Developed by Airport Planners, for Airport Planners

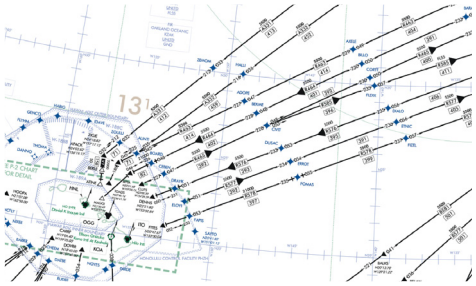
AVIATION NEWSLETTER

FALL EDITION 2020

We've got a packed fall newsletter for you to dig into! The webinar schedule for the second half of the year is starting to take form; learn more about our software or improve your skills with a Product Presentation, find out more about a specific topic in an IN FOCUS session or take part in one of our engaging Up for discussion panel webinars. We're also trying a brand new concept this fall, our online user group meetings. We can't wait to meet our users again, this time in the digital space, to once again learn from each other, discuss challenges, share best practice and gaze into the future of the aviation industry.

Improving Oceanic Coordination

Automatic Dependent Surveillance-Broadcast (ADS-B) is enabling surveillance and efficiencies for oceanic traffic to a much greater extent than ever before.

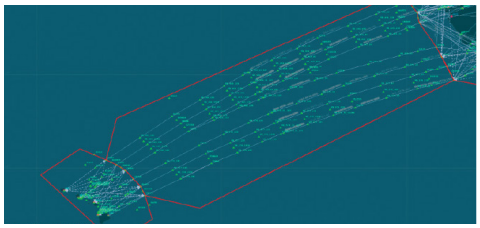


While air traffic operations in the terrestrial portion of the United States National Airspace System are optimized for the highest efficiencies, oceanic operations are unoptimised. With the emergence of space-based ADS-B, Air Traffic Services surveillance is now available in areas where it was not previously provided. OpenSky-Avia recently chose AirTOP from Airtopsoft, A Transoft Solutions company, to study the operational effects of this new technology on specific airspace routes.

In terrestrial airspace with monopulse secondary surveillance radars (MSSR) or ground-based Automatic Dependent Surveillance-Broadcast (ADS-B) antennas, Air Traffic Controllers can see where the aircraft are and communicate with them in real-time. In contrast, air traffic operations in oceanic and remote airspace are conducted according to "procedural" airspace rules, with large traffic separations and rigid route structures in areas where traffic demand is high.

In these areas, it is impossible or not feasible to have ground-based surveillance and communication infrastructure and, consequently, the traffic is managed with larger separations that provide higher margins of safety.

"Oceanic operations are probably the least efficient operations in the NAS" explains Dr Vitaly Guzhva, Professor at Embry-Riddle Aeronautical University, who worked on modeling oceanic operations with OpenSky-Avia, a provider of aviation research and consulting services to government and commercial customers.



Read the full article to learn more about Improving oceanic coordination and the results of OpenSky-Avia's study with AirTOP

IN FOCUS

LIVE WEBINAR

Optimizing GSE operations using simulation

With the nature of aircraft and Ground Service Equipment (GSE) operations being inextricably interdependent, efficient GSE operations are critical to on-time aircraft performance. Adding to the complexity is the fact that GSE vehicles typically operate on dedicated Vehicle Service Roads, which are prone to congestion near high-volume sites such as baggage make-up areas and passenger bussing zones. How can you ensure optimal GSE operations and airside efficiency? Guest speaker Prakash Dikshit from Landrum & Brown will showcase how their firm uses integrated fast-time simulation models that include both aircraft and GSE operations to successfully optimize operations and improve airside efficiency.

Guest Speaker | Prakash Dikshit, Landrum & Brown(L&B)

Prakash specializes in the application of data analytics and operations research methods to aviation, and has over 10 years of experience in optimizing airport operations to maximize current infrastructure and refine capital programs. He leads projects in airspace and airfield planning, apron operations, gate scheduling, and terminal planning. His experience spans major airport projects in the U.S., Mexico, Colombia, Middle East, India, China, and Australia.

