SPECIAL ISSUE: MAY-JUNE 2021

YOUR GUIDE TO POLICY DEVELOPMENTS IN THE GEOSPATIAL INDUSTRY ECOSYSTEM

POLICY WATCH

SPECIAL ISSUE: MAY-JUNE 2021

Canada releases its first ever drone strategy

UK to come up with national Artificial Intelligence strategy

Russia extends space agreement with United States

Data created in South Africa to stay in South Africa

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WHERE THINGS CHANGE

This special edition of *Policy Watch* is being launched as the World Geospatial Industry Council (WGIC) is embracing change. Recently, I was asked to take on the role of Editor of this tech journal following in the footsteps of the highly capable Barbara Ryan, who has herself moved into the role of Executive Director of the WGIC. Under her leadership, the WGIC secretariat is examining how it conducts its business, with an eye to providing better member service and fine tuning the organization to better meet the changing drumbeats of not only our industry but the global economy. That Barbara worked at bringing on a new Executive Board of highly capable global industry leaders is just one aspect of the changes afoot within WGIC. Also afoot is an ongoing membership drive for new members in industrial sectors of advanced technologies, such as Artificial Intelligence, Internet of Things, Aerospace and Space, and the exponentially growing data sector.

For *Policy Watch*, the organizational pivot being executed in the WGIC secretariat means serving members better and how we gather and present policy intelligence in a manner that is more strategic and practical for all of you. This will require new ways of working and new ways of thinking. So, in the upcoming months, largely on an incremental basis, this journal will explore in more detail and with more analysis how specific policy proposals in domestic jurisdictions affect your operations. We will examine and revisit issues and studies that we have commissioned in the past, and which should be revived, updated, and monitored to ensure that our combined intellectual efforts are not lost on the shiny penny of the day.

I also believe that it is going to be essential to feature interviews and thought pieces from some of the world leaders who are responsible for policy development and execution to hear what is top of mind in their roles to execute the public interest. And, finally, it will also be important to canvass each of you – to listen and document the policy issues that you are facing and how you can leverage the incredible WGIC network to accelerate the goals and objectives of your businesses while strengthening our global community.

Best wishes,

Prashant Shukle
Editor, *Policy Watch*
In a country the size of Canada, where 80% of its population lives within 100 miles of the southern Canada-United States border, it is not surprising that drones are seen as essential tools to manage the vast lands and waters of the Great White North. For Transport Canada, the federal department which released Canada’s “Drone Strategy to 2025”, drones are seen as game-changing technology which can modernize the way industries work, improve people’s lives, and provide public benefits to communities — especially rural and remote communities that live well beyond the well-integrated chains of southern Canada.

The strategy is the first of its kind for Canada and establishes the aspirational goal of integrating drone operations into Canadian airspace and its civil aviation system. The vision was based on half a decade of outreach with industry and partners, testing of technologies, and policy and regulatory efforts to identify clear regulations and standards, and due considerations for the cybersecurity required to safeguard these systems.

Safety in the airspace over Canada is a responsibility shared by Transport Canada, NAV CANADA, and the Department of National Defense (DND), whose laudatory efforts are targeted at creating a drone traffic management system that includes mobile drone flight planning, airspace access request systems, communications, navigation, and airspace surveillance systems. The strategy can be found here.

**Key Elements**

- Safety regulations to support innovations
- Managing drone traffic
- Drone security risks
- Innovation enabling economic growth
- Increasing public trust in drones
India’s efforts on developing a clear policy and regulatory framework on drones has taken another step forward, with the Ministry of Civil Aviation releasing a new set of drone laws for anyone operating an unmanned aircraft system in the country.

The new rules provide: classifications of drones based on weight; import and export eligibility requirements as well as ownership requirements. Licencing and operating policies are clarified as are regulations regarding non-restricted and restricted airspace and penalties for violation of the rules.

For example, according to the Unmanned Aircraft System Rules, 2021, a drone cannot be operated within 5 km of international airports and 3 km from the perimeter of any other civil, private or defense airport. The rules also stipulate that drones cannot be flown within a 25 km distance of India’s international borders. Areas around military installations or military operations are strictly prohibited.

