

EXCLUSIVELY PREPARED FOR WGIC MEMBERS

POLICY WATCH

August 2019 | Quarterly Edition | Issue 4

A newsletter that highlights policies, plans, programs and progress in the global geospatial community.

In focus this month are: ►

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Foreword

The August Quarterly issue of Policy Watch brings additional attention to several advancements that were previously shared – ranging from regulations around the world that are focused on drones, space, data privacy and Artificial Intelligence (AI).

What I find most interesting with these advancements is that in addition to cutting across the thematic areas of Policy Watch, they also cut across geographic scales. Efforts range from establishing a geospatial portal in the States of Jammu and Kashmir, India to deliberations on AI that took place at the recent G-20 Summit in Tokyo. This range of scales shows us how fractal our work is, and regardless of scale, success (societal, economic, and environmental) depends on partnerships, policies, and programs.



These partnerships, policies and programs, and the dynamics between and among them come to light in the last article of this issue where a Strength, Weaknesses, Opportunities, and Threats (SWOT) Analysis is shown for both a traditional approach for building space programs, as well as for “New” Space. Both the European Union (EU), in 2016, and the U.S., in 2018, released New Space Strategies for their respective governments. Highlighted in each of these Strategies is a focus on the commercial sector, particularly start-ups and relatively new entrants to the space sector, and in the case of Europe, to grow their efforts to 10% of the global space market. While making shifts in business or governance models are not trivial, and often take longer than anticipated, the SWOT Analysis for the New Space Sector can provide a useful model for those countries just entering the space sector.

Please join me in taking another look at the advancements described herein.

A handwritten signature in blue ink that reads "Barbara J. Ryan". The signature is written in a cursive, flowing style.

Barbara J. Ryan

India – Jammu and Kashmir Geo-Portal Launched

Jammu and Kashmir launched the Beta version of the J&K Spatial Data Infrastructure, alongside the Beta Geo-Portal (ssdi.jk.gov.in) in mid- July.

The State spatial data infrastructure aims to create an electronically available network of data, data producers, and users and consists of global standards for data collection, data exchange, and formulation of procedures. The result is the creation of a national digital geospatial data framework that is permitting organizations and individuals from all affected sectors to work together on a common platform of shared geospatial data.

The spatial data is essential for:



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DRONES

Argentina – Draft Drone Regulation Rolled Out

The Argentinean department responsible for aircraft, the National Administration of Civil Aviation has rolled out a new project for regulating Unmanned Aerial Vehicles (UAVs) and Unmanned Aerial Systems (UASs).

This new regulation is currently in draft form and still open for comment before releasing the final bill. This document adds significantly to the original regulation released in 2015, as it recategorizes UAVs according to their aimed use including:

- Recreational;
- Commercial; and
- Experimental.

The new regulation has further categorized UAVs by weight and size. This categorization requires different actions for registration and operation in each category, as well as different corridors for use for each category.



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DRONES

Kenya – Revises Drone Regulations

Currently, in Kenya, the operation of drones is illegal. This situation has been particularly problematic for tourists who may not know that drone operation is illegal, resulting in, large numbers of UAVs having been confiscated at airports and docks, leading to a decrease in the tourism ratings of the country.

In June 2019, for the second time, the Kenyan Civil Aviation Agency (KCAA) presented a draft regulation for drones to the Senate.

The KCAA published a similar regulation in 2018 that legalized the use of drones. Inconsistencies and faults in several provisions of the 2018 regulation, however, resulted in the Parliament of Kenya annulling the regulation.

The new document was published, taking into consideration all comments for governance structures and other sources, such as public and private entities and consumers. This new regulation also addresses safety, security, and any breach of personal property that may occur. Once launched, it will immediately bring Kenyan drone operation back in service.

DRONES

New Zealand – Government Discusses Drone Regulations

The Government of New Zealand released a paper discussing the drone regulations of the country. The use of drones for commercial and recreational purposes currently exceeds over 77,000 in number, resulting in safety and privacy concerns across the nation.

To address this issue, the government has released a paper titled “Taking Flight: an aviation system for the automated age.” This paper proposes a regulated environment for drone operations in New Zealand by fostering and supporting effective integration of drones, and creating a social license for their operation.

The paper also advances the idea that any regulation that is launched for this purpose should be regularly reviewed and adjusted according to the requirements of the country and all commercial and recreational users.

“

As with all aviation regulation, restrictions in activity will continue to be necessary to ensure safety and security is maintained. There is a need to continue raising awareness of the rules, regulations, and safety requirements for drone operations (through education and improving how we communicate with the public and through visible enforcement of regulations). There is also a need to understand better what drone operations (commercial and recreational) the public is comfortable with. This is likely to help address any public concerns about drone operations.

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DRONES

USA – Remote-ID for Drones Requirement Withdrawn

In May 2019, at the Senate Commerce Committee, UAVs were the focal point for discussion with the agenda to incorporate unusual aircraft into the National Aircraft System (NAS).

