Collaborative Decision Making (CDM) Reimagined  

**December 17, 2020**

CDM traces its origins to September 1993, when the Federal Aviation Administration (FAA)/Airline Data Exchange (FADE) experiment highlighted the benefits of NAS users providing updated schedule information, allowing for improved decision making by Traffic Flow Managers. Officially formed in 1995, the CDM Program is a joint/government industry initiative, which has worked to develop new technology and procedures to ensure a safe and efficient NAS beneficial for everyone; the aviation community and the flying public. CDM is both a process and philosophy. NAS stakeholders have not only enthusiastically embraced this approach, but the CDM methodology has been applied throughout world aviation partnerships. If 2020 has taught us anything, it’s that we have to adapt to changing times and environments. Beginning in September 2020, a collaborative working group started looking at how to adapt CDM to our current environment while building on the success of the past. Through this process, we developed a new structure for CDM that combines our National Customer Forum and CDM Stakeholders Group under one organizational structure. With the creation of a new Executive Committee, CDM is poised to streamline FAA/Industry engagement and continue to advance the collaborative approach to traffic flow management. This provides us a roadmap to transform CDM into a model of stakeholder engagement that will enhance efficiency, productivity and ingenuity for the NAS.

The Executive Committee will serve as the governing body for both CDM sub-team activities and the NAS Collaboration Forum, formerly National Customer Forum. The Executive Committee will assume the role of the CDM Stakeholders Group as well as directing the tasks and agendas for the NAS Collaboration Forum working group. The desire for NCF for many years has been to develop a joint FAA/Industry working group that brings the operational units of the ATO

(Continued on page 2)
(Continued from page 1)

together with our industry partners to solve issues and concerns facing the NAS. NCF will continue to provide information such as upcoming procedural changes, construction activities, special events, performance initiatives, but in addition, we will have the opportunity to address and provide solutions to operational concerns in a forum that brings together the operational units of the ATO with the flight operators, airport operators and industry associations. The CDM sub-teams will still be tasked with providing recommendations on projects and initiatives that require more in-depth review but NCF will provide us the opportunity to quickly address issues that can be resolved by having the decision makers in the same room and working toward resolution in a collaborative manner. We believe this new structure will allow more flexibility in how we solve problems in the NAS and make recommendations for improving our traffic flow management system. We will kick-off our new Executive Committee and NAS Collaboration Forum beginning in January 2021. The current CDM sub-teams will continue working their tasks and providing recommendations just as before this change and the great work accomplished in these teams will continue to enhance the safety and efficiency of the NAS.

CDM is a global model that has transformed TFM around the world. The FAA has collaborated with ICAO on global CDM guidelines while promoting acceptance of U.S. TFM technology, procedures and processes. Working with not only ICAO but also CANSO and various other ANSPs to provide education about CDM and foster the philosophy of CDM, the FAA has been influential in promoting engagement with all stakeholders for TFM decision making. CDM is recognized globally as a “gold standard methodology” and the new Executive Committee structure will help us transform CDM to the next level of stakeholder engagement. CDM will continue to provide a venue for stakeholders to collaboratively agree on issues related to real-time operations and by using the suite of tools available to CDM participants, Air Traffic, airlines and airports are able to reduce delays by optimizing resources and improving predictability of events. The concept, process and methodology of CDM has been very successful for the FAA and our stakeholders. Our new structure will establish a model that continues the tradition of collaborative decision making that addresses the TFM issues of today and beyond. Please join us as we begin this new chapter of CDM and stakeholder engagement.

Happy Holidays,
Greg Byus and Bob Flynn

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The CDM news is published quarterly and edited by Jadyne Seitz, Staff Support Specialist and beat writer.
To remove your name from our mailing list, please click here.
Questions or comments? Email the CDM office at 9-ajr-cdm@faa.gov
The National Airspace System (NAS) is the safest, most efficient aerospace system in the world. While safety is always paramount, efficiency maximizes the use of available airspace. In 2020, the FAA’s Air Traffic Organization (ATO) undertook several initiatives to improve operational efficiency. Continuing to build on this foundation, the ATO will focus on five Efficiency Performance Initiatives for 2021. Advancing NAS efficiency requires a better understanding of operational interdependencies of dashboards and efficiency tracking mechanisms in 2021. These data analytics tools will be the key to measuring progress and identifying where to concentrate corrective actions for years to come. On December 9, the National Customer Forum was given a briefing from Curt Rademaker & Lisa Caldwell, 2020/2021 EPI Leads.

