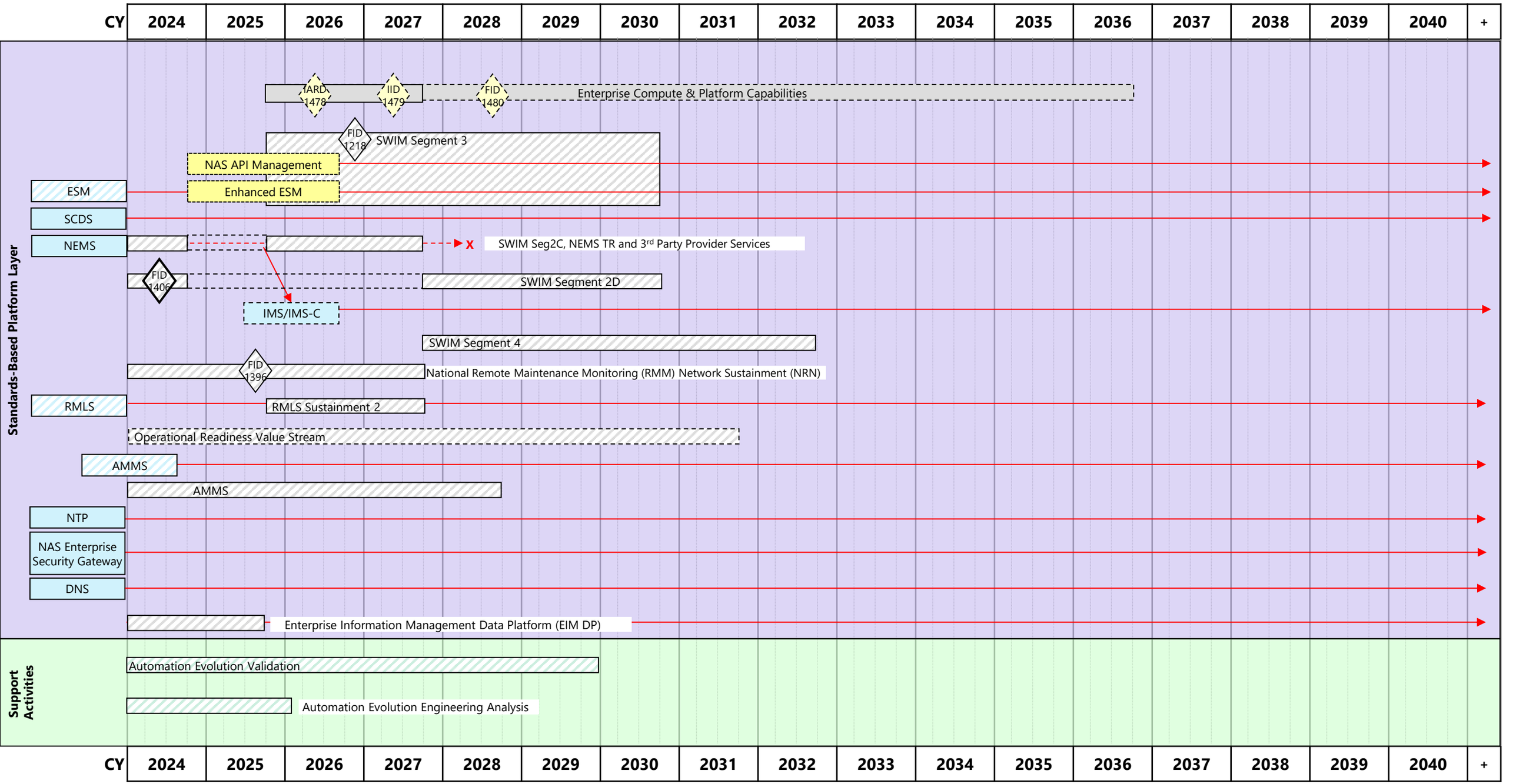
Enterprise Services & Capabilities

The Enterprise Services and Capabilities Roadmap presents an Executive View (EV) of the evolution of existing and planned enterprise services provided by NAS systems and programs and provides an outline of the major activities, decisions, and milestones. By definition, services are capabilities that exist as processes, applications, infrastructure, or any combination. They are implemented using design principles that support and promote enterprise-wide interoperability, sharing, standardization, federation, awareness, loose coupling, granularity, modularity, abstraction, reuse, and flexibility. Enterprise Services in the Automation Evolution Strategy (AES) architecture is defined as a service created for standardized use across the FAA. It includes services that provide common functionality where there is a significant benefit to the organization for all to adopt.

The Enterprise Services & Capabilities Roadmap is organized around the following Automation Evolution Strategy (AES) layers: Standards-Based Platform and Computing Resources. Additional layers may be considered during the next update cycle.

- The Standards-Based Platform Layer include services that deliver specific software or middleware component that are made available for use in creating, deploying, and operating mission software. It provides Frameworks & Environments and Enterprise Infrastructure Services (e.g. security event information management, cyber, monitoring/logging, identity access management, data encryption, and back-up & restore).
- The Computing Resources Layer includes services that provide components of the computing infrastructure needed to run platform and/or mission software. It provides End User equipment (e.g. workstations and monitors), Computing Infrastructure Components (e.g. cloud & on-prem, routers, switches, servers, disk storage).

Enterprise Services & Capabilities Roadmap (1 of 2)



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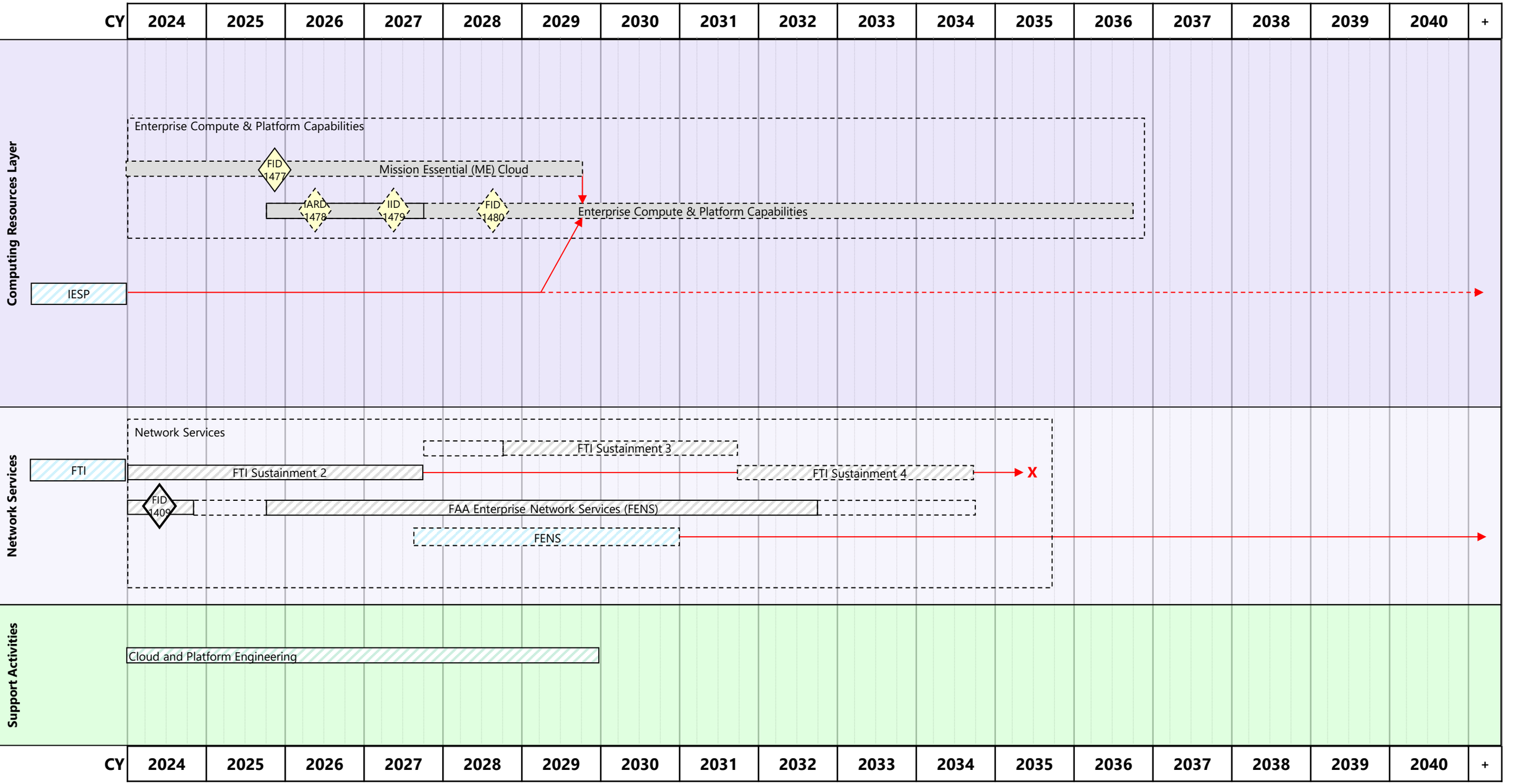
Enterprise Services & Capabilities Roadmap (2 of 2)



