

Former Obama advisor shares insights on drone transactions

Lisa Ellman, Partner in our Washington, D.C. office and head of the firm's Unmanned Aircraft System (UAS) Group, speaks about drone deals, valuation and regulatory trends.

What's your vision of transactional trends?

The UAS industry is in its very early stages, and transactional trends reflect this. Big players like Google, Amazon and Facebook are getting into this market, but also a lot of smaller players and start-ups, not only on the hardware side but on the software and application side. I see a lot of growth coming from the software and application side. Venture capitalists are trying to figure out where the industry and regulation are going. Right now commercial use of UAS in the United States is unauthorized without special permission from the FAA. There's a proposed rule which is going to become final in the next year, which will provide a baseline authorization to fly UAS, but it is not going to allow for beyond line of sight flight, or flights in cities. This will greatly impact a lot of the potential applications we see, as every industry is looking to use UAS to further its own interests, and many want to fly long distances or over people. Investors are holding back slightly to see what develops over the next few years but I anticipate a huge flood of transactional activity as soon as that rule becomes final and provides regulatory certainty.

With so much uncertainty how are investors setting valuations?

Valuation has been one of the challenges because there is so much regulatory uncertainty and lack of data in this space. The UAS industry is essentially a collection of very different businesses. You have the consumer toy industry, aviation, emerging technologies, technology generally, and defence, and all of those entities are in the same new UAS world, with different levels of sophistication and different valuation metrics applicable to their industry. I have met with various investors and venture capitalists who are really excited about this industry but are waiting to see what happens about beyond line of sight flight, incorporation of collision avoidance technology, and safety rules for flights over people. Depending on how regulation develops, the types of industrial applications will vary enormously. That's part of the service we provide to clients in this space: we help think through

policy issues and how regulatory decisions may affect business models and valuation.

I'd also add another dynamic we are seeing here – with so many new players, everyone is vying to come out on top as the leader for their particular niche, and they're all trying to invent "the" platform that will be the industry lead and that will set the standard others look to adopt. Investors are trying to guess who will be that next "top" leader that should be invested in. So everyone is looking, listening and comparing notes to see where the "smart money" is investing.

Does the firm generally advise potential investors, or are we on the target side, or both?

Both. We frequently advise investors, but we also have several start up clients. We also advise bigger companies trying to figure out how UAS fits into their broader strategy. As I mentioned earlier, a new fast-growing segment is the software side: development of technology that can help us fly more safely or alleviate some of our safety, security and privacy concerns with the widespread use of UAS. These technological remedies will have an impact on the kind of regulations that emerge.

We have also seen a number of service-based companies, such as companies that want to become the "Uber" for drones – "rent a drone" companies, for example.

The United States government, through the NTIA, has begun a multi-stakeholder process in order to develop self-regulatory privacy and transparency solutions for UAS. What is your view of the process?

I was on the team that wrote the presidential memorandum that created the multi-stakeholder process. It is always a challenge to bring together public, private, civil society organizations, and academics, in one room and develop a consensus. The NTIA process is intended to result in voluntary best practices for privacy, transparency and accountability related to the commercial use of UAS. One of the challenges of policy making in the UAS arena is that there is not a lot of data: we don't have reliable safety or privacy data because commercial UAS operations don't yet exist in the U.S. That said, we have heard a lot from the American public, especially on privacy. UAS are just a platform for a camera.

However, perhaps due to their unique mobility, the American people perceive UAS very differently from other forms of cameras. Researchers at University of Oklahoma surveyed people about their reactions to traffic monitoring by UAS-mounted cameras versus ground-mounted cameras, where the camera on each platform would capture the same information and the same data. People were less concerned about the ground-mounted camera and more concerned about the UAS-mounted camera, even though the camera was capturing the same amount of information! The privacy approach to UAS will have to take this different perception into account. One of the objectives of the NTIA multi-stakeholder process will be to ask what privacy concerns are unique to UAS, and which privacy concerns are not unique. For those that are not unique maybe we need to update our privacy laws on the books generally. For the ones that are unique, maybe we need to consider UAS-specific rules.

You mentioned public perception in the U.S. being particularly sensitive to UAS. How do people outside the U.S. perceive these policy issues?

Many other countries are ahead of us. For example, in Japan, 85% of crop dusting is done with drones and it has been that way for many years. In Canada, there are already regulations in place permitting commercial UAS use. Amazon has tested its UAS in Canada, while Google has tested its UAS in Australia. Australia and New Zealand have allowed commercial drone use for many years. The U.S. has the most complex airspace system which is why it has taken so long for us to get rules on the books, but critics would say that policy making in the U.S. is bureaucratic, reactive and we are falling behind the rest of the world. Some countries are worried about privacy issues, some less so. From what I've seen, privacy issues in Canada are not a large part of public debate. Here in the United States, there has been a lot of debate over surveillance generally.



One of the things the commercial industry has suffered from is the fact that the term “drone” refers to both a toy drone and to Predator or a Reaper drone flying overseas to gather intelligence or kill people. They are entirely different things, but unfortunately they have the same name, which creates confusion for the American public.

The U.S. has in some respects looked to other countries for guidance. For example, when the FAA released its proposed rule in February it asked for public comment on whether microdrones should be regulated differently, meaning drones weighing two kilograms or less. Canada has adopted this sort of tiered approach to regulation. Drones that are two kilos or less are regulated differently from heavier drones in Canada. At a policy level, this makes sense. The question is whether a two kilo drone is less risky than a 20 kilo drone, including when it gets caught in a jet engine – is it just a question of weight, or also materials? The materials the drone is made of may be just as important as the weight. Here in the U.S., policymakers are looking at frangibility as a safety factor. If a microdrone presents the same risk to a jet engine as a bird, perhaps that’s a risk that the American public would be willing to take.

Are there regions in the world that are leaders in drone technology?

The biggest manufacturer of drones right now is a Chinese company called DJI. They have a large market share. Of the 333 exemptions that have been issued, I believe that DJI accounts for maybe 70% of the vehicles that have so far been approved by the FAA. Japan has been a leader in using drones for agriculture.

What was it like working on these issues in the Obama administration?

In 2012 I was working at the White House focusing on making our government more innovative, bringing innovation and emerging technology to the federal government. I was running our open government initiative. This included opening up data from the federal agencies and making it available to the public. In 2012 Congress passed the FAA Reauthorization Act which mandated that the federal government integrate drones into our national airspace by 2015. So around that time I was asked to run drone policy at the Department of Justice. It was a fascinating

time to be on the ground floor of this new emerging technology. There were no rules in place. We had to ask some basic questions: what are we trying to do? What does an integrated national airspace system actually look like? What does it mean to have drones fly alongside helicopters? Next to buildings? Over cities? How can we get there in a way that is safe, secure and respectful of people’s privacy? It was fascinating to be at the front end of all of these conversations and being able to craft some rules to get the process started and I really liked it.

At some point I realized I could make a big impact from the private sector. I like to say now with the Hogan Lovells’ UAS practice we are really helping the industry along, one client at a time. We are helping start-ups, big technology companies, drone manufacturers, software developers, users and operators and various industries who can take advantage of all the benefits of drones. I wanted to come to Hogan Lovells in particular because of the firm’s strengths in both aviation and emerging technology. A lot of law firms are strong in aviation but don’t have an emerging technology practice or they are strong in technology but don’t have the aviation practice. Hogan Lovells has the full picture which was really enticing to me. There are also lots of synergies with our leading satellite practice. We like to say we support everything that flies.



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