- The Flow Evaluation Team strives to increase system efficiency by reducing route coordination time and enhancing system planning through the creation of common situational awareness of potential route alternatives, procedures, and coordination processes.

- The FET will develop any potential opportunities having to do with routes or issues generally within the enroute domain.

FET MEMBERS

Walter Williams	FAA/ATCSCC
Ernie Stellings	NBAA
Eddie Olson	Delta Air Lines
Tom O'Neill	American Airlines
Richard Voigt	FedEx
Drew Toman	United Airlines
Mario Beauchamp	FAA/AJV
Dan Kerr	FAA/NATCA
Phil Smith	THE OSU
Darin Tietjen	Southwest Airlines
Tim Niznik	American Airlines
Chris Vital	JetBlue
Ron Foley	FAA/NATCA

A Tribute to those we lost via retirement/job reassignment/escapees:

- Chad Wakefield-- (FAA/ATCSCC)—Former Co-Lead

- Brett Gilbertson--(Delta Air Lines)

- Mike Sterenchuk--(American Airlines)

- Bob Ocon---(FAA/ZNY)

- Clay Whitesell--(United Airlines)

- Tony Smith--(FAA/ATCSCC/NATCA)

- Dave Vogt—(Delta Airlines)

- Kal Moustapha—(Jet Blue)

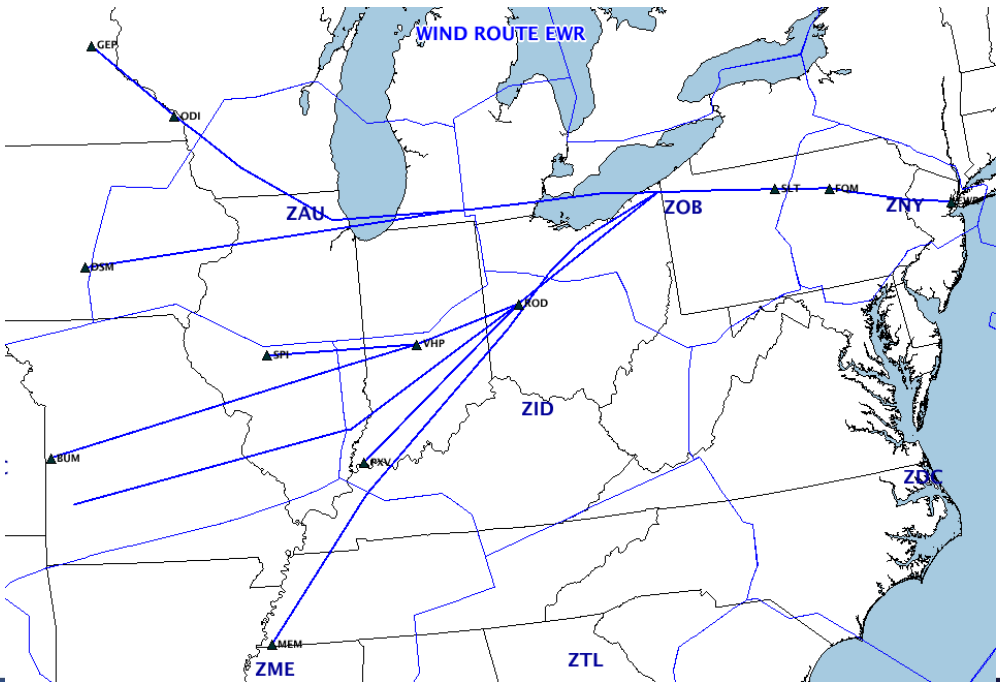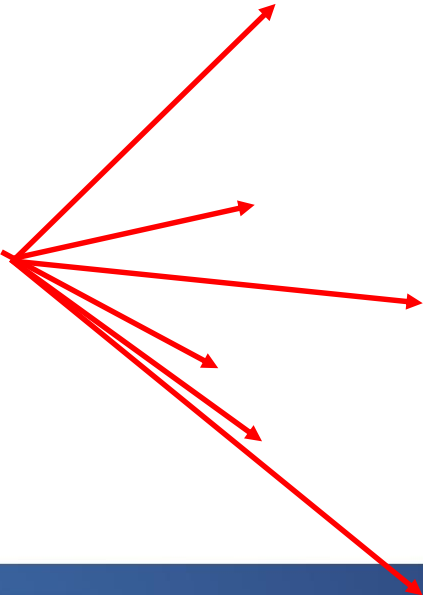# OVERVIEW OF CURRENT TASKS

- Route Strategies to Support NASA Research
  - NASA will utilize the FET members in understanding current route usage along with known city pair constraints in Pref and Playbook routes.
  - Will also provide feedback to NASA on potential refinements to ATC tools and procedures that would directly impact route strategies.