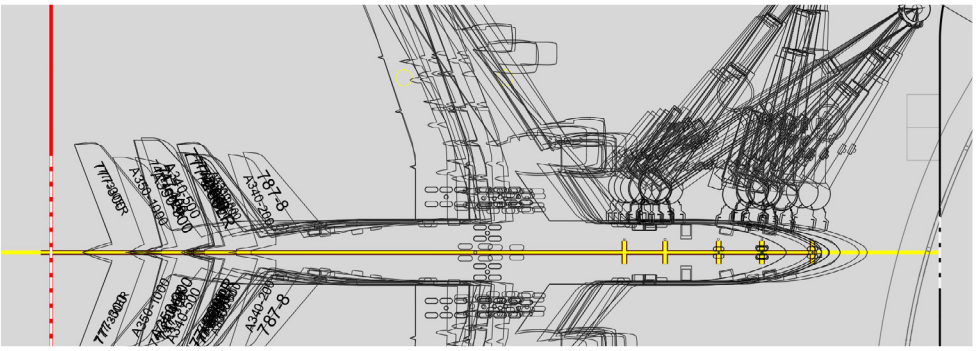
REGISTER HERE!

The Transoft Solutions' IN FOCUS concept is a platform for airport professionals to share their expertise on a specific topic with our aviation community. Feel free to reach out to infoaviation@transoftsolutions.com to learn more about upcoming opportunities.

TRANSOFT SOLUTIONS

Improve airside planning with AviPLAN

Airside planning projects often require the need to adequately satisfy both safety and efficiency considerations of the operating airlines. To thoroughly assess existing or future operations, airside professionals need to evaluate a number of aircraft to ensure airport compatibility and that turnaround times can be optimised. Michael Frost, Senior Product Manager at Transoft Solutions, and Michael Osborne, Engineering Design Manager at EXP, talk about how AviPLAN is informing airport design, and enabling staff to make safe and efficient decisions on the ground.



It's no secret that working in airside planning and operations in today's bustling airports can be a headache. From mapping out ground movements by aircraft and airport vehicles, and factoring in the paths and turning radii of said aircraft, to measuring the impact of jet blast and maintaining the correct stand configuration to ensure smooth turnarounds, staff have to regularly process information quickly and make decisions with short working timelines. The role is becoming more demanding as carriers work to tighter schedules, squeezing in commercial and leisure flights to and from airports quickly and efficiently.

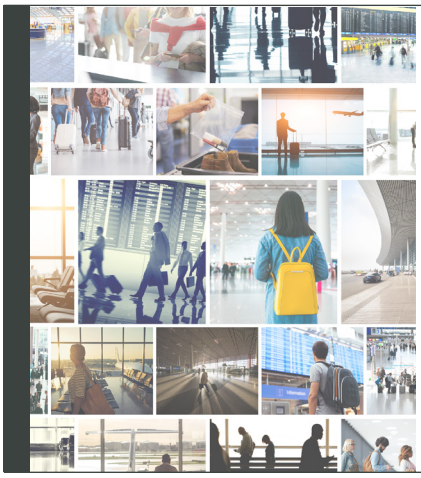
In an operation where time is money, there is little room for error. For example, airports and airlines would like passengers to be able to transfer to connecting flights within 45 minutes. Airlines don't want to see aircraft experiencing unnecessary delays," says Michael Frost, senior product manager at Transoft Solutions. "They'd rather see passengers departing through the gate, find their connection and leave the airport on their next flight as smoothly and as quickly as possible." AviPLAN takes some of the pressure of airside planning, design and operations professionals. Built on validated swept-path and aircraft docking algorithms, the platform provides detailed simulation and analysis of on-the-ground scenarios. Without AviPLAN, airside planning projects would take significantly longer, along with the likelihood of error when the planning team alone have to maintain the accuracy of equipment specifications and design regulations. AviPLAN is also being used by architects and engineers to better inform their airport designs – Chicago's new O'hare International Airport is one such example.
"O'Hare strictly defined the project parameters in terms of how many MARS (multi-aircraft ramp stands) gates they wanted, how many standard ADG (airplane design group) 3 gates they needed, so that left us with a very tight area in which to put five stands to get it right," Osborne explains. "We ran through multiple options, which is where AviPLAN was outstanding. You can design a gate and then say 'Yes, that works, I need three of those'. So, you're not going to design it again and again, you just take that gate and copy it."

