



Sean McGowan: Hello everyone and welcome back to Thompson Coburn LLP's *Three Lawyers and a Drone Podcast* coming to you from Washington, D.C. My name is Sean McGowan and I'm a partner in the firm's Federal Regulatory practice group and Co-Chair of the firm's UAS practice group. As always, joining me today are my colleagues Tyler Black and Mike Deutsch. Today we're excited to welcome Arthur Frisch and Robert Sweeting, Co-Founders of the Fli Drone, a drone delivery service operating in the Bahamas and the greater Caribbean.

Arthur Frisch: Hi Sean, Tyler and Mike. A pleasure to be here, thank you.

Mike Deutsch: Hey Arthur, this is Mike. For those who may not know, Arthur and I are actually long-time friends. We grew up together in sunny South Florida and now we are both involved in the UAS world, me on the legal side and Arthur, in the Bahamas. We're really excited to have you on. Can you provide us with some background on Fli Drone and the type of services that you provide?

Arthur Frisch: Sure. So the Bahamas, for those that do not know, is actually an island nation. It's made up of over 700 individual islands and historically, logistics have been an area of difficulties. It's always been an issue moving things around islands and between islands. So Fli Drone is the leading drone delivery service in the Bahamas and the greater Caribbean. We deliver items to businesses, to homes, private islands and yachts and we have two primary operations. We have a Last Mile delivery service in Nassau which is the capital of the Bahamas and are also launching an interisland service throughout the Bahamas and the Caribbean.

Mike Deutsch: Interesting. Now what exactly does Fli Drone deliver?

Arthur Frisch: Fli Drone delivers four major categories of goods. The first is medical supplies. That can include temperature-controlled medications. It can include vaccines and medical goods for acute issues. It can also include lab samples so medicine is a big part of what we do. We also delivery equipment and boat parts. Third - perishables and fourth - packages.

Mike Deutsch: And from the customer's perspective, how exactly does it all work?

Arthur Frisch: Sure. So we have two different models. First, largely for enterprises, we offer a subscription service. So this is a business that is regularly delivering on island or between islands. We set them up so that they have, you know, essentially an unlimited number of flights on a monthly basis so that they can reach their customers where they are and when they need goods. And then we also have an on-demand service. This on-demand service is really for your emergency and critical last minute needs. It can also be for individuals spread throughout the islands.

Mike Deutsch: And does the customer place the order directly with the retailer or , with Fli Drone, and if it's with Fli Drone, does the customer pay Fli Drone for the item or just for the cost of delivering? How does that all work?

Arthur Frisch: Sure, so we actually offer both methods. So our primary focus is on extending businesses' delivery methods so that their existing customers can receive goods where and whenever they need them. However, if you are not located on the same island, we can provide fulfillment services in addition to the delivery service so we can actually send runners around to certain islands to get that boat part or to get that grocery order that you need then shipped to a different island.

Mike Deutsch: In terms of the deliveries themselves, how, practically speaking, how does that work? Are the drones dropped in a designated landing area? Are they equipped with cameras? Can you walk me through the practical aspect of that?

Arthur Frisch: Absolutely. And this is really an area where the benefits of UAS shine. So unlike other methods of air cargo, we are not restricted by infrastructure, so we don't need runways. We utilize UAS technology known as VTOL, or vertical takeoff and landing, meaning that we can operate from any location and deliver to any location. In our case, we can actually operate directly from our enterprise customers' locations. So if it's a part distributor, we can actually have a drone that departs from their facility and takes goods directly to the GPS waypoint of their end customer. And again, unlike traditional air cargo that would require a runway on the departure end, it would also require a runway on the arrival end. We can go directly to any GPS waypoint whether that's a construction jobsite, whether that's someone's back yard or whether that is a boat.

Mike Deutsch: That's incredible. That's really exciting to hear. Now, going back to retail, does Fli Drone have partnership agreements with certain retailers or are the services available to any retailer on a certain geographic area or any retailer on the island itself? How does that work?

Arthur Frisch: Sure, so we're open to work with virtually all retailers. The model that we have established with a few and we continue to grow, is that we do

have annual recurring relationships with these companies. That way we can better understand the demands in terms of how many aircraft a certain operation would require and the retailer could then count on our ability to scale with their business because in the Caribbean, specifically with the Bahamas, you have a lot of business that is located in Nassau, the capital, but there are many customers spread throughout the remote islands which are formerly known as the family islands. So we are actually helping Nassau-based business expand their reach to those family islands similarly to how we are helping businesses throughout the Caribbean expand their footprints and their reach to other islands. So we have strategic partnerships with different groups in those sectors so, for example, in medicine, we are working with the private hospital network in the Bahamas and/or equipment distributors and others. We are building strategic relationships where we can help augment their existing distribution methods with a new method which is UAS.

