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Future Concepts Team

## Co-leads

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## Team Members

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Task 97:  
Trajectory Based Options &  
Future Flow Management



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# What is TBO?

- TBO is an air traffic management method for strategically planning, managing, and optimizing flows and flights.
- It relies on time-based management, performance-based navigation, and enterprise enablers such as data communication and System Wide Information Management (SWIM)



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# The FCT provided feedback to illustrations of TBO capability by:

- Focusing on flight operator impact
- Identifying TFM Shortfalls, and benefits
- Outlining a vision towards exploiting expected benefits



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The FCT concluded that given the complexities of the TBO concept, system integration is the necessary foundation to achieving the proposed benefits and that meaningful operator engagement is key.

Task 97 was closed September 2021. Additional tasking on Future Flow Management (FFM) will be forthcoming once the concept has matured.



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# Task 107



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# Post-Departure Coordination and Airborne Negotiation (PCAN)



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# What is PCAN?

PCAN is a concept supporting the ICAO Flight and Flow Information for a Collaborative Environment (FF-ICE)



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The FCT has been tasked to provide operational expertise and input through a series of tabletop exercises designed to focus on the functionality of PCAN while the concept is matured.

To date the team has participated in the first of two planned exercises.



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The FF-ICE concept defines information that is associated with ATM Components.

- Flow Management
- Flight Planning
- Trajectory Management



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PCAN as the name suggest is an airborne negotiation process of trajectory management.

The concept incorporates Negotiation Horizons that can be broken down to the following zones for conflict resolution.

- Departure
  - Up to 30 minutes prior to departure the negotiation horizon is based in the Terminal Zone.



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- Enroute
  - The Negotiation Zone moves ahead of the aircraft until reaching the coordination zone for conflict resolution
- Arrival
  - Once the aircraft enters the terminal zone no further negotiation is possible and the aircraft lands safely.



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# PCAN Tabletop 1 Takeaways

- Review of related concepts from FF-ICE
- Refined Negotiation Horizon Timing and Revision Request Process.
- Explored edge cases to align with Negotiation Horizon construct
- Discussed FF-ICE services recommended for strategic negotiation
- Discussed FF-ICE processes that support strategic negotiation use cases.



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# PCAN Tabletop 2

- Scheduled for May 18<sup>th</sup> & 19<sup>th</sup>
- Highlight the outcomes of Tabletop 1
- Expand on applicable constraints to further refine the clearance coordination processes
- Explore the integration of FF-ICE with TFM operations



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# Questions?

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