Currently, Osborne and EXP are helping the airport map out the current interlocking web of taxiways, working out how they might fit into the new design infrastructure and how that network can safely handle a variety of aircraft, ensuring that the rolling wheels pass these junctions with the minimum required clearances in keeping with current regulations. To help them with this task, they are once again using Transoft's tried-and-tested software.

"We're using another feature in AviPLAN, the fillet design tool, which allows us to run myriad aircraft through a taxi network," explains Osborne. "On every junction of every taxiway on the inside corner, there is a single arc or multiple arcs that have to be a minimum clearance away from the rolling wheels. The clearance line then changes depending on the particular model of aircraft, so this tool analyses that from multiple directions to come up with the outermost geometry that's required." Without the software, running through the parameters for every single type of aircraft would be a drag to say the least. "If you had to generate this type of work without having a smart tool, you'd be doing 500 individual aircraft-tracking manoeuvres each way through the junction," Frost says. Luckily, with AviPLAN this analysis is easy to do as the software quickly batches the relevant information together, giving users the combined outermost geometry in a fraction of the time it would otherwise take.

This is but one example of a host of specific features that makes the software a global market-leading technology. A global product that is currently used at renowned airports across the world, AviPLAN is reshaping how airports are designed and run, enabling architects to factor in the practicalities of on-the-ground operations, while giving planning and operations staff the relevant information to interpret ground manoeuvres more accurately, making a stressful job that bit easier.

Read the full article on how to improve airside planning with AviPLAN in Future Airport



Keep an eye out for our upcoming panel discussion

with Transoft Solutions, EBEA Consulting, Bristol Airport and Haaga Helia University

Following the first **Up for Discussion** webinar on social distancing and its effect on terminal operations from earlier this year, this webinar will focus on the actual impacts of social distancing measures taken on a real case study with Bristol Airport, a key regional airport in the United Kingdom.

More information will follow, and registration will open shortly. In the meantime, keep an eye out for updates in our webinar schedule.

View webinar schedule

UP FOR DISCUSSION

Fast-time simulation - a powerful tool

Meet Ramon Anton, Managing Director at EBEA Consulting

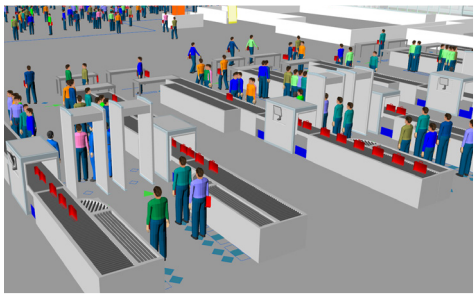
With over 10 years of experience in the aviation industry and a career path which has led him through various areas of airport operations, Ramon Anton can rightfully present himself as an expert airport planner and operator. We reached out to Ramon to listen to his thoughts on the ongoing pandemic, future challenges for the aviation industry, as well as getting his take on what role fast-time simulation will play in all of this.

Tell us about yourself – Who is Ramon Anton?