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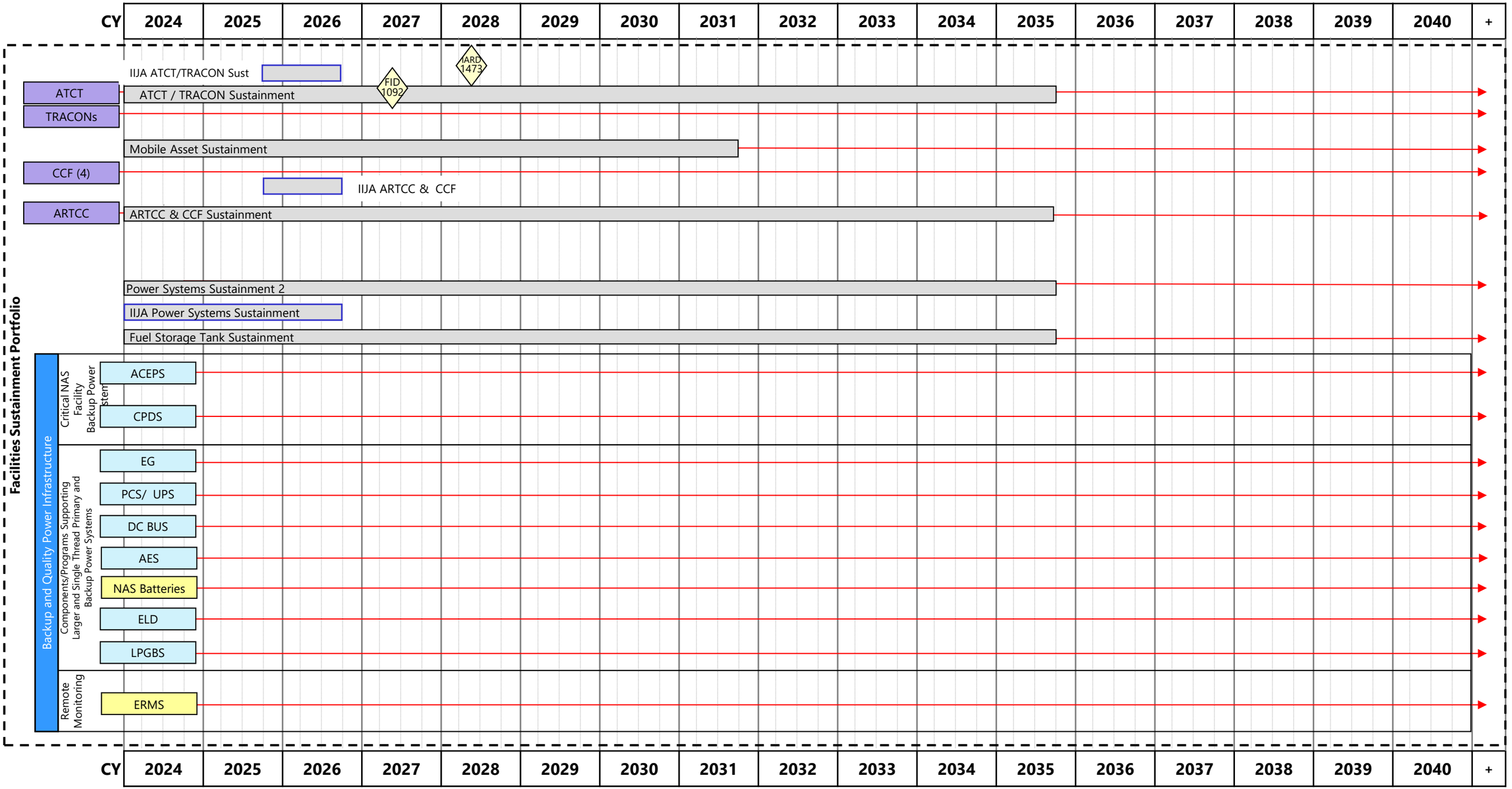
Facilities

The Facilities Roadmap presents an Executive View (EV) of the current National Airspace System (NAS) facilities environment and their sustainment, modernization, or replacement through major development programs.

Items with a blue outline are lines of funding from the Infrastructure Investment & Jobs Act (IIJA), also known as the Bipartisan Infrastructure Law (BIL).

Facilities Roadmap (1 of 5)



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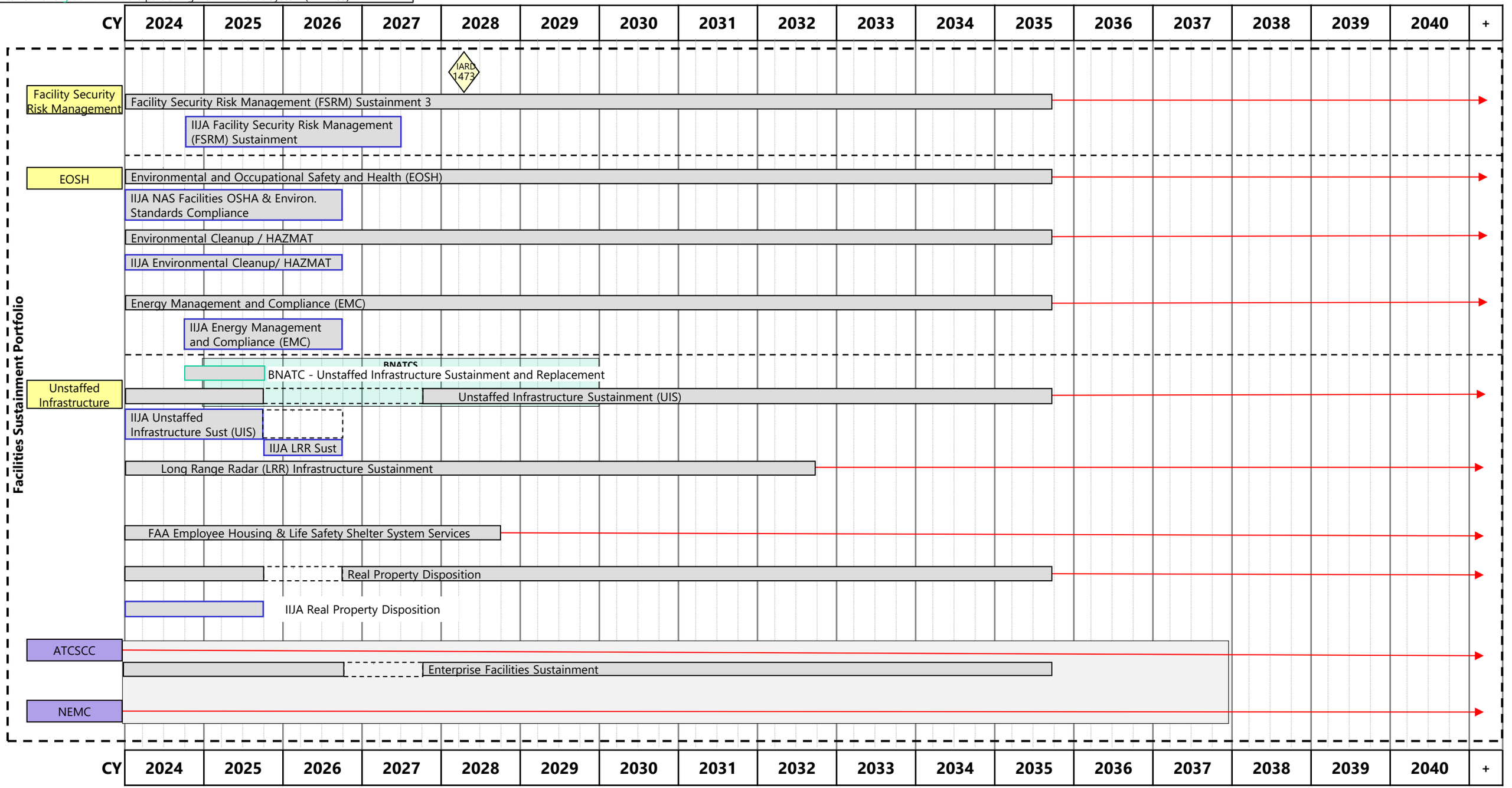

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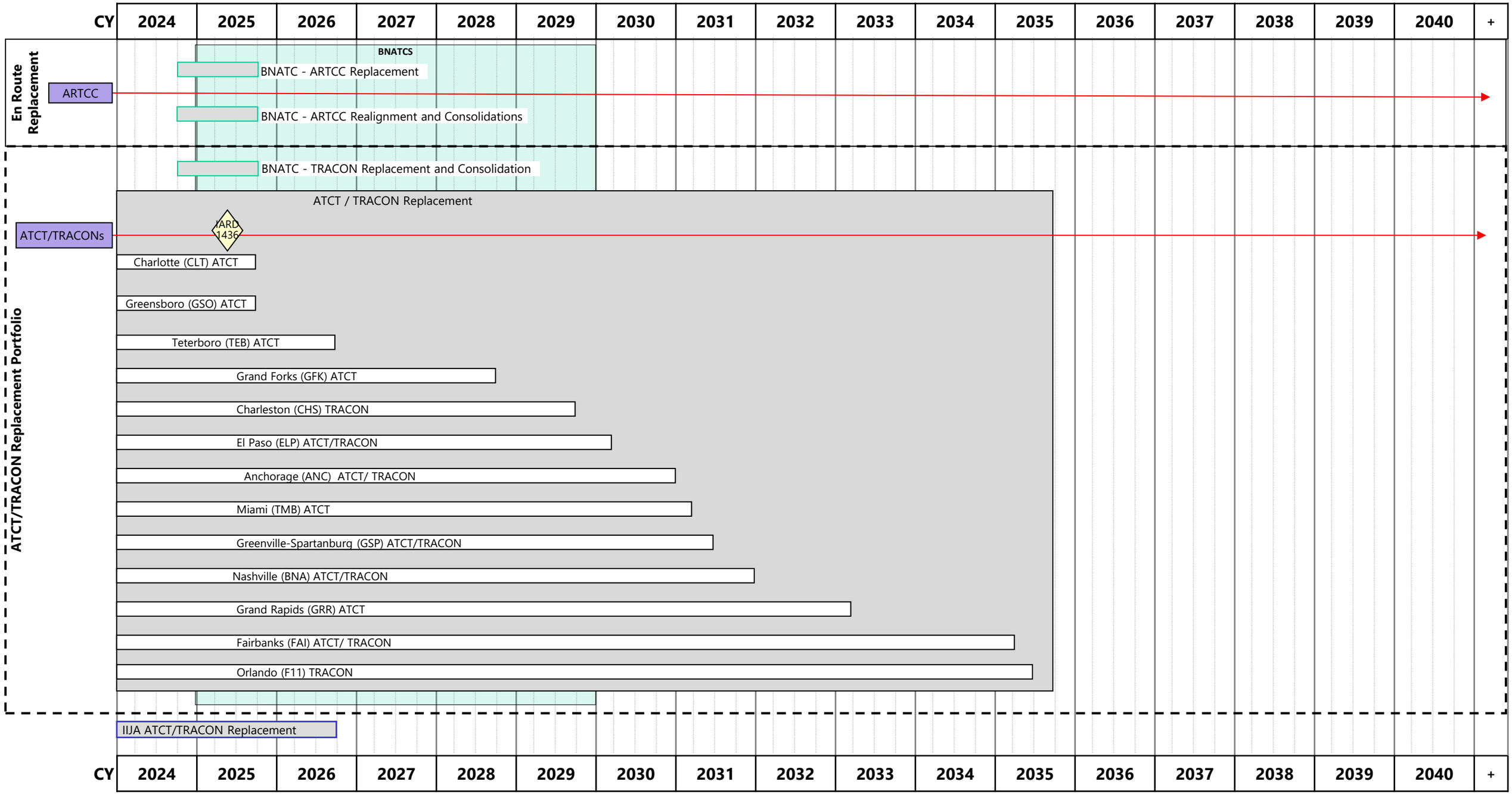