For a few months, the Federal Aviation Agency (FAA) has advocated for remote identification of drones, claiming that unmanned vehicles provide users with a significant degree of anonymity that could lead to a lack of accountability. This policy update, however, has not been well-received. The counter-argument states that remote identification reveals private information about the user that cannot be protected.

A letter, signed by manned and unmanned aviation organizations, chambers of commerce, industry advocates and pilots' associations – indeed a large part of the aerospace industry -- was sent directly to Congress expressing concern with the delay of the rulemaking effort. See below for an excerpt of the letter.

“

Letter to Congress

As leading industry associations, aviation stakeholders, and labor unions, we all have significant concerns pertaining to the continued delay of the remote identification rulemaking and the adverse implications of that delay on the safety and security of airspace as well as on the future of the unmanned aircraft systems (UAS) industry. We urge the Administration to convene key federal agency stakeholders including the FAA, the Department of Defense, the Department of Homeland Security, and the Department of Justice to collaborate on publishing a rule on remote identification without further delay

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Though a large part of the aerospace industry has vocalized opposition to such a policy, many others support it and see it as necessary to create a safer environment for all aerial vehicles post the incorporation of UAVs in NAS. Given these differing views, the impacts, intended or unintended, of such a policy cannot be predicted with accuracy.



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SPACE

Angola – Angola National Space Strategy Approved

In the African region, Angola leads in many sectors, ranging from health to the newly emerging Space industry. In May (2019), the National Space Program Management Office launched the 2019 – 2022 Strategic Plan. The Plan augments the 2016-2025 National Space Strategy, the 2018-2022 National Plan, and other several other policies and whitepapers.

The new Plan differs from earlier plans and strategies as it requires routine monitoring and project development and management.

The infographic below illustrates the main elements of the Plan.



SPACE

Australia – Government Project on Satellite Based Augmentation System

The Australian Government has embarked upon a project to create a national Satellite Based Augmentation System (SBAS), with commercial participation from private organizations. This initiative has been in the pipeline since 2015 and has so far obtained AUS \$160.9 Million (US \$112.12 Million) from the federal budget. The project has the following goals:

- To enhance the positioning of global navigation satellite services (GNSS);
- To directly impact industries like agriculture and mining; and
- To include New Zealand in its coverage.

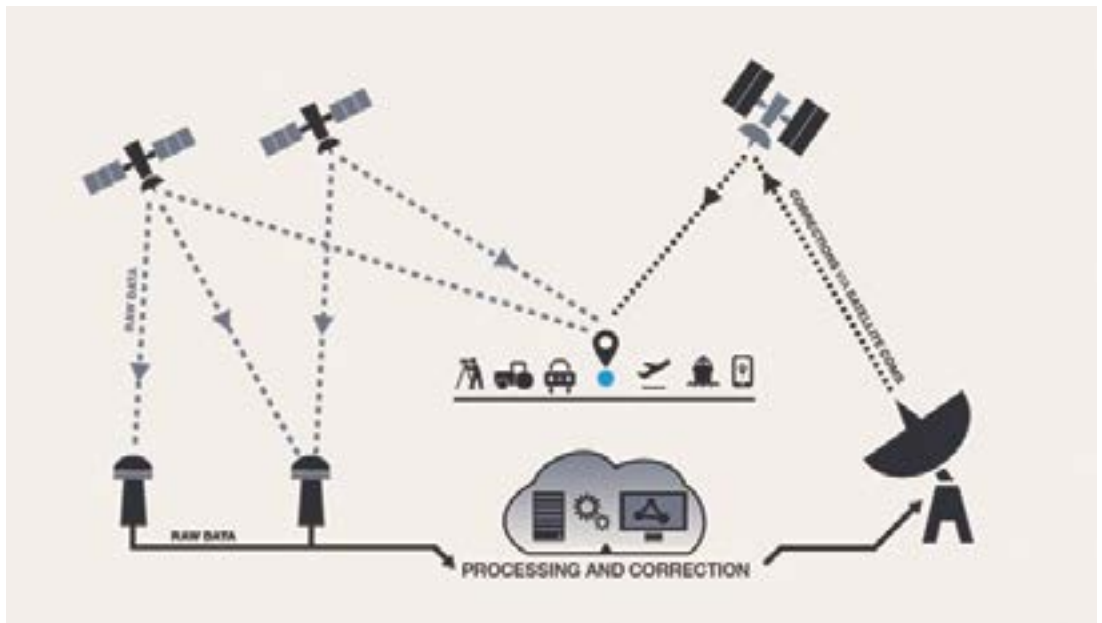


Image Source: Geospatial World



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SPACE

Nigeria - Nigeria Plans Launch of Satellite

The Nigerian Government has continued its expansion into the space race by initiating efforts to build and launch a satellite. These intentions were voiced in May 2019.

Though the plan has not been formally released, it is said that the satellite will benefit multiple sectors, including the environment, education, medicine, security, intelligence infrastructure development, and mobile telecommunications. The influence of the National Space Research and Development Agency (NARSDA) has been essential, not only for the Nigerian people but also for the Nigerian economy at large.