I had my eyes set on a career in aviation since early university days, where I graduated as an Aeronautical Engineer in Spain and proceeded to take a MSc in Airport Planning and Management from Cranfield University in the UK. Since then, I've taken on various roles and challenges within airport operations, ranging from ground handling at Barcelona Airport to leading airport planning and continuous improvement teams at London City Airport to name a few. In 2019, I co-founded EBEA Consulting together with 3 other colleagues. Since then I hold a Managing Director role at EBEA, offering my knowledge and expertise to support other businesses within the aviation industry.

What challenges do you see the aviation industry facing currently?

The implementation of the new social distancing measures, and how to balance these measures against an efficient operation in order to enable a sustainable recovery, is one. I believe that some of the currently implemented health and safety measures is likely here to stay even post-pandemic, albeit in a more relaxed fashion. Another major issue is the lack of consistency in rules and implementation – mainly between countries, but we've also observed disparities in the measures adopted by various airports within the UK as well. The lack of consistency leads



to confusion as to what must be applied – and there is also a lack of clarity as to who should be responsible for policing and implementing these measures. Is it the airport, the airline, or another actor?

Lastly, the lower traffic forecasts have led to heavy cuts in operational staff now in the short-term, but as traffic recovers, staff need to be re-hired and re-trained. It's crucial that the training process is properly planned in order to ensure that the customer experience remains solid throughout all stages of the recovery process.

Looking beyond these current challenges, what other challenges do you believe will present themselves further ahead as we're moving forward into the "new normal"?

I believe that we might see a shift in passenger demographics. Business passengers might be less prone to fly and, as a result, airports will need to supplement the lost demand by targeting more leisure routes, or alternative revenue streams. A different passenger demographic means that the expectations for the airport, and therefore the design criteria, might need to be adapted and reviewed if the shift is substantial.

I also believe that we will see a shift from major new infrastructure developments towards optimizing current facilities instead, focusing on maintaining a safe customer journey. All in all, this will lead to airports challenging their status quo and their way of thinking about their operations.

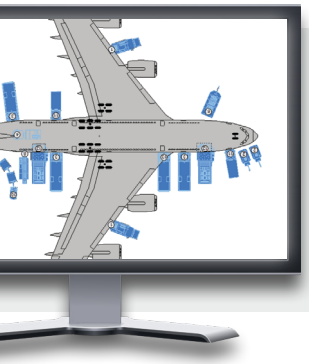
What role do you believe fast-time simulation will play in dealing with these challenges?

Fast-time simulation provides a perfect platform to test new standard operating procedures (SOPs) and changes in demand, all in a controlled environment. By being able to test it in your simulation model rather than in a real-life setting, e.g. inside your airport terminal, you'll ensure that the passenger will not be disrupted by trials which could already be ruled out by a properly calibrated model. In today's rapidly changing environment, operating scenarios are changing so quickly and drastically that it's not feasible to test them without modeling it first.

Lastly, any general advice you wish to share with other colleagues working with fast-time simulation within the aviation industry?

Fast-time simulation software are incredibly powerful tools. However, it is still down to the operator to make the most out of it. I encourage everyone who works with fast-time simulation to always interrogate the model to make sure that the inputs behave in the way you would expect. It's a great investment in my opinion, especially in the current situation when many airports likely will consider optimising the current space to the maximum before investing into new projects. My last advice would be to always take some time to think on what your aim with each model is, while keeping the needs and expectations of your client in mind at all times. This will ultimately help you to design a tailor-made and efficient model.

Ramon Anton
Managing Director
EBEA Consulting
r.anton@ebea.co.uk



A WORD FROM DEVELOPMENT

After the recent release of Aircraft Data Viewer 3.4, which included new jet blast and engine designation data as well as our new cloud-based user subscription licensing option, the next products in line are ArcPORT and SkySAFE. ArcPORT 2.4 will bring user interface enhancements and other general improvements while SkySAFE 2.0 will introduce new CAD compatibility, extended terrain evaluation features and cloud-based licensing. The AirTOP team continues to work tirelessly on extending AirTOP and WIZer, our tool for real-time traffic complexity forecasting and what-if analysis.