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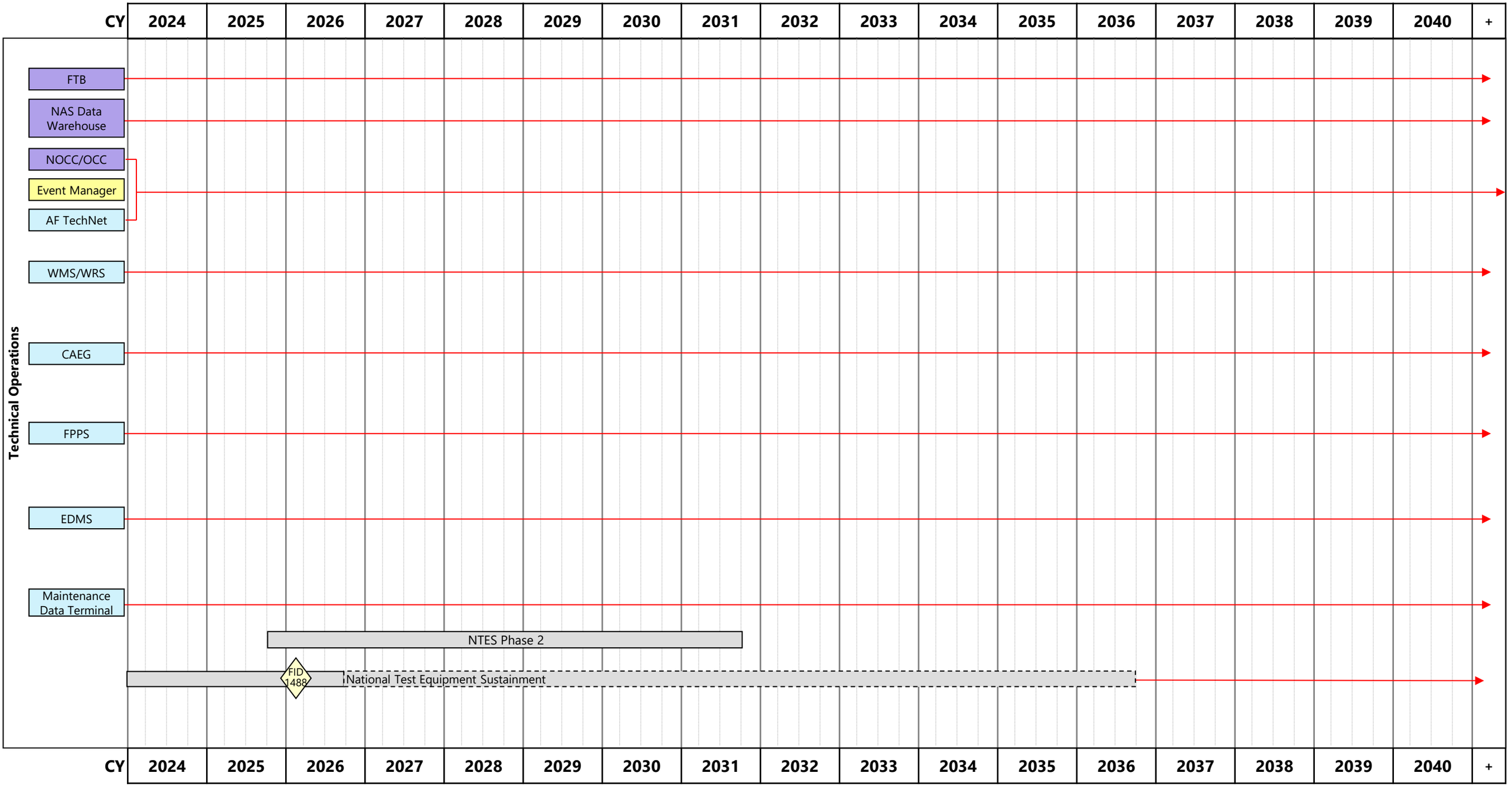
Facilities Roadmap (4 of 5)



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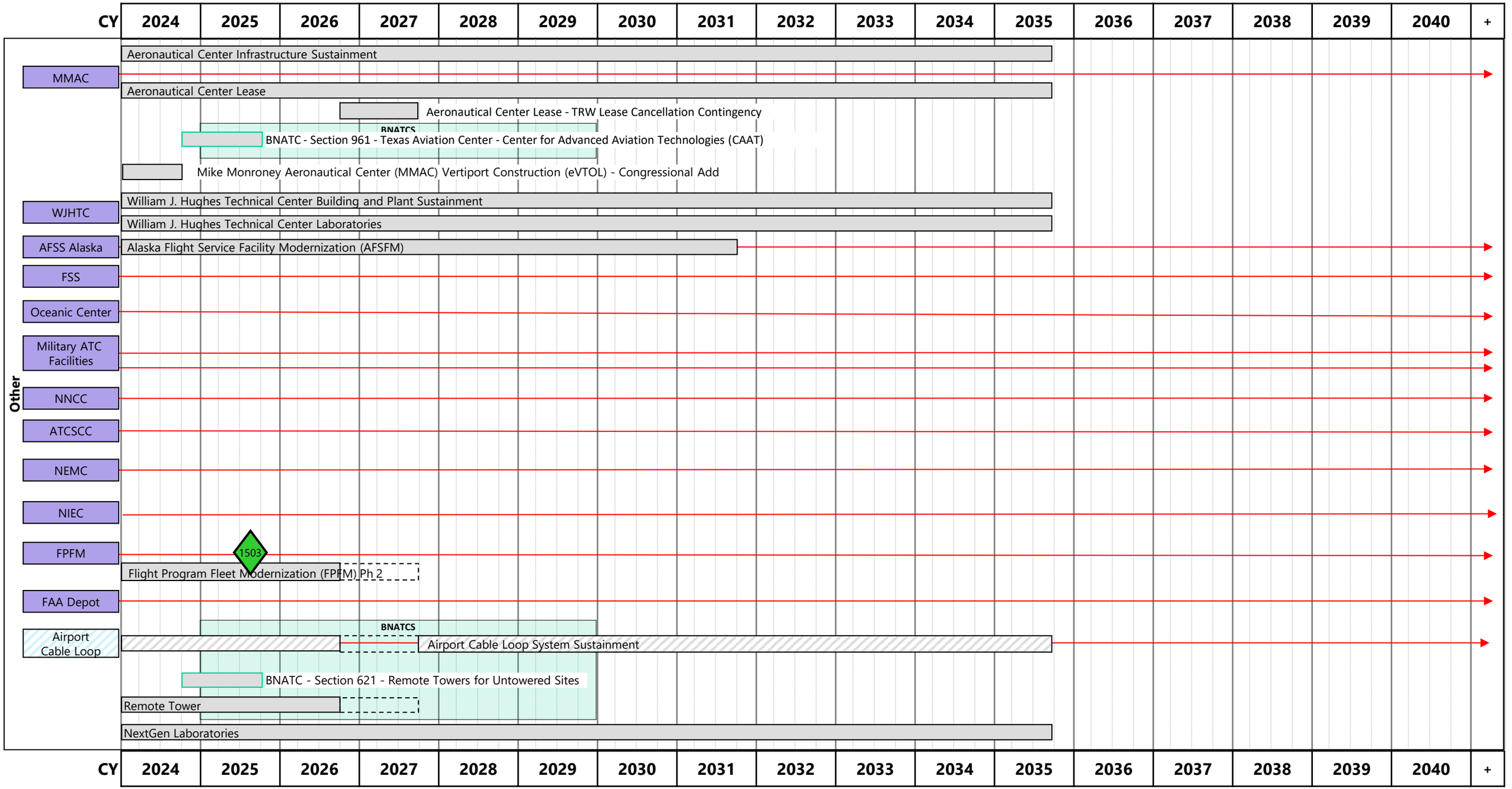

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Navigation

The Navigation roadmap depicts the establishment, sustainment and evolution of ground-based, satellite-based, and visual navigation systems which enable aircraft to determine and report their position, navigate in accordance with clearances, and efficiently transit the NAS. These systems support conventional and Performance-Based Navigation (PBN) for the NAS and will ensure safe, efficient, and resilient services.