- Route Strategies to Support NASA Research

Pitch and Catch Points

Protected Segments Option

Eastbound Playbook Routes

MGM 3 PLAYBOOK

New Protected Segment Default

- Route Strategies to Support NASA Research
  - After providing NASA with feedback on playbooks routes that might be worth pursuing, the team decided to test this by going to ZKC and meet with TMO/STMCs/NATCA/Airspace folks on this concept.
  - This was met very positively and routes are being evaluated for modification using this concept.
 - The FET is now looking to ZID and ZME with a similar approach

- Design, Conduct, and Evaluate Trajectory Options Set (TOS) Table-Top Exercise

- Develop and conduct a Table-Top exercise or series of exercises to
  - Challenge and examine the TOS capability with the objective to improve existing roles, responsibilities and definitions in the TOS concept of use.
  - Assess the TOS functionality to identify gaps and recommended corrective actions

Trajectory Options Set - TOS

- Alternative use of TOS using PDRR

  - Reroute around Airspace constraint
  - TOS creates ability for Airlines to use Alternative Trajectories
  - Alternative Trajectory Options are filed in pre-departure phase
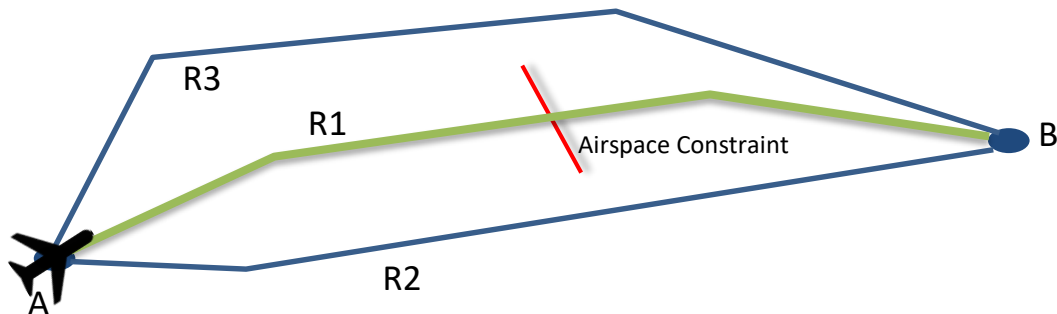
Trajectory Options Set	
Route 1 (R1)	Preferred Option – shortest
Route 2 (R2)	Option 2 – long deviation
Route 3 (R3)	Option 3 – even longer deviation

- Current Status:
  - Met with Tanya Y/Tech Center on their TBO project that also involves use of TOS with ABRR/PDRR
  - They are interviewing Traffic Managers on usage of these tools at 12 facilities and this feedback can assist us with our project
  - We are in Phase 2 of the project:
    - Identified participants for exercise (FET + 12 center TMCs)
    - Identified scenarios for use in test (Recommendation-ZDC, ZOB, ZHU, ZNY)
    - Identified format of the cognitive walkthroughs
    - Determined time frame for exercise—September 2022
  - Shadow test to assess the use of TOS
    - UAL + AAL + others?   (June 1)
    - ZDC?

Closed Tasks

- Route Planning, Assessment and Coordination: Integrated Adaptive Route Capability (IARC)
  - The objective of IARC is to provide a one-stop-shop for the management and use of all IFR Preferred Routes, including Playbooks, CDR's etc.
  - Collaboration between CGH and FET worked well with a final Phase 01 IARC Prototype completed

- Real time coordination, collaboration and information exchange
  - Utilizing the use of "Alternative Route Options" feature in the NAS Operational Dashboard (NOD) to support departure fix demand balancing as well as to conduct an initial benefit analysis for a proposed process.
    - Industry providing alternate departure route options
    - FAA evaluating and executing departure reroute using Industry provided route option
      - Rerouting in theory could take place before push-back or after.
      - All participants were encouraged to provide feedback (feedback form linked in NOD)
    - FAA and Industry monitoring selected flights

- Overall, the NOD Alternate Route capability showed promise as an additional method in identifying efficiencies in selecting Alternate Route candidates. However, the following challenges/complexities continue to hamper a full comprehensive review:
  - Travel volume within a Covid-19 recovery state has been unstable at best, challenging comprehensive testing during test period.
  - NOD is not officially supported by NATCA on most of its capabilities, allowing for only STMC input and overall use regarding Alternate Route Testing.
  - Staffing challenges throughout the NAS led to limited interaction on various testing dates.

- Trajectory Option Set (TOS) Development

- Project Description and Scope of Work:
  - This tasking will identify the relevant classes of scenarios and potential benefits to flight operators in developing TOS capabilities.
  - The FET has identified and submitted shortfalls in current automation and processes for both industry and the FAA.