James Renner, Senior Product Manager, Aviation

Meet the Aviation Team

Blanca Colon works as an Account Manager at Transoft Solutions. She has a bachelor's degree in accounting and finance from the University of Puerto Rico at Mayaguez and an MBA from the University of Illinois at Urbana-Champaign.
She has been working with the Transoft Solutions Aviation team since 2011 and is mainly responsible for the Latin America region.

What's your expertise?
I work closely with our customers as well as our sales and marketing teams. I promote and market Transoft Solutions products in Latin America and I have a close relationship with our users in the area, as well as survey consumer needs and trends in the market. An important part of my role is the building and development of relationships with our clients.

Under normal circumstances I travel around the Americas region to represent Transoft Solutions at various tradeshows and events, although this year is of course very different due to the ongoing pandemic.

What development do you see within the aviation industry?
COVID-19 have without a doubt affected the Aviation industry severely. Our entire industry is not only in the process of recovering itself from the massive reduction of passengers and the economic backlash that this has caused – it is also in the process of adapting to both the current situation and in a transformation stage to be able to handle a "new normal".

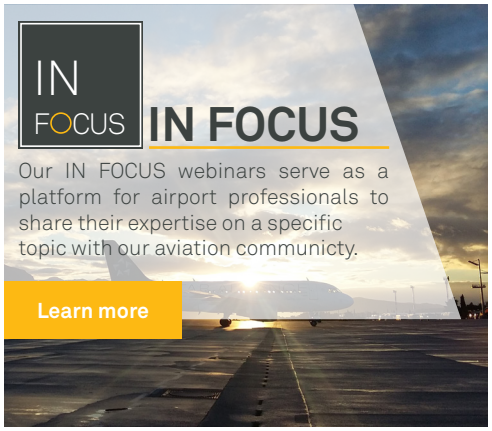
Before, our users used our capacity software ArcPORT and AirTOP to improve and maximize the service points in the airports. Now, we see users focusing mainly on how you can make the service points more time efficient and comply with the new biosafety measurements taken by the airport. I think that a major challenge for the aviation industry in the immediate future is to be able to calm and reassure passengers that the air travel experience is safe again.

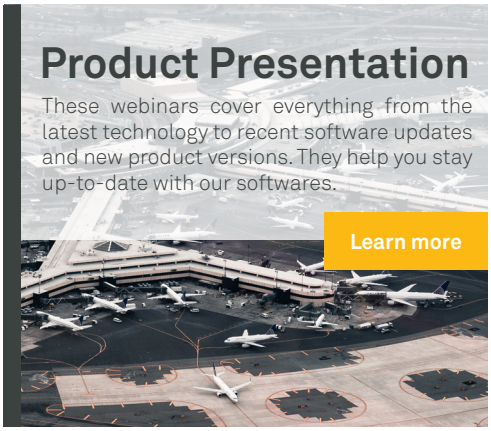
A tip for our software users?
Our entire aviation team at Transoft Solutions are a very experienced and professional group willing to provide the extra mile to our users. So, if you're ever in doubt or have any questions, reach out!

Blanca Colon
Account Manager
Americas
b.colon@transoftsolutions.com

I'd also like to invite our users to participate in our webinars coming up this year, to learn more about our software solutions and to refresh their knowledge. Our webinars are either led by our own internal product experts from our product management or development teams, or by external guest speakers with a great deal of experience and expertise on the subject at hand. We also have a good amount of recorded webinar versions available on-demand in our webinar library that you can watch whenever it suits you.

AVIATION WEBINARS
discover the selection





NOVEMBER

ONLINE
USER GROUP
MONTH 2020

TSUG

We're opening up the registration for the 2020 edition of Transoft Solutions User Group meetings, TSUG!