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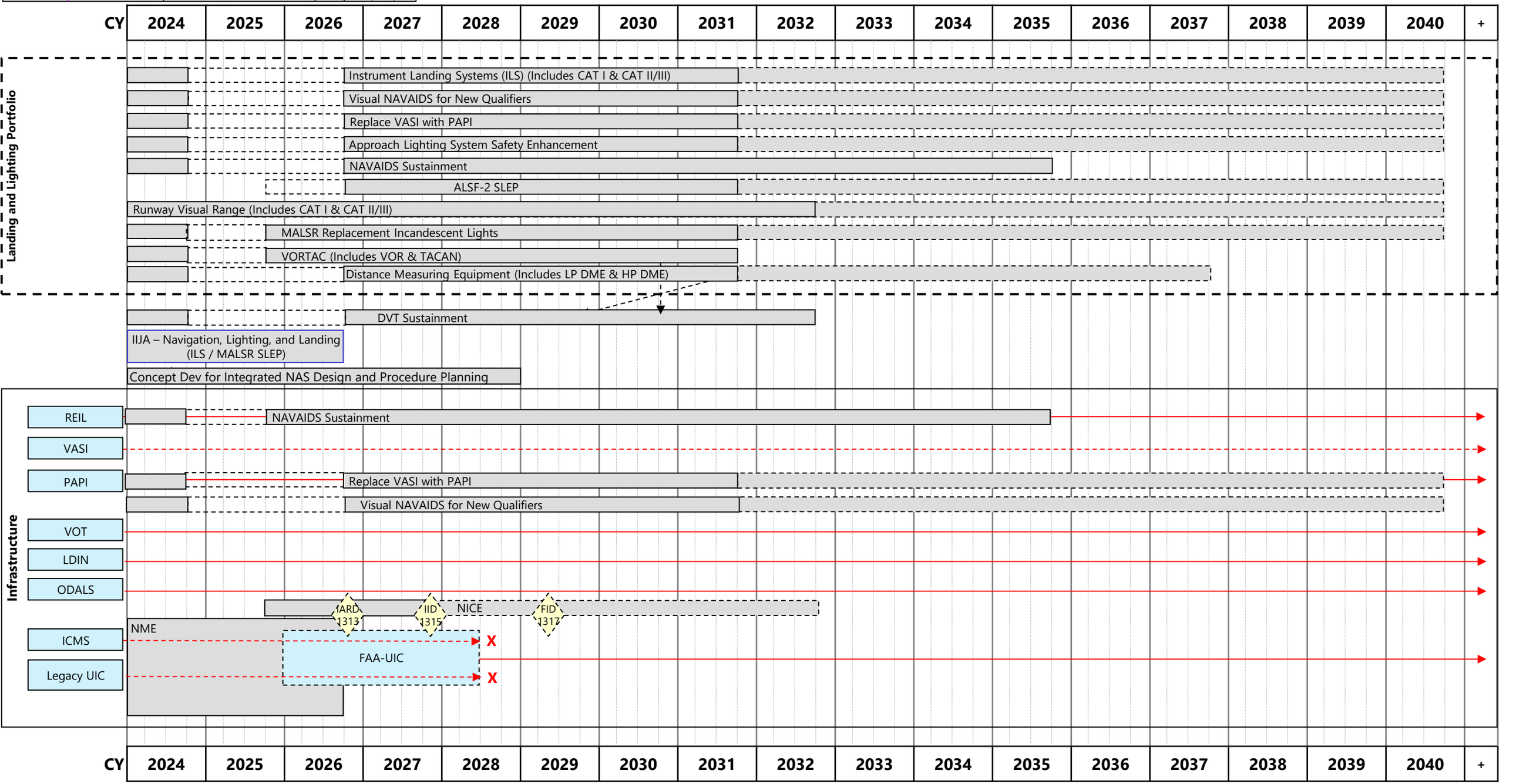
Navigation Roadmap (1 of 3)



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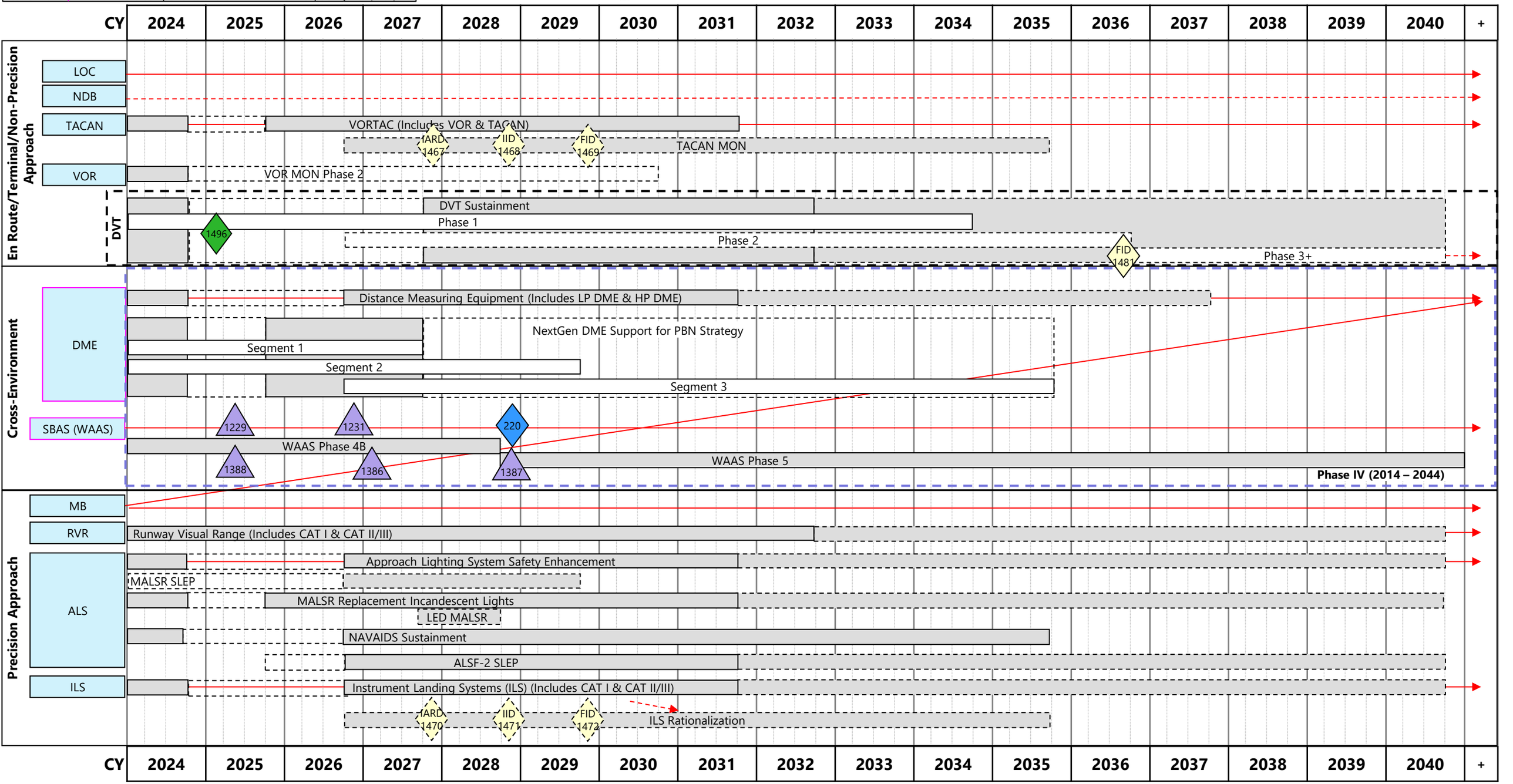

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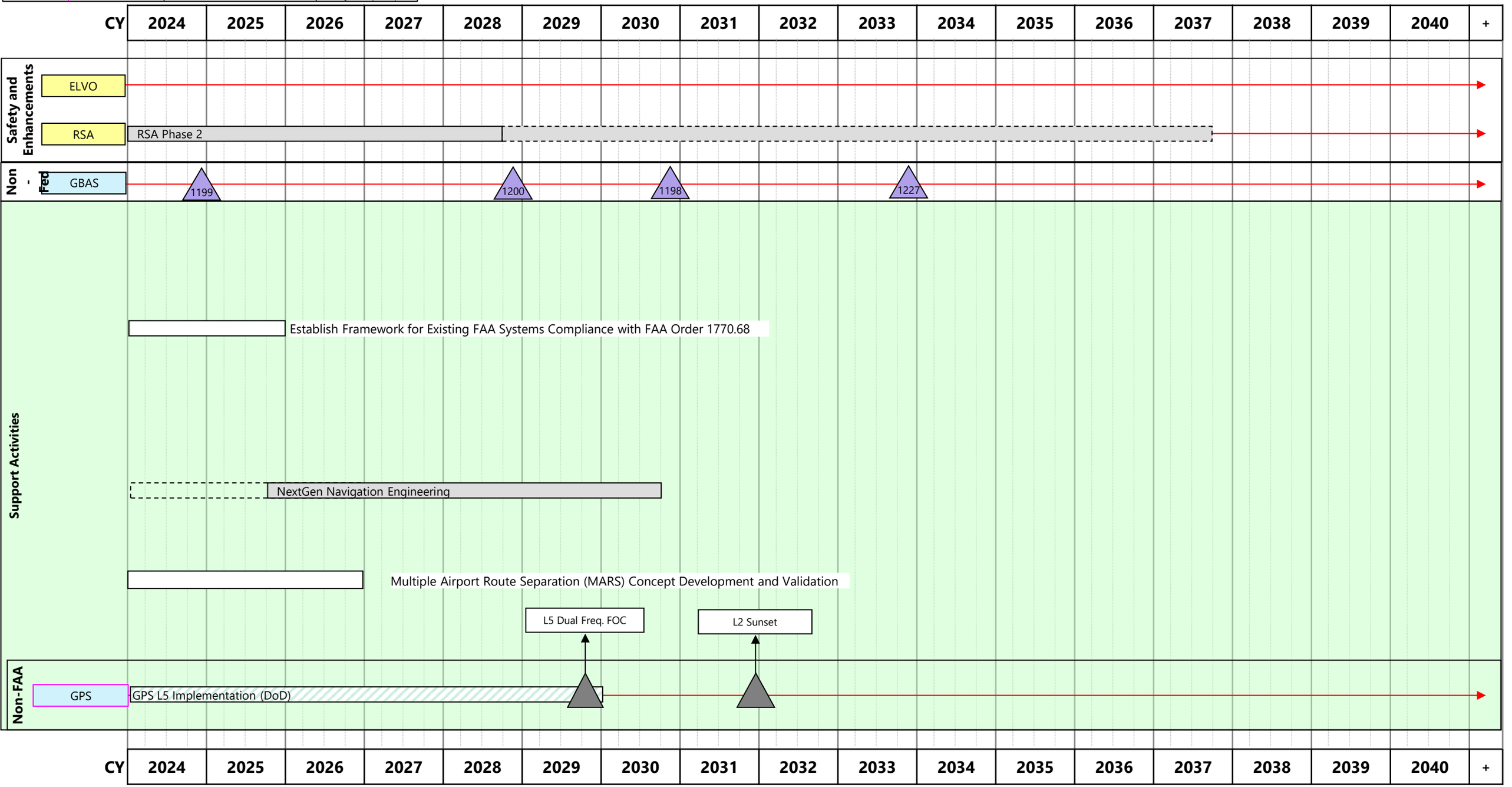