CDM, over the decades, has become a very useful way to provide operational expertise for Air Traffic Flow Management (ATFM) software development, testing (i.e., Human in the Loop, End to End), Operational Testing & Evaluation (OT&E) simulation and Key Site Acceptance Testing (KSAT) through CDM stakeholder guidance. Sub-teams have touched on all these efficiency endeavors in the past, and are ready and eager to use our processes to aid the ATO in this EPI-focus through guidance from our new NAS Executive Committee. Sub-teams will continue to conduct efficiency research and help aid projects such as these, ensure they provide efficient and cost-effective improvements to the NAS, and help to measure such improvements.

We thank the EPI leads for their work and their briefing. Four EPIs are carryovers and one is new. The FOCUS FIVE are:

- **Miles-in-Trail Stringency:**
  Reducing or eliminating un-needed mile-in-trail (MIT) is more relevant now than ever. The compounding effects of MIT initiatives as they ripple through the system lead to system delays and overall inefficiencies. Striving to be the most efficient aerospace system in the world starts at the very lowest level. With the use of the improved Stringency dashboard and targeted MIT reduction action plans, Traffic Management Officers will continue to search for areas where the reduction or elimination of MIT is needed and appropriate.
  
  - Re-Baselining – The New Normal
  - Continue to Target Area’s Where the Reduction or Elimination of MIT is Appropriate
  - District MIT Reduction Action Plans
  - Report Cards

- **Program Compliance:**
  In 2020, a new dashboard was created to track facility EDCT compliance for Ground Delay Programs at the departure airport. In 2021, the ATO will educate the workforce on the importance of GDP compliance.
  
  - Mandatory Briefing Item for Awareness Training
  - 2021 goal is to increase GDP compliance by 5% through training, tracking, and report cards.
  - Industry education

(Continued on page 4)
Arrival Fix Balancing:
The ATO has assembled a dashboard that identifies overscheduled arrival fixes. Armed with this data, AJR and AJT will work with industry to develop mitigation strategies at our busiest airports. Balancing arrival demand into our busiest airports will have wide ranging benefits to include fewer miles-in-trail initiatives, less tactical airborne re-routes and reduced scheduling delays into the overhead stream. The goal of arrival fix balancing is to maximize throughput at the destination airport.

- Target One Airport With Multiple Core Users
- Joint Effort –Industry/ATO

Airspace Flow Programs (AFPs):
The ATO is using new data analytics to determine the Unimpeded FCA Throughput (UFT) for FCAs used to implement AFPs. Using historical data to determine UFT allows for a true starting point to discuss the “day of operation” throughput rates. A new Midwest FCA structure will be established in preparation to dry-line weather events. The ATO will also educate traffic management personnel on the optimal use of AFPs.

- NE FCA Throughput Refinement Project –collaboration ongoing
- ZJX FCA/AFPs and Midwest FCA/AFPs
- Field awareness training

National Traffic Management Log (NTML) TMI Reporting:
The ATO is committed to using data to make actionable, informed decisions to improve aviation efficiency. The NTML is the primary data source for efficiency metrics. NTML accuracy at the service delivery point is vital to organizing the data into actionable information in 2021. Improved NTML data will help us prioritize our goals.