As you may have already seen in some of our previous communication, TSUG 2020 is going digital. Thanks to the input from over a hundred of our software users, we're certain that this year's TSUG will be a valuable and memorable experience. We appreciate everyone who took the time to fill out the survey and we're definitely listening. It's evident that what our users want to see are case studies presented by industry peers, product specific presentations held by our Transoft Solutions' Aviation experts and Q&A sessions with a panel of our product experts. There was also interest shown in small group workshop sessions. So, we're bringing you all of the above!

A full month of TSUG!

Our online TSUG events will be divided by product, if you're a Transoft Solutions Aviation software user you are welcome to join all of them or to pick and choose by interest. The month of November will be dedicated to hosting these User Group meetings focusing on one product per week. The meetings will be divided into two days, where focus for Day 1 will be on presentations, case studies and Q&A sessions while the focus for Day 2 will be on small group workshops with 8 to 10 participants each.

Register your interest for TSUG workshops today!

Let us know which product workshops you are interested in joining. Details will follow with more information on the focus for each session, at this point we're mainly looking to get an understanding for the number of participants to set the schedule for November. Please keep in mind that seats will be limited for the workshop sessions, sign up now to reserve your spot. First come, first served!

Looking forward to meeting you all online this fall!

Feel free to reach out to infoaviation@transoftsolutions.com for more information.

REGISTER INTEREST

AVIPLAN™ ARCPORT™ SKYSAFE™

Interested in joining our upcoming AirTOP Online User Group Meeting?

What sets our AirTOP User Group meetings apart is that they are usually hosted and moderated by one of the AirTOP users, chosen by the attendees of the previous year's meeting. This year, as we can't meet in a physical location, the plan is to hold a virtual conference on Transoft Solutions' digital platforms.

Let us know what you think by filling out the survey!

Help us create the best possible Online User Group meeting by letting us know what you would like to see!

AIRTOP™

Take the survey!

TRANSOFT EDUCATIONAL PROGRAM

TRANSOFT EDUCATIONAL PROGRAM

The Transoft Solutions Educational Program (TEP) is available for educational institutions that teach transportation engineering courses and/or have practical training programs. The educational institution will be provided with network licenses and training, as well as potential internships and funding for research.

Explore the TEP brochure

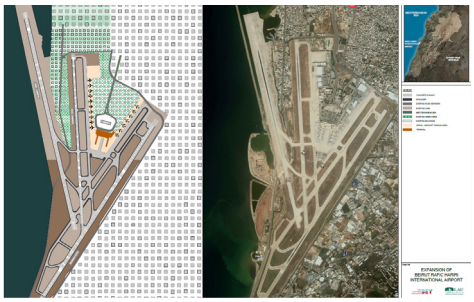
Supporting the engineers of the future

One university recently joining the Transoft Solutions Educational Program is the Lebanese American University, on the initiative of female engineering student Gaelle Abi Younes and her professor John El Khoury. We asked Gaelle a little bit about herself, her final year project and what the future holds, and John about the plans for the upcoming academic semester with Transoft Solutions software at his disposal for the students.

Give us a brief inroduction - who is Gaelle?
My name is Gaelle Abi Younes. I graduated last fall from the Lebanese American University, holding a B.E. in civil engineering. In September, I will pursue my masters in civil engineering with an emphasis on transportation systems and mobility at Ecole Polytechnique Federale de Lausanne (EPFL) in Switzerland.

Could you tell us a bit about your final year project at LAU? What was it all about?
The final year project at LAU exposes senior students to the practical side of civil engineering. I chose to do my project in the field of transportation and more specifically in the airport design area. My project was entitled: "The Expansion of the Beirut Rafic Hariri International Airport", where I redesigned the airfield of the airport to increase its capacity and allow it to accommodate for large aircrafts such as B747-400 and A380.