Tyler Black: Hi Robert, this is Tyler. Thanks again for coming on. I'm wondering if we can take a step back for a second. How did you guys come up with this idea? What's your background?

Robert Sweeting: Hey Tyler. So I'm a native Bahamian and I've had the pleasure in working on various family islands around the country and experienced firsthand, you know, how hard it is to go to and from the islands. And my work background is in construction and real estate development so a large part of my job was establishing supply chains to and from these islands.

Tyler Black: In your business, does Fli Drone have special arrangements for corporate clients and local businesses?

Robert Sweeting: Yes, we work with our corporate clients and local businesses. We offer a subscription-based service that's tailored to each individual's needs, you know, depending on how many flights per day, payload and range.

Tyler Black: And I'm thinking now kind of, I always have my U.S. hat on, I'm wondering, do drone deliveries have any weight restrictions in the Bahamas?

Robert Sweeting: We don't have a weight restriction as far as assigned to the aircraft but as far as like payload capacities, if you know, can understand, our last operation drone had an 80 pound payload with a 30 mile range and our interisland operation which we are launching soon has a 300 pound payload with a 300 mile range.

Tyler Black: Wow. Are you manufacturing your own drones or are you using someone else's?

Robert Sweeting: No. We buy our drones. We consider ourselves a logistics company. This way we can always stay up-to-date with the latest and greatest in UAS technology.

Tyler Black: Right, that makes sense. Can you walk us through the startup process in your work with the Bahamian regulators?

Robert Sweeting: Yes, so many years of education and collaboration with the Civil Aviation Authority, air traffic control and air transport board, basically building agreed-upon procedures, following global best practices in terms of training and certification.

Tyler Black: And what kind of comparison would you make, if any, to the FAA and how the FAA guidance may serve as a model for the Caribbean regulators?

Arthur Frisch: Sure. So this is Arthur, I'll answer that question. So, the FAA is the gold standard throughout the world when it comes to safe airspace operation. With that said though, the Bahamas is a very different geographical area and air traffic is also nowhere near the scale of the U.S. So Caribbean nations like the Bahamas can diverge from the FAA and move a bit faster in certain areas and the Bahamas has been a very progressive country when it comes to this technology. So, certainly looking at the FAA as a model, also understanding that certain geographical advantages allow us to move a bit faster.

Tyler Black: Okay. So I'm thinking some of the biggest restrictions in the U.S.: can't fly at night, can't fly over people, can't fly beyond visual line of sight without waivers. How does this compare in the Bahamas?

Arthur Frisch: Sure, so it's a bit different and I'll tell you why. So, most of our operations are flying non-people over non-people, meaning that we're flying cargo for the most part over water. So inherently we are de-risking our operation because of that. That speaks to the geographical advantage that we have of operating in the Bahamas. Now we are approved to fly beyond visual line of sight. That is one of the major benefits that UAS as a technology provides when you're talking about unmanned traffic management that in the near future we will have drones traversing the earth uh, performing a myriad of different delivery services. So it just depends on your geography and certain restrictions. In our case, as I mentioned, since we're flying non-people over non-people, uh, we have been less restricted.

Sean McGowan: Hey Arthur, this is Sean again. While we're on the subject of FAA Part 107, are all the Fli Drone pilots licensed under Part 107?

Arthur Frisch: Yes. That's a great question and it goes back to my prior comments around the FAA as the gold standard. So yes, it is an internal requirement for Fli Drone operators to be licensed under 107. Both Robert and I are licensed under Part 107.

Sean McGowan: Okay, great. And I was wondering, can you tell us a little bit about the operation is a little different than flying in a, you know, very populated area, can you tell us about what your safety procedures are, what you go through, you know, before, during and after each flight and what your documentation looks like?

Arthur Frisch: Sure. So we follow the safety procedures that have been prescribed by our UAV manufacturers specific to certain types of aircraft and then of course our standard operating procedures that we have agreed upon with local regulators. So it's a mixture of flight planning, risk management, sharing our flight routes with air traffic before, over-communicating before, during and after operations and my overall statement on the subject here is that we take safety very seriously. We are looking to prove UAS as a next generation technology and that the Bahamas is one of the global hubs for UAS. So we understand that, you know, we have to take safety first. We are very committed to doing the right amount of risk management and mission planning to try to nullify any potential issues during flight.

Sean McGowan: Okay. About insurance, I know there a lot of entities getting into the drone insurance area. I assume your drones and you know, the services you're providing are insured, but um, how exactly does that work? Are you doing that on like an umbrella cover of each particular drone or is it on a per flight basis, do you pass that cost along to the customer? Can you talk a little bit about that?