- Develop standardized training
- Build tracking mechanism to measure compliance
New and Improved CDM Website is Coming Soon

The CDM office has been hinting at the new website for a really long time now. With social distancing and working from home, even such introverted work like coding can be slowed up. However, we are finally nearing the finish line. We’re really excited about the new website and we think you will be too. The entire site has been updated with new graphics, has a more streamlined navigation, and is mobile friendly. But most importantly, the site has been re-designed for greater communication. The homepage now includes a blog-style listing of upcoming events and news stories. This part of the website is available to both the CDM community and the general public. We anticipate it to be read often by anyone familiar with our history of collaboration in ATFM. CDM subteam leads and Executive Committee members will be given permissions to make posts to the site. This is where subteam members can share stories to keep everyone informed about new tasks, or features, tests, and recommendations. Posts are an opportunity to explain new developments or topics more in depth. We want to encourage every subteam to write news posts and we’ll have training to support and kick start those efforts. News posts will be curated and further distributed through the quarterly newsletter, which is distributed to 600+ CDM stakeholders. It is so vital to get information from your meetings out there so the CDM community can read and understand what is happening with the teams. We’re looking forward to sharing all the work you are doing.

We’ve also created a forum-style interactive platform. It’s called Subteam Connect. An area of the site which is restricted to registered users—and membership in a specific subteam is required. There will be a repository for all things required of the teams by our CDM Guidance Document; meeting agenda templates, a place for your meeting summaries, your meeting presentations, travel request forms, tasks and task recommendations all in one place. And photos. (Especially photos!) Communi-
Collaborative Decision Making

NEWS

(Continued from page 5)

cations with subteam members can be done right on the site which will make scheduling a meeting quite easy. CDM subteam members can chat, exchange ideas, post information, and build a dialogue within their subteam. Within your profile area, you can also directly message other users within or outside of your subteam.

Here are the next steps. We’re planning a test drive among the subteam co-leads soon. We’ll hear their thoughts and recommendations then make updates to the site. After that, we will share the site with all the subteam members.

In the meantime, if you have any questions or recommendations, please email them to 9-AJR-CDM@faa.gov.

Happy Birthday to me, and Happy Holidays!

In addition to our wonderful new website for communication and as we transition to the new NCF format, we will still be utilizing the MITRE TFM Customer Forums page as a repository for documents. There you will find information from NCF meetings, event reviews, and airport construction reports. Now is a good time to take a look at this page and give us some feedback about it. TFM training as always can be located on the TFM Learning website.
In addition to the futuristic website, the FAA CDM office at the Command Center has a new email address: For all your CDM questions, comments and concerns please write & add us to your contacts!

9-AJR-CDM@FAA.GOV

CDM 2020 General Session

*******November 17, 2020*******

The CDM General Session was held in a virtual format this year due to Covid-19. A normal General Session was planned and we were ready to meet in Denver on April 1 2020. But of course, all plans were postponed. As time passed the decision was made to meet via webinar. Better late than not at all. The following pages of this newsletter will provide a recap of the subteam briefings. Video of these briefings will be available when the new CDM website is up and running.
General Session Updates

CTT  (CDM Training Team):

Tony Price (FAA) & Darin Tietjen (Industry) co-leads.

The CDM training team closed out the virtual General Session and by far, we were voted the “Most Enthusiastic PowerPoint Winner” award. That being said, our presentation focused on how we now disseminate the new procedures and technologies that have been submitted. We highlighted the new TFM Learning website functionality. We’ve updated and added more customer training. Out with the old and in with the more user-friendly website content. Video files have been replaced with click-and-play links. No more downloading files to view! Check out all of the training courses under CUSTOMER TRAINING in the TFM training tab. Please use these materials and distribute them to the appropriate employees at industry operations and air traffic facilities.

We are also very pleased to announce that the ATCSCC Training office is planning a virtual version of the 50113 course starting in January. Planned Offerings in 2021 are as follows:

January 12-13, February 2-3, March 2-3, April 6-7, May 4-5.

We will post confirmed information on the TFM Learning site soon, but industry stakeholders can expect the ATCSCC Training office to send out a solicitation.

We look forward to supporting your CDM training efforts.

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CAT (CDM Automation Team):

Jill Sparrow (FAA) & Bob Nursey (Industry) co-leads.