How did SkySAFE assist you during the project?
Beirut airport has 3 operating runways. To accommodate for the large aircrafts, the length of 1 runway had to be increased whereas the width of the 3 had to be increased as per FAA standards. My main concern was to be able to visualize the imaginary surfaces of the 3 runways at the same time. This task is almost impossible to be performed manually. I searched the web for software capable of executing such task and the only software that I found was SkySAFE (It really is one of a kind!). The software is friendly to use and very easy to learn. The tutorial under the "Help" section is very helpful, detailed and provides very good guidance. Using SkySAFE, I was able to successfully accomplish the task. What I like the most about the software is that the dimensions of the surfaces are predetermined and the user has the option to choose between FAA or ICAO regulations. What impressed me the most was the professionalism and effectiveness of the support team that assisted me in a very fast way.



The final drawing of Beirut Airport from Gaelle's final year project

What do you see yourself doing 5 years from now? What's the aviation dream?
In the few years to come, I see myself working as an airport engineer/designer. Airports and aviation fascinate me and air transportation has continuously evolved over the last decade. The challenges to be overcome are still so many, which makes the life of airport engineers interesting and fulfilling as well.

Moving over to you John. What are your plans with the software which you received through the Transoft Solutions Educational Program for the coming academic year?
Knowing that the software packages, SkySAFE and AutoTURN, are both state of the art software in their respective fields, I am planning to mandate those software in every final year project that students select in the transportation field. I have two main project types: highway and airport designs. This should give students the opportunity to learn and capitalize on the utilities of such powerful software.

Do you have any advice to give to all the engineering students out there with their eyes set on a career within the Aviation industry?
"One advice that I could give to future students that are passionate about aviation is to never miss out on an opportunity to learn and gain experience in the aviation world and to always look out for that 1 skill that will set them apart from thousands of candidates", Gaelle explains.

"My advice to my students has been to be flexible to the highest level - learn as many tools as possible in order to be more attractive for employers.", John continues. "Every door they open has 10 doors behind it that all can lead to wonderful careers."

"As a final note, I'd like to express my admiration for Transoft Solutions for supporting future engineers and providing them with the necessary tools to allow them to succeed in their careers", Gaelle concludes.

Are you a student or professor who believe that your educational institution would be interested in joining the TEP? Get in touch with us today!

Gaelle Abi Younes
Connect

John El Khoury
Connect

UPCOMING ACTIVITIES

2-3 SEP 2020	IN FOCUS WEBINAR Optimizing GSE Operations using simulation	GLOBAL Online	Learn More >>
10 SEP 2020	PRODUCT PRESENTATION ADV | Aircraft specifications at your fingertips	GLOBAL Online	Learn More >>
17 SEP 2020	PRODUCT PRESENTATION Live Webinar | My Transoft Portal & licensing options	AMERICAS Online	Learn More >>
23 SEP 2020	PRODUCT PRESENTATION AviPLAN | Empowering Aviation Planners	GLOBAL Online	Learn More >>
OCT 2020	PRODUCT PRESENTATION Live Release Webinar | ArcPORT 2.4	GLOBAL Online	Learn More >>
OCT 2020	PRODUCT PRESENTATION Live Release Webinar | SkySAFE 2.0	GLOBAL Online	Learn More >>
OCT 2020	UP FOR DISCUSSION Live Webinar | Terminal Operations | Case study	GLOBAL Online	Learn More >>
OCT 2020	UP FOR DISCUSSION Live Webinar | The New Normal	GLOBAL Online	Learn More >>
NOV 2020	AVIPLAN USER GROUP Online User Group meeting	GLOBAL Online	Learn More >>
NOV 2020	ARCPORT USER GROUP Online User Group meeting	GLOBAL Online	Learn More >>
NOV 2020	SKYSAFE USER GROUP Online User Group meeting	GLOBAL Online	Learn More >>
NOV 2020	AIRTOP USER GROUP Online User Group meeting	GLOBAL Online	Learn More >>
DEC 2020	PRODUCT PRESENTATION SkySAFE | Ensuring Safe Operations	GLOBAL Online	Learn More >>

Transoft Solutions offices around the world!