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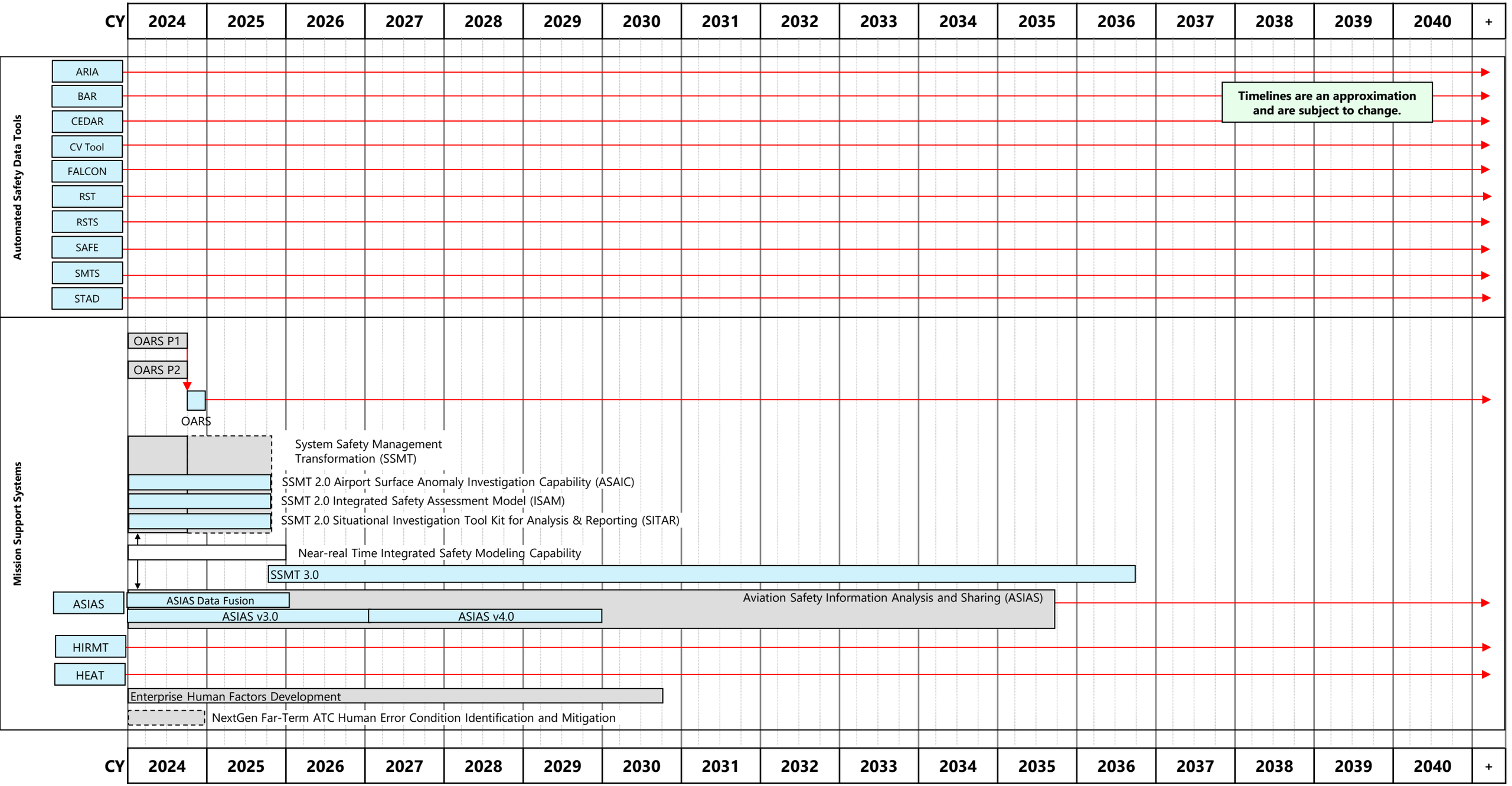
Safety

The Safety Roadmap reflects various aspects of the Safety Risk Management (SRM) process that support enterprise level, concept/capability level, and system level safety. It supports the execution of safety assessments on potential safety issues that span multiple FAA organizations, through cross-cutting stakeholder collaboration, and provides FAA decision-makers with pertinent information to make risk-based decisions. The Safety Roadmap integrates SRM elements with NAS operations and system acquisition milestones through the development of key safety assessments, procedures, guidance, policy and requirements that support the Enterprise System.

Safety Roadmap (1 of 2)



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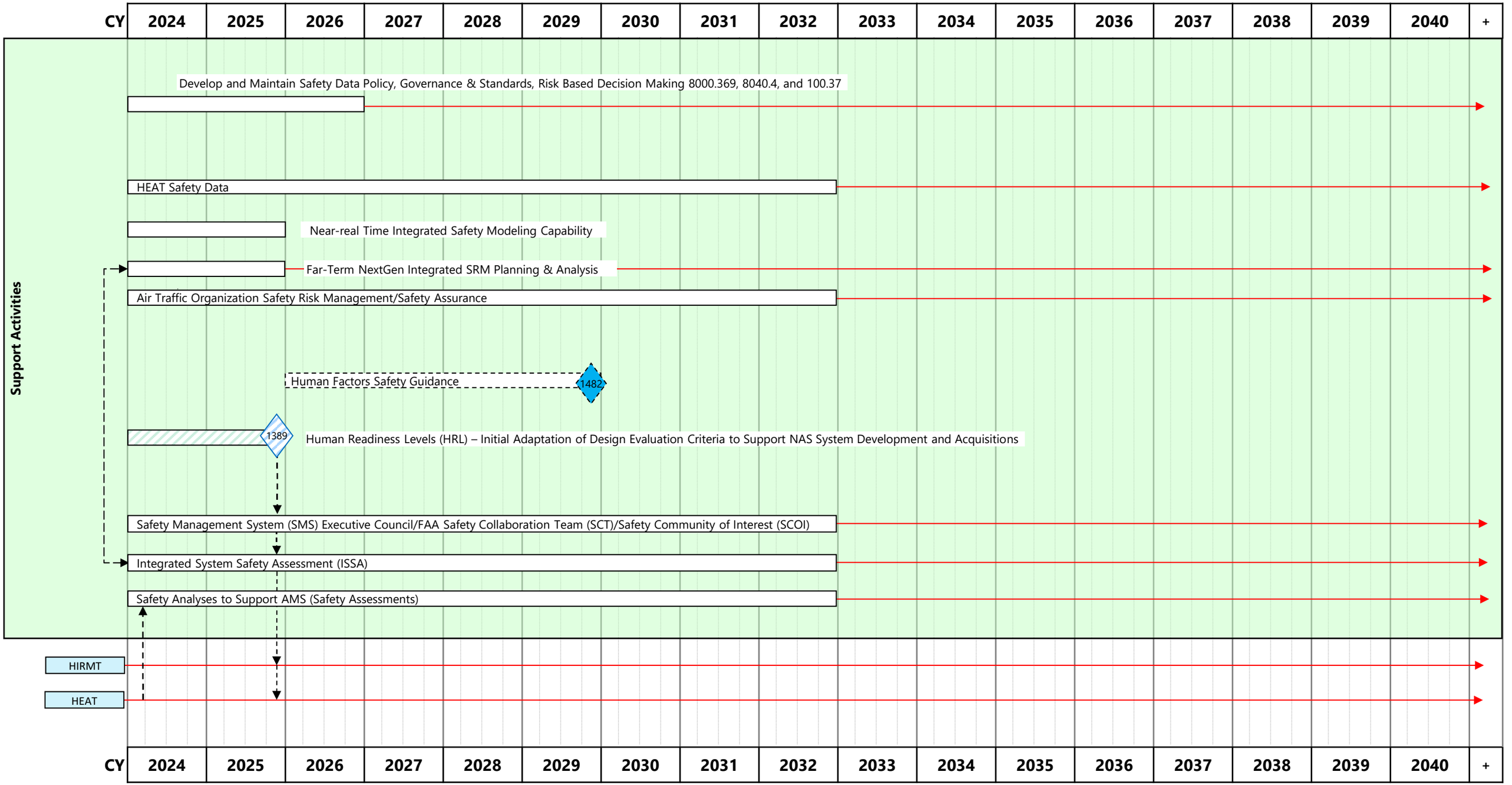
Safety Roadmap (2 of 2)