Rules regarding the activities of individuals have also been clearly defined. Any individual importing, manufacturing, trading, owning or operating drones must be a citizen of India and above 18 years of age. Companies must be registered and qualify as Indian businesses. The rules also extend to governance structures and officers of companies. For example, the Chairperson and a clear majority (66%) of the Board of Directors must be citizens of India. Manufacturing rules also impose the requirement to obtain prior approval before manufacturing or importing a prototype unmanned aircraft. Operation of any drone can only occur with valid certification.

**Different Categories, Different Rules**

- **Nano:** Drones weighing less than or equal to 250 grams; no license or permit required
- **Micro or Small:** Drones weighing more than 250 grams and less than or equal to 25 kg; UAS Operator Permit-I required for operations
- **Medium and Large:** Drones weighing more than 25 kg; UAS Operator Permit-II required
Pakistan’s Prime Minister Imran Khan has approved the formation of a civil drone authority to regulate the use of drones in the country. “Developing a policy framework for the adoption and management of drones is essential for businesses, agriculture, research and development, and other areas,” Khan was quoted as saying. The new authority will fill the current regulatory void and promote the domestic production of drones. “Efficient use of drone technology will help improve utilization of resources and service levels,” the Prime Minister added. He urged to speed up the formation of the organization after a formal approval from the cabinet.

The regulatory authority will be headed by Secretary, Aviation Division, Shoukat Ali, and include top officers from the Pakistan Air Force, Civil Aviation Authority, Ministry of Defence Production, Ministry of Interior and Ministry of Science and Technology. It will supervise and implement several regulations related to unmanned aircraft systems (UAS) including licensing and permits, importation, manufacturing, production standards, operations, training, and research and development.

Developing a policy framework for the adoption and management of drones is essential for businesses, agriculture, research and development, and other areas.

IMRAN KHAN
Pakistan Prime Minister
The European Parliament’s Culture and Education Committee has endorsed a call for a framework to regulate Artificial Intelligence (AI). Aimed at “reducing gender, social or cultural bias in technology”, the framework is meant to bolster the backbone of societal values and fundamental rights.

EU lawmakers stressed that ethical AI needs to be deployed sustainably and in a manner that respects equality, diversity, and the need to promote digital literacy for all. The Committee noted that a coherent vision and strategy was essential to create a fair and just single digital market that benefits all citizens.

To be ethical, AI must be developed, deployed and used in a sustainable and socially responsible manner, following a gender equality strategy, respecting cultural diversity, promoting digital literacy, closing the digital gap and safeguarding intellectual property rights.
The Indian Institute of Technology (IIT) Roorkee has recently launched two online certificate programmes — Data Science and Machine Learning; and Advanced Machine Learning and Artificial Intelligence. Both the courses are being offered on Coursera — an online learning platform. Certification in Data Science and Machine Learning is designed to equip professionals with competencies in the core focus areas including linear algebra, statistics, gradient calculus, and programming components. In contrast, the online certificate in Advanced Machine Learning and AI uses hands-on learning to teach advanced ML techniques and skills needed to build deep learning models and AI applications.

This initiative complements the Indian Institute of Technology (Madras) Robert Bosch Centre for Data Science and AI (RBCDSAI) fellowship in Artificial Intelligence for Social Good. The objective of this fellowship is to recruit exceptional early career AI scientists to RBCDSAI, IIT Madras.

According to reports, recent Ph.D. graduates or early career researchers in computer science, computational and data sciences, biomedical sciences, management, finance, and other engineering branches can apply for the fellowship. Interested candidates can apply for the fellowship by clicking here.
Having recently announced the launch of the new UK Cyber Security Council, the UK government now plans to publish a new National Artificial Intelligence Strategy (the AI Strategy) later this year. The objective of the strategy is to build on the UK’s position as a global center for the development, commercialization, and adoption of responsible AI. According to reports, the AI Strategy will focus on the following:

- Growth of the economy through widespread use of AI technologies;
- Ethical, safe, and trustworthy development of responsible AI; and
- Resilience in the face of change through an emphasis on skills, talent, and research and development.