The CAT attended the 2020 virtual General Session and briefed out on three tasks. The year has definitely been stymied due to the constraints of COVID-19. Our CAT work requires use of operational subject matter experts and we are hampered by the moratorium on doing extra work to the TFMS system outside of necessary maintenance. One of the tasks assigned to our team requires us to analyze the use of the National Traffic Management Log (NTML). Former work by multiple CDM sub teams has recognized that inconsistencies and pitfalls exist in the actual practice of using NTML in field facilities. CAT will conduct the following activities:

1. Assess current operational capabilities which utilize NTML data.
2. Assess NextGen capabilities also expected to access NTML information.
3. Provide a documented analysis which describes the tools using NTML, the information accessed and findings realized resulting in shortfalls or benefits.
4. Engage with applicable stakeholders to provide input to the assessment and validation of the results.
5. Generate a report on the operational shortfalls, recommendations including documentation of resources used in conducting this analysis.

APREQ restrictions entered into NTML should begin populating SWIM data with the deployment of TFMS Release 14. Standardization of NTML entries is key, and now that there has been some refresher training developed, we should see some improvements.

We are also working on a task which will hopefully identify better ways for the TFMS system to identify matching flights. Some progress has been made. The CAT identified TFMS logic that is creating duplicate flights as well as deleting legitimate flights. The PMO has dedicated personnel to assist CAT by providing detailed flight matching logic.

The final thing we briefed on was our closed task regarding TFMS trouble tickets which are submitted by users of the system. We came up with some recommendations for the Program Office to consider. We feel there should be a central location for

(Continued on page 10)
TFMS maintenance notifications to be easily located. We asked if it was possible to create a “tracker” to automatically email out a list, so that NAS operators would not be duplicating efforts. We felt it best if each CDM member would provide a POC that will be the focal for their operation, and that they remember to update the CDM or TFMS office when POC changes occur.

Lastly, we would like to announce our new industry co-lead, replacing retiree Clay Whitesell. Bob Nursey from Southwest Airlines has stepped in to fill the role. Bob started with Southwest in 2010 after transitioning from a corporate aviation pilot. He is no stranger to CDM; he began working as a Southwest ATC coordinator in 2013 and joined the CAT team at the end of 2016. Bob lives in Dallas with his wife. They live on a small ranch south of Dallas where they raise cattle, travel with their horses to trail ride, and in his spare time, Bob volunteers as a firefighter in his local community!

Drew Toman from United has also been added as a member of our team from Industry.

For further information on CAT please write:

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The CAT team back in 2019
SCT (Surface CDM Team):

Jadyne Seitz (FAA) & Robert Goldman (Industry) co-leads.

Holiday greetings from the Surface CDM Team. We see some light at the end of the tunnel and we are very much looking forward to resuming our tasks, in-person, with programs which really require in-person tech deployment in FAA facilities as well as in-person site field visits. It is not an understatement to say that Terminal Flight Data Management (TFDM) deployment has been delayed due to COVID-19. Once the moratorium is lifted on travel, site visits, and FAA facility clean crew concepts, the SCT is eager to re-engage. Task 75 “TFDM/Industry Engagement throughout TFDM Development and Deployment” was the first of our open tasks to be briefed at the 2020 CDM General Session. This task is primarily fulfilling the NextGen Integration Working Group (NIWG) recommendation establishing on-going Industry engagement with the FAA throughout the development and deployment of the Terminal Flight Data Management (TFDM) system. The SCT is expected to provide, as needed, interpretation of the SCDM Co-Ops as well as the surface management related requirements as defined in the System Specification Document approved in the June 2016 TFDM Final Investment Decision. As of our last engagement with the TFDM office, the waterfall for deployment is still very much in limbo, but background work is ongoing. A related SCT task is “Collaborative Site Implementation Teams (CSIT)- Assisting With TFDM Training to Airport Operators and Developing LOAs”. Our meetings with the CSIT group have stopped this year, but periodically we hear from the team that they are still having some virtual meetings with airports and airline workers at airports. Our industry Surface CDM Team representatives have been involved in these virtual gatherings where they have been able to engage with the CSIT team and other reps from their respective airlines in Flight Operations Centers, Ramp Control, Airport Operators, and Fixed Base Operators. At the General Session we briefed on some of these meetings. The most recent was an airport briefing for ATL on December 7 2020. Our team is hopeful to engage with CSIT to discuss that interaction.