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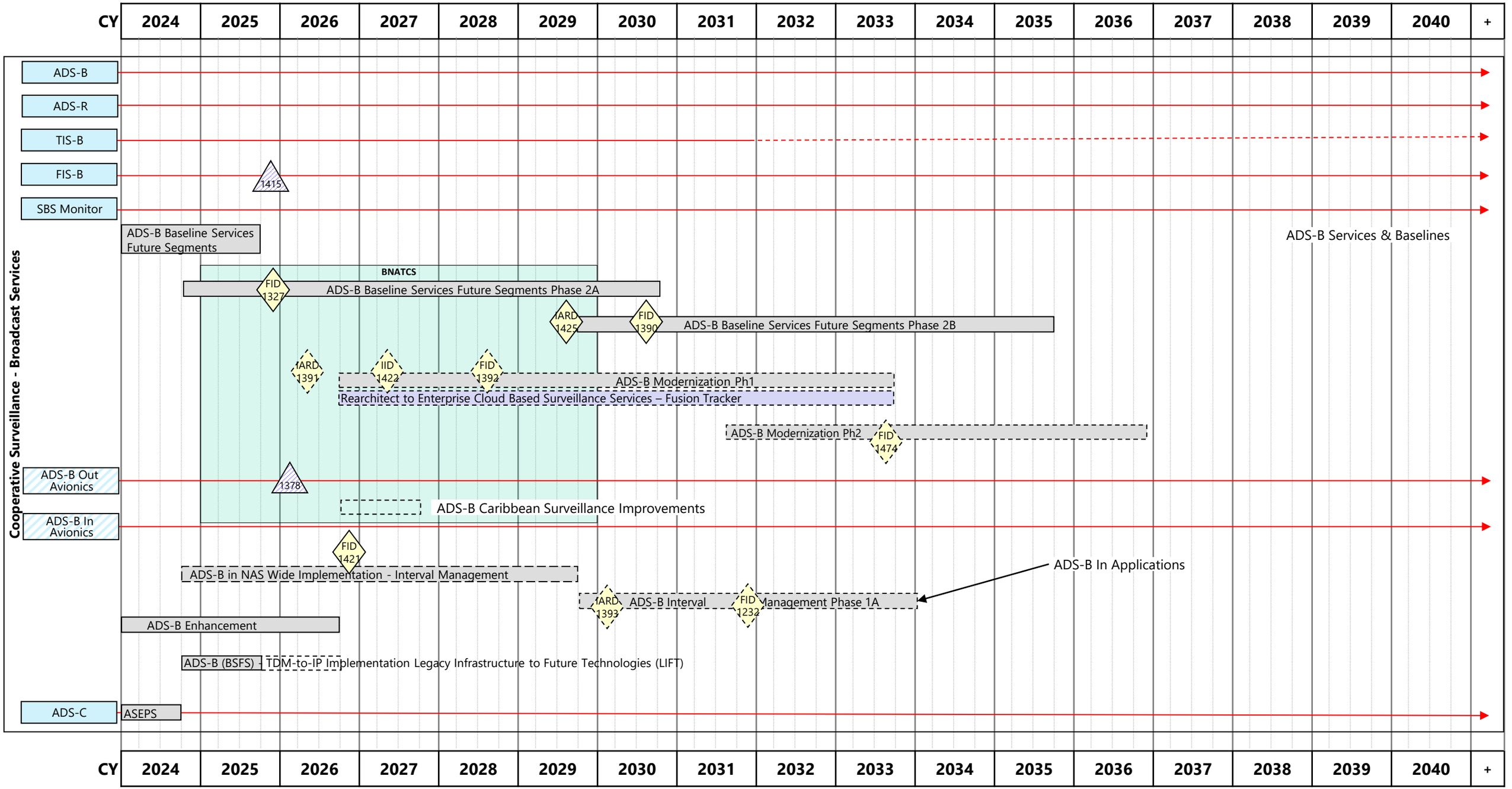
Surveillance

The Surveillance roadmap depicts the sustainment of legacy surveillance systems and the evolution towards the NAS Modernization environment.

Items with a green outline are part of Big New Air Traffic System (BNATCS)

Surveillance Roadmap (1 of 4)



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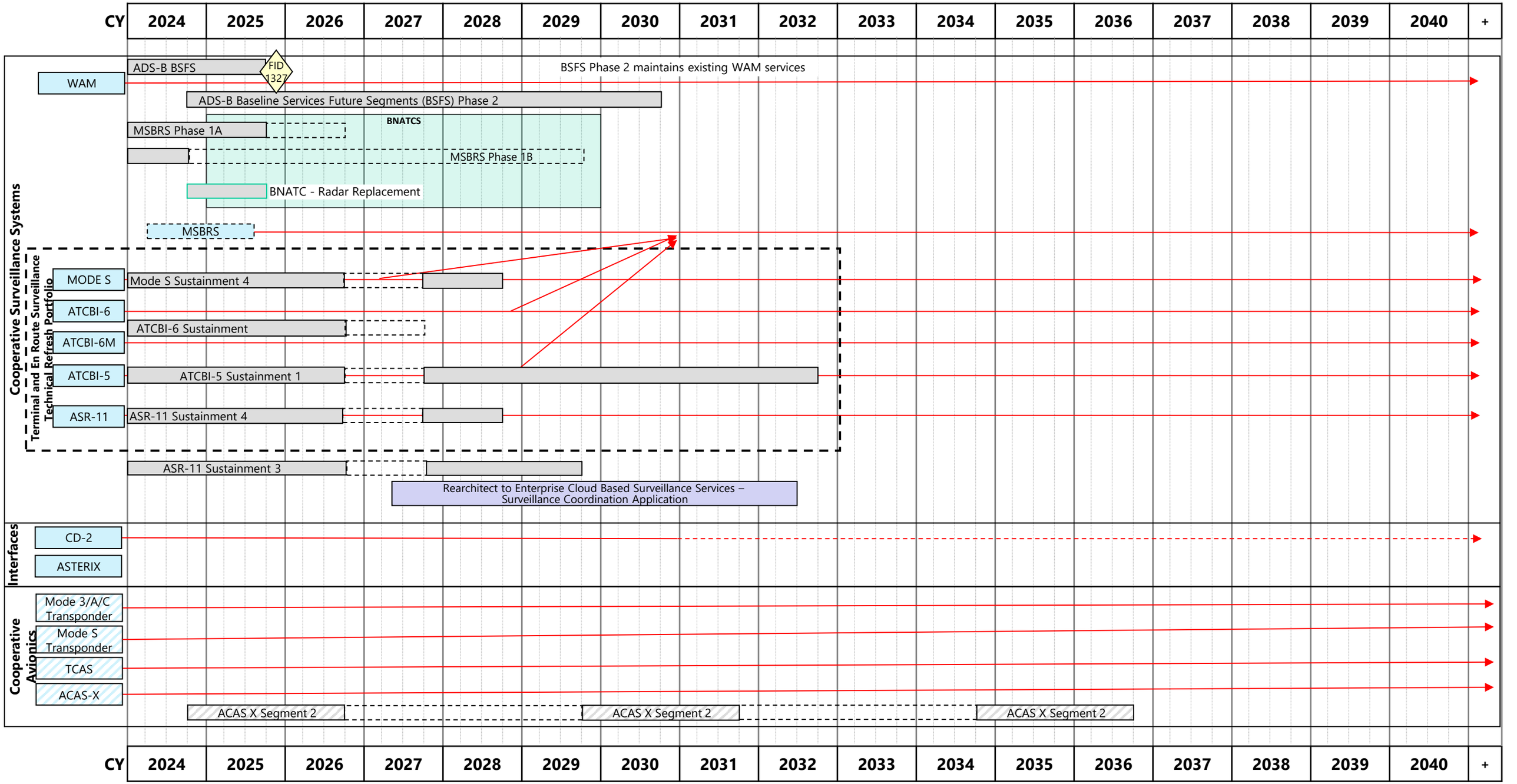

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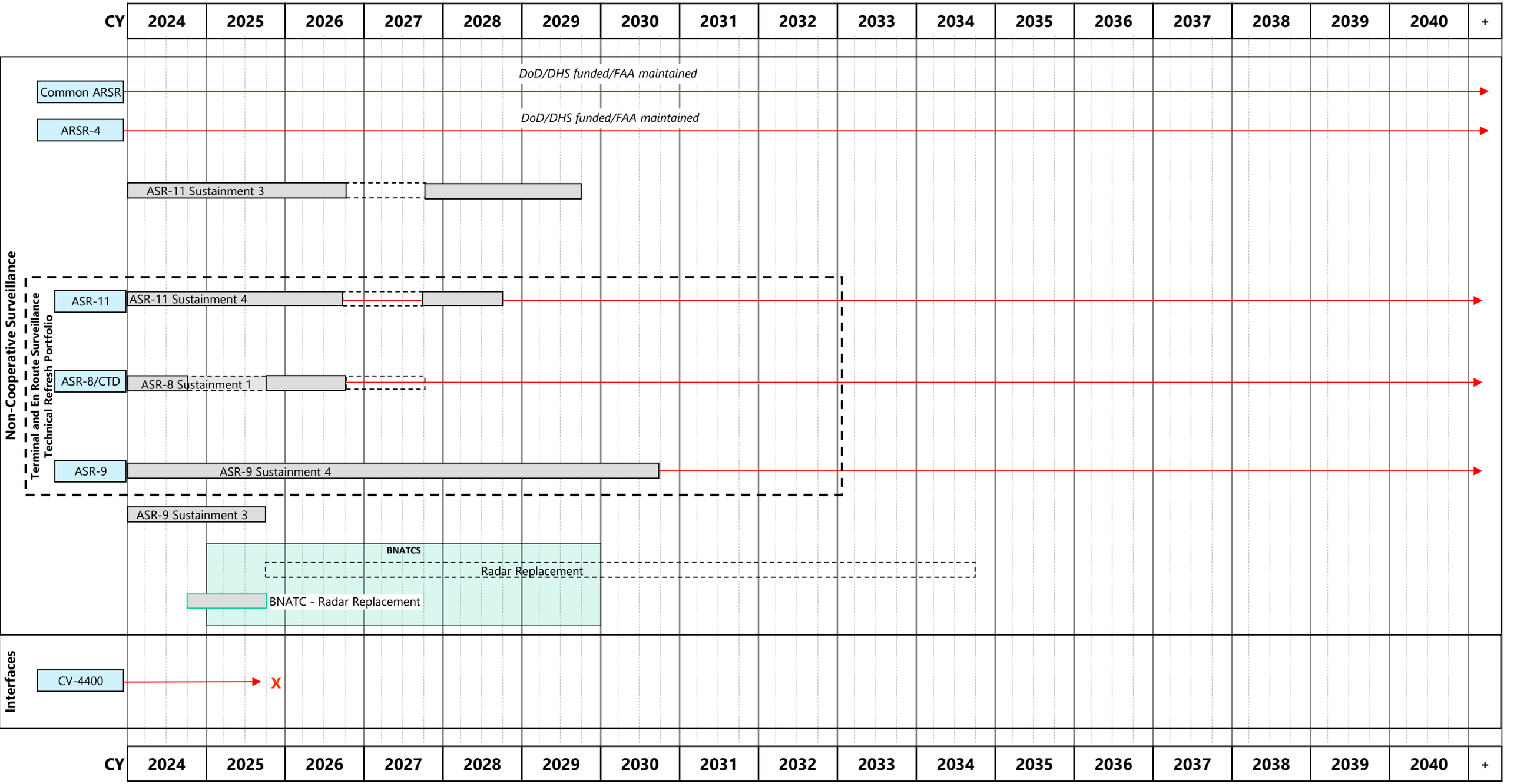