Digital Secretary Oliver Dowden made the announcement by saying, “Unleashing the power of AI is a top priority in our plan to be the most pro-tech government ever. The UK is already a world leader in this revolutionary technology and the new AI Strategy will help us seize its full potential — from creating new jobs and improving productivity to tackling Climate Change and delivering better public services.” The intention is for the AI Strategy to align with the UK government’s overall plans to support jobs and economic growth through increased investment in infrastructure, skills, and innovation.
Russia has extended an agreement on Space cooperation with the United States until the end of December 2030, the Russian government recently announced. “The extension of the agreement is in the interests of both parties and will contribute to the effective implementation of joint Space projects,” the Russian Cabinet said in a statement. Prime Minister Mikhail Mishustin approved the proposal to extend the agreement on cooperation in the exploration and use of outer Space for peaceful purposes, it said.

The agreement between the two countries was first signed in 1992 and has since been extended four times. It includes joint work on the International Space Station, which Russia said, will continue until 2028. The agreement also extends cooperation on the use of the Russian rockets to transport astronauts and supplies to the ISS.

The extension of the agreement is in the interests of both parties and will contribute to the effective implementation of joint Space projects

RUSSIAN CABINET
The UK Space Agency, under its National Space Innovation Programme (NSIP), has announced that it will support a host of initiatives, such as projects to remotely probe ice on Mars to help explorers find life below the surface; a system to warn of impacts of flood risks to infrastructure based on research in India; and a scheme to design UK imaging technology for a Space telescope. The funding will see UK companies and organizations working with partners, such as the Canada, Italy, Japan, and the United States.

Dr Graham Turnock, Chief Executive of the UK Space Agency, said, “Space technologies are part of almost every aspect of our daily lives. With rapid technological innovation, Space offers a broad and growing range of opportunities to support economic activity and protect the environment. These projects champion the best of British innovation while strengthening our partnerships around the world.”
The UK Space Agency has awarded funding worth £300,000 to five projects to support the development of Space technology through its National Space Technology Programme. Among the projects receiving funding is the University of Leeds’ 3D printing methods and liquid-crystal technology, which is developing far infrared (FIR) sensors to study climate change and star formation. Rocket Engineering of London received funding to create a compact propulsion system (the size of a house brick) for use in nano and small satellites. The system is designed to use electromagnets to enable in-orbit spacecraft mobility for servicing satellites of to mitigate Space debris.

Lena Space was awarded funding to develop an off-the-shelf, modular propulsion to support small launch vehicle programs. This project will involve detailed design work on the MPE, and integration of several proprietary Lena subsystems, such as pintle injectors, electric drive cryogenic pumps and additive manufacturing nozzles.

Another project receiving funding is one by Oxfordshire County Council, in which a partnership with Spottitt, was funded to examine the technical and commercial viability of a low-cost fully automated monitoring service for waste and mineral sites using satellite imagery. The final project to receive funding is SuperMagdrive, from Rocket Engineering Limited, supported by Oxford University’s Department of Materials.

This investment will help UK Space businesses fast-track innovative technologies with real scientific and commercial potential, supporting our aim for the UK to secure 10% of the global space market by 2030.
SECURITY CONCERNS FOR REMOTE SENSING INDUSTRY

The Remote Sensing industry could be challenged by security and privacy concerns, Rep. Don Beyer (D-Va.), Chairman of the House Science, Space and Technology Subcommittee on Space and Aeronautics, has warned. The lawmaker said that as the industry continues to introduce increasingly sophisticated products, it may be time to consider additional rules to ensure technologies do not infringe on privacy or compromise national security.

Last year, satellite imaging providers welcomed new rules from the Commerce Department that streamlined the licensing process for private operators. The revamped regulations were intended to help US Remote Sensing companies compete in the booming global market for Space-based data. The new rules reduced the regulatory burden for most companies and imposed restrictions mostly on companies that offer a completely novel capability that is not available in the open market.

Beyer has said there are probably other reasons to restrict Remote Sensing licensing other than having a “novel capability.” There are “issues of access and resolution” that could impact national security and especially privacy, “where Congress is going to have to strike a balance.”

Rep. Don Beyer (D-Va.) has said that for the Remote Sensing industry, there are “issues of access and resolution” that could impact national security and especially privacy, where Congress is going to have to strike a balance.
DATA
France’s data protection watchdog CNIL will now conduct checks to ensure that websites are complying with new guidelines on Internet advertising trackers. CNIL will expect that any user consent for advertising cookies must be granted by a “clear and positive act”, such as clicking on an “I accept” button. The CNIL framework states that browsing a site can no longer be considered as a valid expression of the web user’s consent.