We also reported news that the TFDM User Guide and Data Operational User Guide will be available by the end of 2020. We will need to get an update on that.

Plans for CSIT in early 2021 include; continued virtual briefings for flight operators and “Configuration A” TFDM sites. Site visits will resume as able with the schedule following the updated TFDM waterfall. There will be virtual “Tech Talks” and bi-monthly forums for non-FAA stakeholders with TFDM to discuss technical challenges with implementation. The first session will be in January 2021 and will focus on substitution (exact schedule TBD). Email CSIT@faa.gov to be added to the invitation for the talks.

SCT Task # 92, Surface Collaborative Decision Making Departure Metering and NAS Scheduling” with the Flow Evaluation Team is ramping up to re-engage with the NASA ATD-2 team in the North Texas Metroplex. We Power Pointed a lot of interesting information on how they are proceeding with virtual

(Continued on page 12)
training, individual training websites, and in-facility training (when permitted). This training is provided to get the Flight Operators ready to participate in submitting information for use in a SWAP season demo in 2021. Several ATD-2 Planner Tutorials have been provided to stakeholders in the North Texas Region.

ATD-2 phase 3 demo training is conducted by NASA personnel through a remote connection to ATD-2 and use of virtual platform to display and explain functions of ATD-2. Initial and follow up training has been provided to airline and ATC personnel as well as the new NATCA ATD-2 national representative. NASA developed training materials, and tabletop exercises, for each field facility including:

- A unique training website for each field facility
- Access to training material, both on the ATD-2 machines and via internet connection, on any airline or ATC computer
- 18 YouTube tutorial video “how-to”s on various facets of ATD-2
- 9 slide show presentations on using ATD-2
- An updated user training manual
- TOS submission process is discussed and re-
- Tabletop exercises with American and Southwest airlines have been conducted; coordinating with Envoy airlines to schedule exercise in the near future
- Tabletop exercises with ATC facilities will be scheduled when ATC resources are available to

NASA is also working on new TOS metrics associated with the “OFF” delay savings, as well as new use cases associated with the “IN” delay savings. IN delay savings extend the concept to capture delay predictions and metrics at the downstream arrival airport. It’s a concept they would like to transfer with their demo findings.

Lastly, the SCT co-leads are in talks with the Flow Evaluation Team on ways to carry on a test within the parameters set forth in joint task 100. The FET work with the MITRE National Operations Dashboard proved some useful findings on pathfinder identification and being able to follow a pathfinder on its way through sectors. Our inclusion in this task will broaden that work, test it out again, and we may identify another use-case scenario to test real-time communication capability for ATFM execution.

For further information on the SCT and our tasks contact:
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FET (Flow Evaluation Team):

Chad Wakefield (FAA) & Ernie Stellings (Industry) co-leads.

The Flow Evaluation Team has many tasks this year and we gave a very thorough briefing to the General Session of CDM last month. Task 80, with its ongoing exploration of Trajectory Option Set (TOS) submissions and in particular the use of Pre-Departure Reroute (PDRR) and Air-Borne Reroute (ABRR) is a focus for our team and it touches on many other tasks. We have briefed on many recommendations over the last few years. In future meetings, the team will solely focus on the ABRR component to explore other areas and opportunities.

In our task 85, FET was tasked to review current AFP strategies and methods for determining AFP capacity. We have officially closed this task as we have briefed the ATCSCC AFP workgroup which has taken our examination to other areas of the country including the Northeast Corridor (NEC). We have also recently officially closed task 96, “Playbook and CDR Route Reduction”. The data mining for this was completed back in March. The team met with FAA facilities over the course of the spring and summer to brief out findings specific to their operations.