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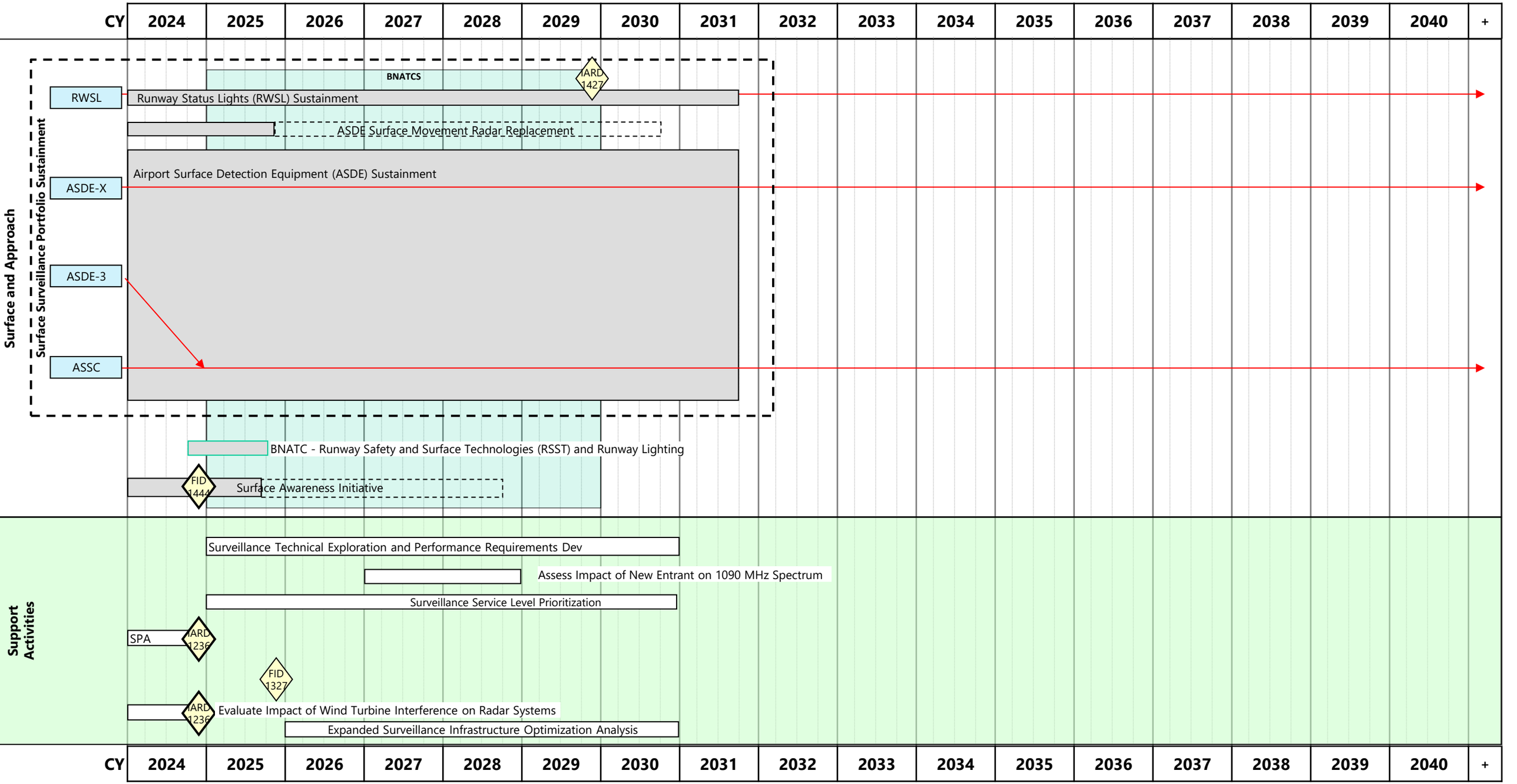

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Weather

The Weather Roadmap presents an Executive View (EV) of weather-related acquisition activities and the changes to these activities that exist within the Weather enterprise architecture (EA) domain (projects and programs) of the Federal Aviation Administration (FAA). The Weather Roadmap provides the evolution of the weather architecture via AMS milestones and related activities (e.g., aviation weather research, demonstrations, and other agency activities) necessary to achieve the performance objectives and capabilities to support NAS Modernization. As a perspective of the changes in the NAS operational environment, the Weather Roadmap reflects major Weather interdependencies to support (or be supported by) other domains in the NAS enterprise architecture as depicted in NAS Roadmaps.

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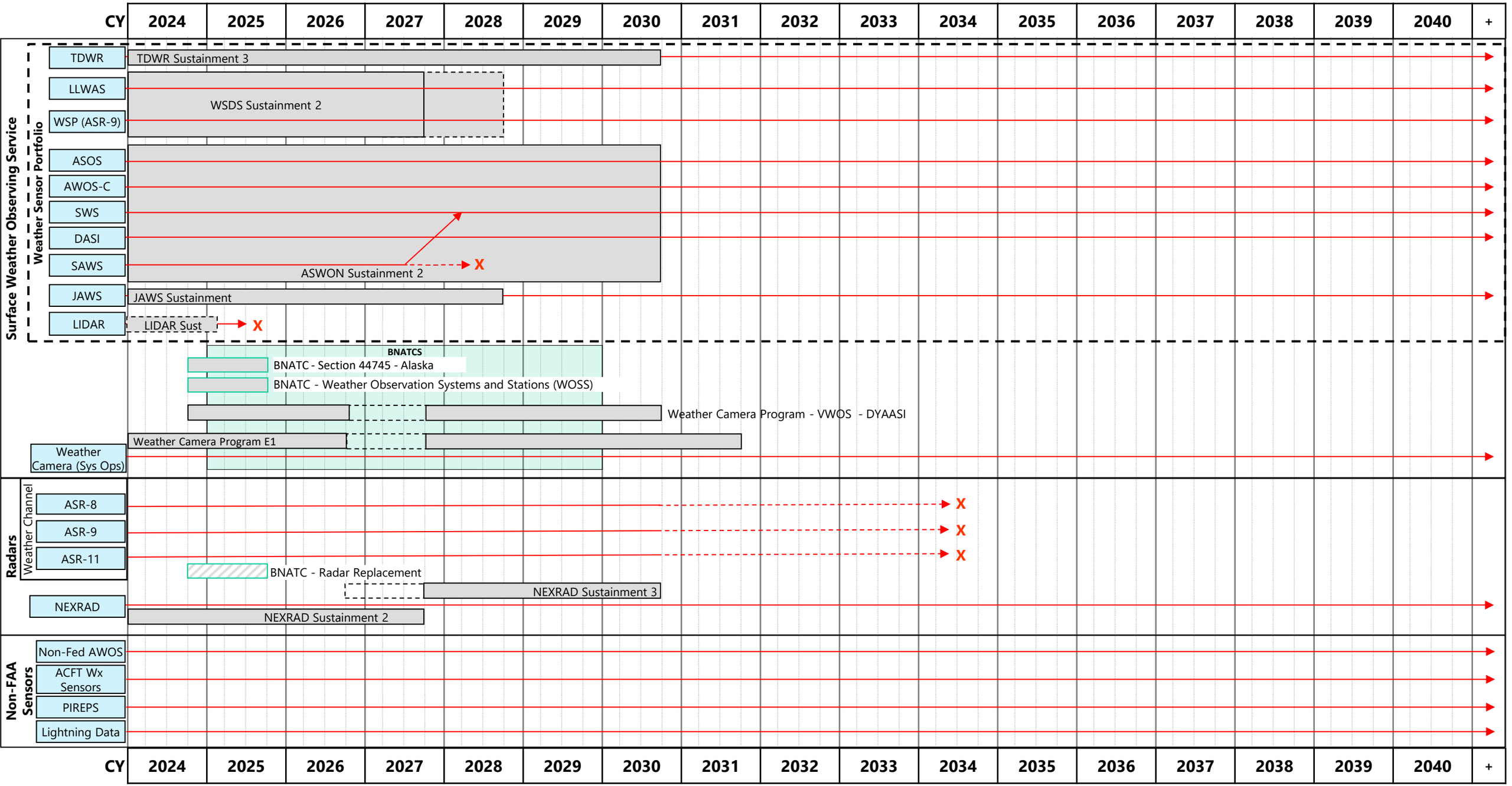
Weather Roadmap (1 of 4)



