

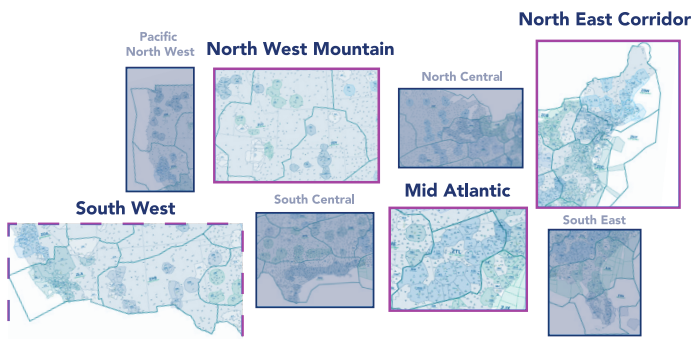


Trajectory Based Operations

Evolution of TBO Capabilities

Trajectory-Based Operations (TBO) builds on the FAA's investments in time-based management tools, and on the FAA's and operators' investments in advanced navigation capabilities. TBO is a long-term effort to reduce capacity-to-demand imbalances across airports and industry. The concepts and capabilities of TBO have been under development for many years, and the FAA is now incrementally deploying them in the NAS. The geographically focused, gradual, and methodical approach for TBO allows for continued infrastructure sustainment — and the opportunity to adjust to change and implementation.

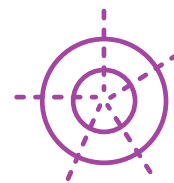
Current implementation areas include the Northeast Corridor, the mid-Atlantic, the Northwest Mountain area, and the newly announced Southwest area.



TBO is different from other FAA programmatic implementations in that it is not a singularly focused program — but a collection of systems and capabilities that evolve and become geographically available over time. These capabilities are split into four categories: infrastructure, initial, full, and dynamic.

Benefits

TBO's current implementation and ongoing evolution over time will bring benefits to operators. These benefits include:



throughput

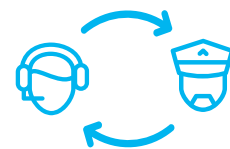


flight efficiency

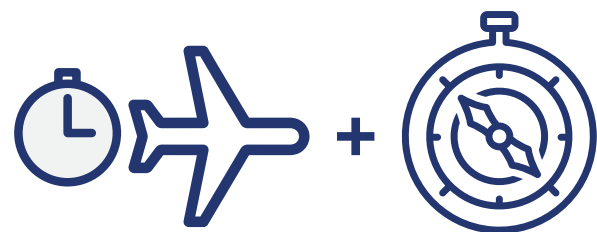


predictability

flexibility



through the use of **TBM**, existing **PBN** procedures, and other enabling technologies. For more information regarding TBO capabilities deployment, please email questions to 9-AJT-TBO@faa.gov



TBO Evolution

TBO capabilities evolve over time, starting with the Infrastructure deployment phase during which the FAA deployed foundational automation and data exchange infrastructure to support TBO.

Infrastructure	Deployment phase during which the FAA deployed foundational automation and data exchange infrastructure to support TBO.	Common Framework for Collaboration, Operations, and Performance Based Navigation
Initial	The FAA started deploying TBO capabilities at select locations in the NAS; in this currently on-going phase, already existing capabilities and those under development within the ATO's Program Management Organization are being deployed in an integrated manner, but the integration of the capabilities across domains remain largely manual and workload intensive.	Capabilities to Develop and Field Time-Based Management
Full	In the Full TBO phase, the FAA will complete the development, deployment and integration of TBO capabilities across domains – to all phases of flight and the associated facilities.	Integrated Automation Systems for TBO
Dynamic	Dynamic TBO phase will include capabilities that are still in research and development; these advanced capabilities will provide automated data exchange across systems and stakeholders, and will support dynamic, flight specific time-based solutions for reroutes and aircraft sequencing.	Advancing Individual Aircraft Solutions

Subject to budget, pandemic, and other constraints



FAA
Air Traffic Organization