Task 98 dictates our review of Route Planning, Assessment and Coordination: Integrated Adaptive Route Capability (IARC). The task is sponsored by NASA, via a Small Business Investigative Research (SBIR) Project with an objective of providing an all inclusive platform allowing for efficient management of all IFR Preferred Routes, playbooks, CDR’s, etc. The IARC research and web-based prototype will ensure that IFR Pre-validated Routes, CDRs and Playbooks are accessible, managed and coordinated in a uniform fashion on a single web-based platform. It provides forecast weather impact information on selected routes. It also allows users to submit for “validation” or approval routes that are not common in existing databases but could enrich route selection choices in the database for all stakeholders. We also have recently been given task 99, “Route Strategies to Support NASA Research”. This tasking looks to improve operational efficiency through route optimization. The team continues to work with NASA to develop a list of perceived inefficient playbook/CDR routes. Our overall end-state is to provide NASA with feedback on potential refinements to FAA tools and procedures that would directly impact route strategies. Task 100, “Real-time Coordination, Collaboration and Information Exchange” is a new task which takes our work from last year with the National Operations Dashboard and extends it for further study of potential other capabilities. The Surface CDM Team has been added to this task to work directly with MITRE. Our last meeting was held last week and we debated how the common situational picture with the airport surface and routes can best help planners in Industry and ARTCCs et al. improve decision making. We will soon be making a decision on the feasibility of conducting a specific test which will be reportable and measurable.

or more information on FET contact:

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FCT (Future Concepts Team):

Esther Bryant (FAA) & Frank Oley (Industry) co-leads.

The FCT has met a few times via internet and we also attended the CDM General Session webinar in November. We briefed the CDM community on our findings and recommendations for Tasking 93 “CDM in the Cockpit”. Pilot situational awareness is increasing with the advent of broadband connections to the aircraft. In addition to possible efficiency gains, the task overview contained two caveats of increased situational awareness, and reducing complexity of airborne re-route applications. The FCT concluded that there are benefits to be gained from increased situational awareness in the cockpit via emerging technologies. Any potential tasking would at a minimum need to consider the following:

- Pilot awareness – CDM/WET work with RTCA SC206 to define a minimum set of information content that may be required for cockpit participation in CDM.
- Safety – CDM/FET may need to standardize the rules of engagement and determine safety impacts of cockpit airborne reroute requests
- Communication Flow – CDM/FCT will examine how advance communication can decrease workload and in turn improve efficiency and predictably in the NAS

The FCT should continue to explore other work taking place and tools that may be relevant to this effort.

We are also currently working on Task 97: Trajectory Based Options & Future Flow Management. The task focuses on the flight operator impact of these two FAA initiatives; identifying TFM shortfalls, and benefits, and outlining a vision towards resolving identified shortfalls while exploring expected benefits. Our team briefed the CDM General Session on several findings which led to more questions initially, but our work will continue on this task. One consideration we have provided some feedback on is how will the FAA provide a clear outline of technologies and highlight how the present-day operation will be changed? The impression is that TBO will perform better in specific regions, but we do not have a clear understanding of the conditions that would improve results.

TBO will be hosting an Industry Day next month. (See next page for information). Along with the scenarios we have been given to discuss, we hope the discussions at industry day will be beneficial.

For more information contact:
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Save the Date: Friday, January 29, 2021 | 10am-3pm EST

Michele Merkle, Air Traffic Services Director of Operations Planning & Integration and Wendy O’Connor, TBO Implementation and NEC Lead, in collaboration with NATCA partners invite you to the **TBO Industry Day Virtual Customer Forum**

What is it? As you may have heard in previous FAA/Industry engagement forums, TBO concept and capabilities have been under development for many years. TBO builds on the FAA’s investments in time-based management tools, and on the FAA’s and operator’s investments in advanced navigation capabilities. The FAA is now incrementally deploying TBO capabilities across the NAS, leading to increased use of PBN procedures and throughput through the affected NAS resources. Over the long term, TBO will deliver benefits of more efficient use of capacity, and improved flight efficiency, predictability, and flexibility. Although the unprecedented circumstances surrounding COVID-19 have slowed down our implementation efforts and increased uncertainty about the future, we are continuing to make progress on our commitments. We hope our TBO Industry Day will help you further broaden your understanding of TBO’s operational impacts and site-specific plans and goals.