Arthur Frisch: Sure, great question. So our operations are insured. We've worked with local brokers to reach out to the global leading insurers that are handling aviation and UAS. Unlike photography drone services that have a very usage-based risk, pay per flight doesn't really allow for the true 24/7 coverage that we need as a business. So we have commercial insurance that covers all aspects of our operation, not just the drones but including the drones, just like any other logistics company you would have insurance that covers their delivery drivers and their trucks.

Sean McGowan: Okay, makes sense. And I understand through Mike that you're a fairly new company. Have there been any unexpected hiccups along the way and if so, how have you guys dealt with that particular incident or incidents.

Robert Sweeting: So this is Robert again and unfortunately, yes, we've had some major hiccups. As you guys know Hurricane Dorian devastated the Bahamas in September of last year, the northern Bahamas and the Abaco Keys and Grand Bahama and our operation literally based in Marsh Harbor where we had a hangar at the airport. Our whole operation was there and we lost everything in the hurricane. So, we probably lost, I don't know how many months, so we had to relocate our entire operation to Nassau and probably now just getting started in Nassau, you know, getting ahead, unfortunately from the damage of the hurricane.

Sean McGowan: Right. And I'm wondering um, you know, post-Hurricane Dorian, did you guys see just this incredible increase in need for your services as opposed to a you know, traditional which I'm expecting to be, you know, bike, car messengers boat messaging, you know, deliveries. Were you tapped significantly after that event?

Robert Sweeting: Yes, there was a certain demand for our services but unfortunately we were located too close to the disaster itself that you know, we were rendered ineffective. So in the future, we're going to have a hub and spoke model temporary operations on different islands in case something happens somewhere else, we're still able to respond.

Sean McGowan: Okay. And I know you mentioned earlier that you were launching interisland operation. Can you talk more about that? You know, how close are you guys to doing that? And you mentioned a range of 300 miles for one of your drones. Are you expecting shore to ship operations and search and rescue operations in the future? Can you talk about that?

Robert Sweeting: Sure. So we actually started with an interisland operation in Abaco. It was a long range delivery of temperature controlled medicine between the Abaco Keys and what's unique about Abaco is that the islands are a lot closer together than say other areas in the Bahamas so we had to move to Nassau. The distance between islands became greater so we needed larger aircrafts to complete the interisland missions. That's when we switched our focus to Last Mile and then, so we're going to focus on Last Mile now and now we have to wait for larger aircrafts to complete the interisland operation. So as far as launching the interisland it's just aircraft availability. And then we do anticipate being able to do shore to ship as well as search and rescue with these new aircrafts.

Sean McGowan: Okay, great. And having a Part 107, does that mean you're anticipating expanding operations into the U.S. or right now are you primarily just focusing on the Bahamas?

Arthur Frisch: So we are a proud Bahamian company and we are focused on the Bahamas. But with that said, we see tremendous opportunities to bring our services to the U.S. and focus on some of the heavier lift market that you don't see the Amazons and the Wings focusing on and we also see a great opportunity to act as the unmanned bridge between Florida and the Caribbean, so we are very interested to interface with the FAA, whether that's between the Caribbean and the U.S. or whether that's us operating in the U.S.

Sean McGowan: Okay. Well, actually I was going to ask you where do you see you know, the future of the industry, not only your particular business but the drone industry and that's an interesting topic being the bridge from Florida and you, what concerns do you see about that or, or that being a possibility, if any, going forward?

Arthur Frisch: Sure. So from a technical side, I don't necessarily have any concern. I think that when you're talking about when moving a new technology or an emerging technology like UAS from kind of the testing grounds experimental stage into full production use, um, our airspaces are busy and congested. Our metropolitan areas do have dense populations so it really just puts the emphasis again on safety and creating standard operation procedures and risk management protocols that keep people safe but I ultimately think that UAS represents one of the most seismic changes to how businesses will deliver goods in the future and it really is a paradigm shift in logistics, especially for critical goods like medications and equipment parts that can now be delivered in an on-demand direct to any GPS waypoint manner.

Sean McGowan: Absolutely. Thanks for that.

Sean McGowan: Okay. Arthur, Robert, let me thank you one more time for being guests on today's podcast. Lots of great information and insight and we're definitely going to want to following you guys as you continue to grow down there. We appreciate your time very much. If anybody listening would like to find out more about Fli Drone, please visit FliDrone.com and I'd like to remind everyone that this podcast is for informational purposes only and does not provide legal advice or create an attorney-client relationship. The views expressed by our guests do not necessarily reflect the view of Thompson Coburn LLP. You should consult a lawyer to get legal advice applicable to your circumstances and as always if you have any questions, feel free to contact us through our Thompson Coburn LLP website or by direct messaging the TC Titter page which is [@TCdronelaw](https://twitter.com/TCdronelaw). Thanks again everybody and have a great day.