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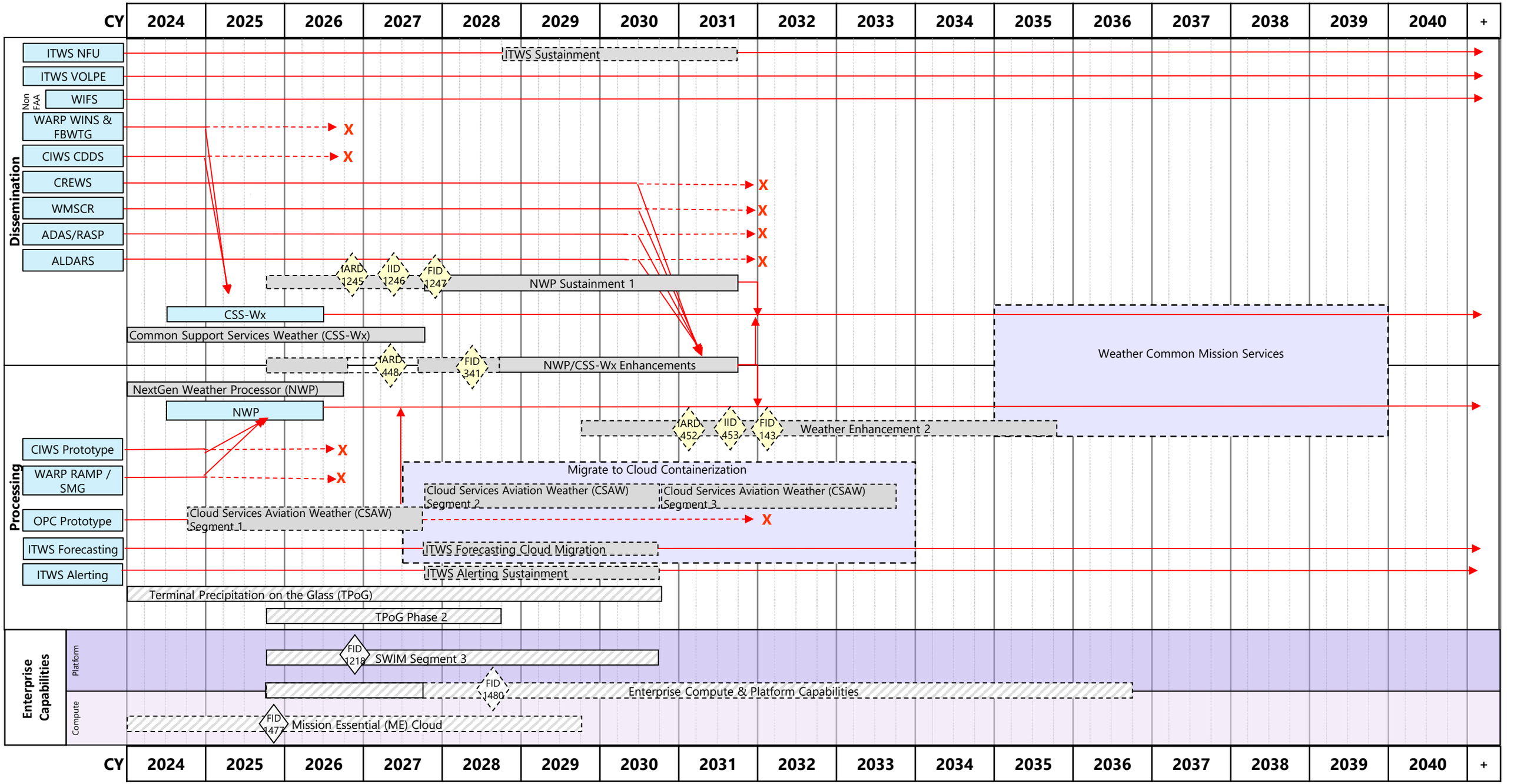

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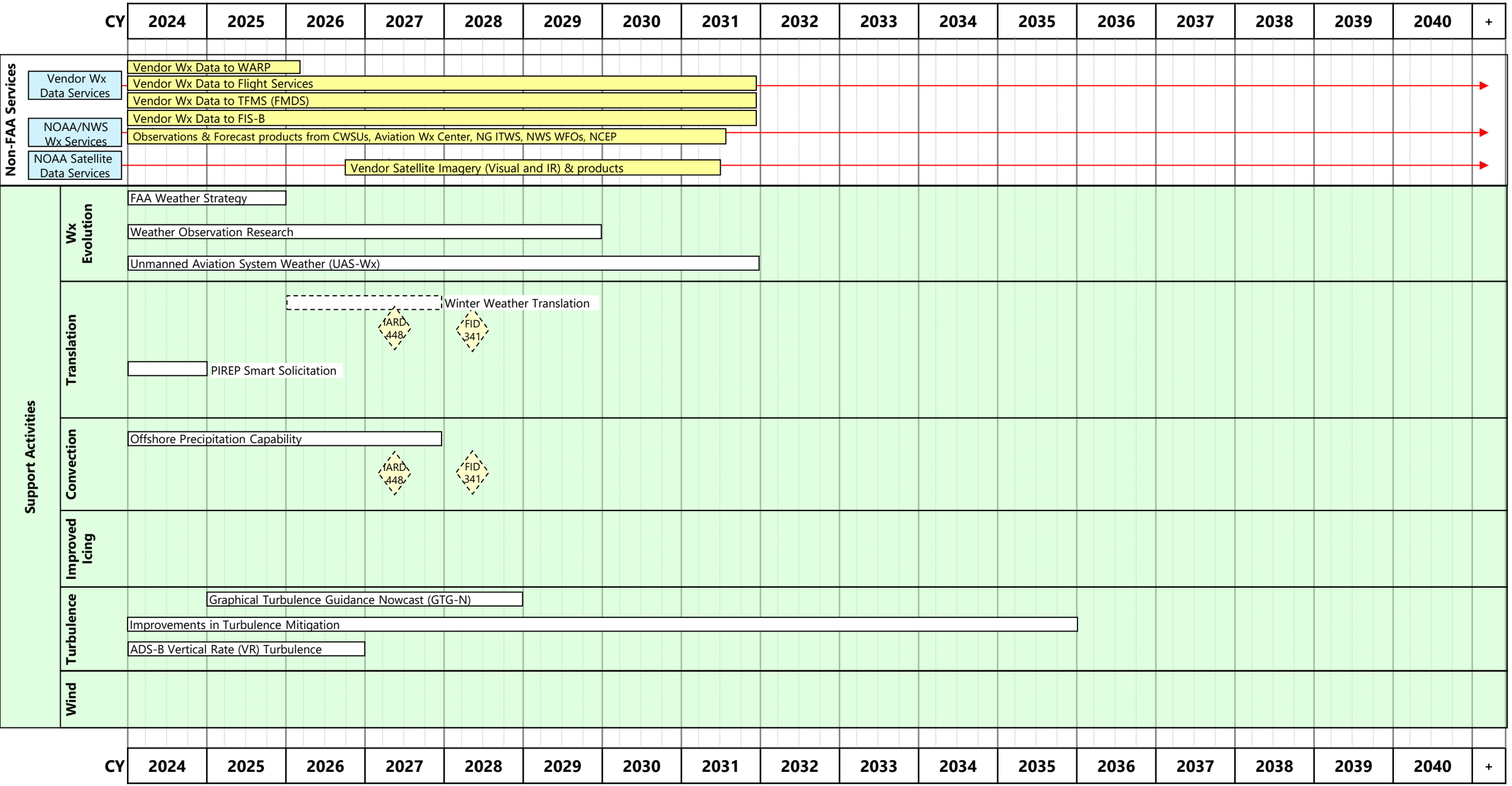

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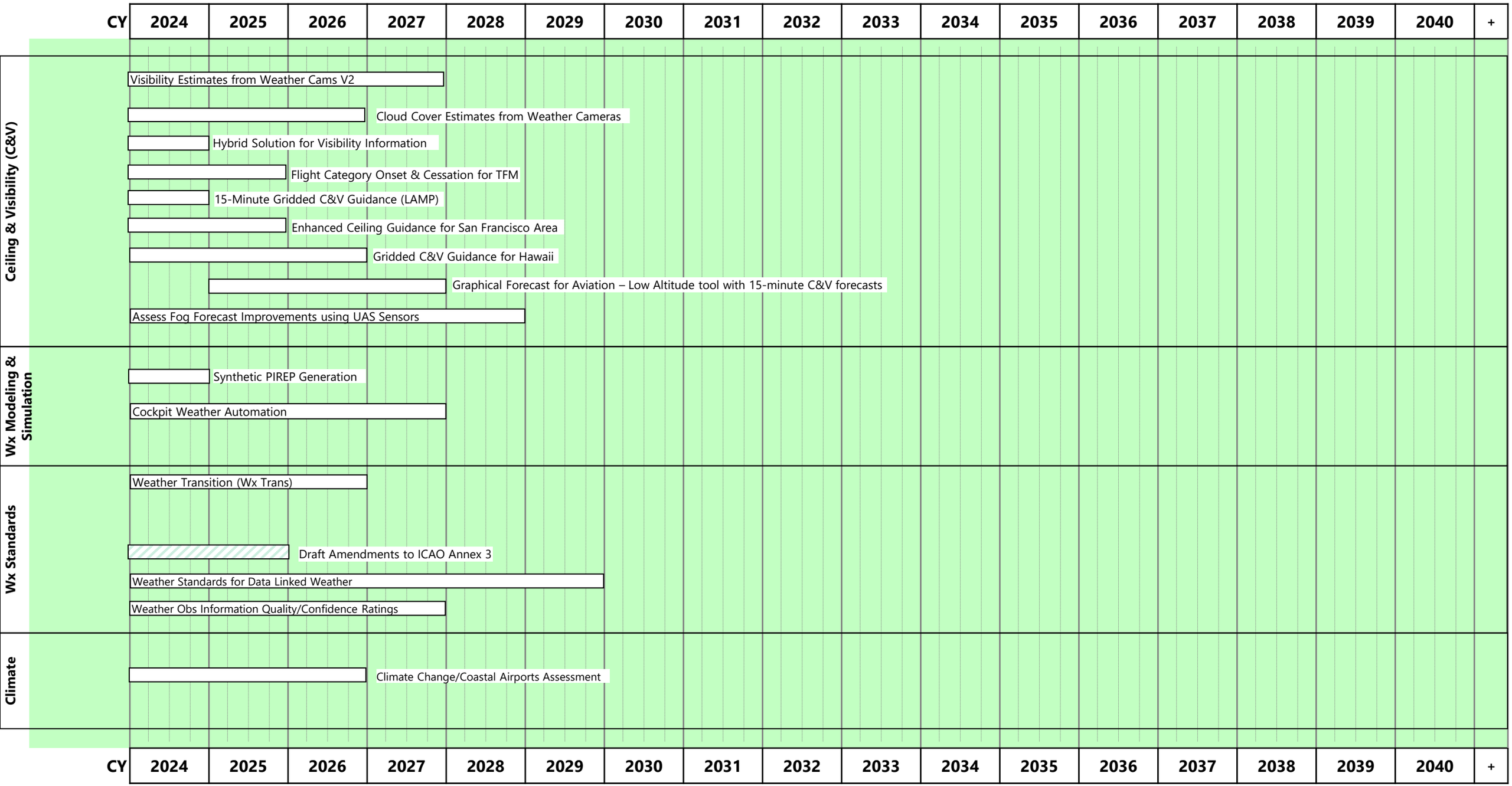

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