What topics will be discussed?

- What is TBO and how will it change Air Traffic Management?
- FAA’s implementation for TBO and operating areas.
- Systems Operations Services and Air Traffic Services alignment to deliver TBO.
- TBO objectives and performance assessment.
- Recent progress and beyond (near-term vs. long-term vision).

Who should attend? TBO Industry Day will be useful for those who are involved in strategic planning and Flight Control Management. It will also be helpful for tech pilots, Department of Defense points of contact, and anyone else who wants to learn more about TBO.

To register and receive updates go here: [https://www.eventbrite.com/e/2021-tbo-industry-day-tickets-128048443341](https://www.eventbrite.com/e/2021-tbo-industry-day-tickets-128048443341)

For more information, please contact Almira Ramadani ([Almira.Ramadani@faa.gov](mailto:Almira.Ramadani@faa.gov))
**WET** *(Weather Evaluation Team):*

Steve Scheuble (FAA) & Tim Matuszewski (Industry) co-leads.

The WET team has resumed our discussions and recently attended the CDM General Session to brief our latest recommendations on task 94, the “SFO Collaborative Forecast” task. Tim, who has stepped in as the industry co-lead, assisted with the brief.

The WET has concluded that a collaborative forecast for SFO is neither feasible nor practical. It is difficult to align forecaster schedules to allow for such a collaboration. A collaborative effort does not necessarily improve forecast accuracy. Quite the opposite, as we feel the forecast difference can be used to evaluate the risks associated with traffic management strategies. We do recommend a daily call at 0550P/0850E to discuss SFO weather and traffic initiatives with industry and the Command Center. The intent of the call will be to review forecasts and discuss the plan for the day. On “blue sky” days, the call can be canceled. Our WET team member from the Command Center has been actively socializing this recommendation to the operation and we expect the next SFO stratrus season to be a way to test it out.

The WET recommends the use of two tools to support SFO weather forecasting and traffic management. We recommend continuing use of the SFO Marine Stratus Forecast System (SFO MSFS), a common platform for stakeholder. We have recently seen a renewed commitment by government stakeholders to tackle the problems which were brought to the surface by our team’s deep dive into the topic of the MSFS one year ago. We also recommends resuming the development of the GDP Parameters Selection Model (GPSM). This tool was developed by Mosaic ATM and uses information from the SFO MSFS to calculate delays for various GDP parameters allowing stakeholders to compare the impacts of varying measures.

What’s next? The WET recommends implementing the suggestions outlined above, closing Task 94, and assigning the following new tasks to the team:

- Monitor the status of the SFO MSFS
  - The Stratus forecast tool is very old with outdated equipment and software. Major components of the tool could fail at any moment.
  - Many experts caution against using the current tool as they question data integrity.
  - Funding has not been allocated for repair or replacement.
  - While FAA Weather and NWS consider options, WET would play the role of SME with assistance from the San Francisco Airport, Mosaic ATM, and MIT-Lincoln Labs.
- Work with Mosaic ATM to develop a study to evaluate the effectiveness of GPSM

*(Continued on page 17)*
In other news, on Dec. 14, the CDM/International manager met with the National Weather Service and the ATCSCC to discuss a TFM Convective Forecast validation method for National System Review processes. This meeting centered on a CDM Weather Evaluation Team recommendation, which held that an accuracy verification would be most useful in post-event analysis. We hope to continue to monitor these ongoing discussions.

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Spotlight!

From the Editor: **Travel Bubbles and the human need to reconnect.**

From the files of “return to normalcy”, the internet is ripe with articles which explore our desire for travel. The following is reprinted from a December 15 posting on news.com (Australia). Written by: Lauren McMahon

**In Australia and New Zealand airlines prepare for flights after New Zealand Prime Minister Jacinda Ardern’s comments:** Airlines are eager to ramp up flights between Australia and New Zealand after NZ Prime Minister Jacinda Ardern said quarantine-free travel between the two countries could resume early next year.