The new rules also stipulate that users must be clearly informed about the intent of the cookies prior to consent. These clarifications are an extension of the EU’s General Data Protection Regulation (GDPR), which states that “consent should be given by a clear affirmative act establishing a freely given, specific, informed and unambiguous indication of the data subject’s agreement to the processing of personal data relating to him or her.”
The Indian government plans to lay down principles for usage of data for the development of any industry, where such norms do not already exist, and put in place adequate safeguards to prevent misuse and access of data by unauthorized persons, according to a Draft National e-Commerce Policy. According to reports, the government is in the process of developing regulations for personal and non-personal data, the policy, which is currently under discussion, said.

The draft states that sharing of data for industrial development would be encouraged and regulations for data would be provided for the sharing mechanism. According to the draft, the government acknowledges the importance of data as an asset and needs to use data emanating from India for “Indian entities first”. For free and informed choice, it said that e-commerce operators would have to ensure that algorithms used by them were not biased and that no discrimination due to digitally induced biases was prevalent.

Consumers have a right to be made aware of all relevant details about the goods and services offered for sale including country of origin, value addition in India, and any other such information which may be necessary for making an informed decision at the pre-purchase stage.
PUBLIC DIALOGUE ON LOCATION DATA USE

Supported by the UK Research and Innovation’s Sciencewise programme, the Geospatial Commission has initiated a public dialogue to better understand public attitudes on location data use. The Geospatial Commission is collaborating with public dialogue and data specialists Sciencewise, Traverse and the Ada Lovelace Institute to initiate the process to gather public perceptions and sentiments.

Findings from these consultations will inform ongoing delivery of the UK Geospatial Strategy.

The rapid advancement and increasing use of location data and technologies present great opportunities for the UK to realize significant economic, social and environmental value. Through developing a dialogue to explore public views about location data, the Geospatial Commission has an important role in supporting the government to remain proactive in maintaining public confidence in how location data is accessed and used.

LORD TRUE CBE
UK Minister of State for the Cabinet Office
DATA GENERATED IN COUNTRY STAYS THERE

South African data belongs to South Africa, and South Africans, according to a new draft data policy which stipulates that any data that is legally exported, must also have copies that remain resident for use by police and domestic authorities. The policy raises interesting issues around how the National Data and Cloud Policy will be enforced.

The policy calls for specific action by the government to address the export and housing of South African data in other nations or virtual “extra-national” environments.

Crucial Points

- Any data generated in South Africa is the property of South Africa;
- Local copies must be kept of any exported data for purposes of law enforcement; and
- Big Data centers and critical backbone infrastructure should be declared national strategic assets.
The United States Food and Drug Administration (FDA) has unveiled its Data Modernization Action Plan (DMAP) to focus implementation of the agency’s sweeping Technology Modernization Action Plan (TMAP) on issues of quality and stewardship. The FDA indicated that this plan consciously recognises that its data systems “are still largely geared to a non-digital, document-based information paradigm” and that electronic documents, such as PDFs, “are not the same as digital data.”

The DMAP is anchored on driver projects that contribute to the FDA’s public health responsibilities in the near term while also building critical capabilities for the future.
The United States Department of Defense is working on better use of data analytics to improve its business operations and decision-making, optimize the workforce and support digital transformation, as it moves on from legacy systems. Gregory Little, DOD’s Deputy Comptroller for Enterprise Data and Business Performance, said his organization partners with various DOD components like the Joint Artificial Intelligence Center, the Defense Innovation Unit and the Office of the CIO on efforts that include rationalizing systems, improving acquisition techniques, getting better data and tying strategy to resources, performance outcomes and risk.

“We think about modernization, how we simplify processes, improve data quality and automate,” Little said. He added, “This administration is very focused on building a workforce that has the right skill sets for the future and innovation.” The Deputy Comptroller emphasized that people have been really excited about the new technology and how it will free up time to do next-level work. This year, 43 bots helped save the Pentagon’s business analysts 30,000 hours, he added.

We think about modernization, how we simplify processes, improve data quality and automate

GREGORY LITTLE
DOD’s Deputy Comptroller for Enterprise Data and Business Performance