In long-awaited news for both sides of the Tasman, Ms. Ardern said yesterday her Cabinet had agreed to establish the quarantine-free corridor in the first quarter of 2021, as long as Australia kept COVID-19 case levels low, and pending our own Cabinet approval.

“It is our intention to name a date of when the bubble will start in the New Year,” Ms. Ardern said.

“The opening of the bubble is contingent on Australia’s Cabinet signing it off, and that the COVID-19 situation in either country doesn’t change.” While no firm date has been given, the two-way travel bubble is anticipated to begin by March, allowing Australians to freely travel to New Zealand without needing to go into quarantine for the first time in 12 months.

The current one-way travel arrangement allows New Zealanders to travel to most of Australia, except for Western Australia and the ACT [Australian Capital Territory], without having to quarantine.

Australia and New Zealand are traditionally each other’s number one travel destinations, with about 2.8 million residents from both countries travelling across the ditch in 2019.

Virgin Australia said it welcomed the New Zealand government’s decision and had more than 70 services to New Zealand from March 28, 2021 on sale.

They include multiple services per week between major Australian cities and Auckland, Christchurch, Wellington and Queens-town. “The New Zealand Government’s ‘in principle decision’ to establish quarantine-free travel with Australia early next year is very much welcomed and provides further confidence for travelers and those looking to do business across the Tasman,” Virgin Australia said in a statement. “While services are currently on sale from late March, the decision gives us time to prepare aircraft and crew for re-entry into New Zealand skies. We’ll continue to review and adjust our schedule in line with demand and the start dates for quarantine-free travel being worked through by the respective governments.”

Qantas currently operates a few weekly services between Sydney and Auckland and will be keen to boost services once details of the travel bubble are confirmed. “We know there’s a huge amount of pent up demand for travel between Australia and New Zealand and we’re looking forward to adding significant amounts of capacity across the Tasman once details about the bubble (Continued on page 19)
and when it will begin is confirmed,” a Qantas spokesman said.

The news has also been welcomed across the ditch. Wellington Airport corporate affairs general manager Jenna Raeburn said the airport, which previously operated 70 trans-Tasman flights each week, had been ready for the two-way arrangements for “several months”. “We are feeling the loss of our connection to our closest neighbor.”

New Zealand’s biggest city, Auckland, is eagerly anticipating the return of Australian travelers.

“New Zealand and Australia have a unique relationship and the prospect of a trans-Tasman bubble is creating excitement in both countries,” said Nick Hill, the chief executive of Auckland Unlimited, the city’s tourism body.

“Auckland is undergoing a massive transformation and our Aussie friends can look forward to experiencing a lot more than before.”

“Our culinary scene is top notch, we have new accommodation offerings and two of New Zealand’s top international attractions – Weta Workshop Unleashed and the All Blacks Experience – have opened their doors in the heart of the city’s entertainment precinct. Auckland is certainly open for business and ready to welcome you back.”

There’s plenty more on offer outside the city centre, Mr. Hill said.

“From stargazing on Great Barrier Island – the first island in the world to be granted the dark sky sanctuary status — to vineyard hopping on Waiheke Island, or coastal clifftop glamping experiences, Tamaki Makaurau Auckland has so much to offer, whether you’re visiting friends and family, or travelling here for the very first time.” Tourism Industry Council managing director Simon Westaway told Nine Newspapers it was likely more Australians would visit New Zealand than the other way around.

However, it would be a good test as Australia looked to open its borders to parts of Asia next year, particularly Singapore, Japan and some parts of China.

“Whilst the New Zealand-Australia travel bubble may see Australians move across the ditch and possibly not travel in their own country – the reality is we do need to establish travel bubbles,” Mr. Westaway said.

“Singapore has already offered Australia a green lane, and that should really be a focus for us in the new year.”
What a year this has been!

See you in March!