A significant reason behind introducing satellites into the vision of NARSDA is to ensure natural disasters are mitigated via the deployment of prediction, detection, monitoring, and management models. The Director-General of NARSDA has also indicated that the Seismic Network and Monitoring Center will be included as part of the geophysical and space-based system.

The ambitions of the country and the space agency are plentiful, and will, therefore, require private intervention and funding, as was noted by the Director-General, to advance disaster detection and monitoring models, along with the seismic stations.

“

This would help Nigeria a great deal in global geodetic and geodynamical activities and monitoring, prediction of seismic activities and mitigation mechanism,

**Prof Muhammed
NARSDA**

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**DATA
PRIVACY**

India – Data Protection Bill Finalized

The Indian Data Protection Bill, which includes the Geospatial Data Bill, was finalized. The Bill underwent four rounds of consultation and changes before it was rolled out in June 2019.

This Bill focuses on personal data and how individuals can control their data, what limits to access exist, and how the same data has to be processed by all government and private entities both nationally and across borders.

The Bill also includes data security and the need for data anonymity. These factors, in combination, according to the Minister-in-charge, Minister Prasad, will lead to data availability, utility, innovation, and localization.

The Bill still to be finalized, has, therefore, not reached the Cabinet. It is likely to be referred to the yet-to-be-formed standing committee on information technology before finalization, expected this winter.



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**DATA
PRIVACY**

Singapore – Data Protection Regulation Boosted Via New Appointment

The Personal Data Protection Commission (“PDPC”) introduced several new initiatives in a bid to advance Singapore’s Digital Economy. These initiatives are called the Data Protection Officers’ (DPO) Competency Framework and Training Roadmap, respectively. These initiatives have been designed to help ensure efficiency in job performance and an active rolling out of all services provided by the DPO.

The initiatives target the DPO as they are the responsible party for all data and data-driven innovation. The PDPC, supported by National Trades Union Congress (NTUC) and their Learning Hub, and the Employment and Employability Institute (e2i), will be launching a 12-month pilot program to train and upskill DPOs.



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UN- WGIC holds a Panel discussion at UN-GGIM Meeting

During the 9th United Nations- Global Geographic Information Management council (UN-GGIM). A Panel discussion was held by the World Geospatial Industry Council (WGIC), and its Policy Committee. Member Countries of the UN, the UN-GGIM Private Sector Network (PSN) and other observers were briefed on progress to date, surveying existing regulations and legislation governing geo-location and personal privacy in selected jurisdictions around the world.

There is a growing global recognition of protecting personal privacy information, and WGIC is interested in broadening its efforts to gain a more comprehensive view of related current and planned legislation and regulations globally.

The WGIC Policy Committee is comprised of the following: Chair: Arnout Desmet (TomTom); Zaffar Mohamed Ghouse (Spatial Vision), James Steiner (Oracle), and James Van Rens (Riegl); with support provided by Barbara Ryan and Seth Sharmishtha (WGIC Secretariat).

The presentation included results from a surveyed area where different Data Privacy Policies were compared to expected standards.

The Policy Committee received valuable feedback and encouragement related to the strategy which is expected to have more impact on policymakers and the specific role that WGIC could play in this vital policy domain.

The WGIC will be developing a white paper compiling the results of the survey, as well as the inputs obtained from this event.

For additional information on WGIC's efforts, please visit www.wgicouncil.org.



AI & IOT

World - G-20 launch AI guidelines

At the G-20 Summit in Japan (June 2019), representatives of the 20 major economies across the world formulated a set of guidelines for commercial construction and utilization of AI. These 20 economies include Argentina, Australia, Brazil, Britain, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, the United States, and the European Union.

Though the guidelines are non-binding, the annex is intended to ensure safety and requires transparency and responsible disclosure.

Highlights of the guidelines, as published by the G-20, are:

Users and developers of AI should:

- Respect the rule of law and values, including privacy, equality, diversity, and internationally recognized labor rights.
- Commit to transparency and responsible disclosure regarding AI.
- Ensure that AI systems are robust, secure, and safe so that they do not pose unreasonable safety risks.

Governments should:

- Consider long-term public investment and encourage private investment in research and development of AI.
- Support an agile transition from the research and development stage to the deployment and operation stage of AI.
- Ensure a fair transition for workers through training programs and access to new job opportunities.



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AI & IOT

Malaysia - Malaysia to get its first AI park

Malaysia, as of May 2019, allocated Malaysian \$1B (US \$240M) to establish an AI Park. Three Malaysian and Chinese companies will construct the Park;

- China Harbour Engineering Company;
- G3 Global; and
- SenseTime.

The Park, designed as a cluster, will enable focused growth in building AI applications to take advantage of different growing technologies, including Computer Vision, Speech Recognition, and Natural Language Processing. The Park will also serve as a base within the country to foster local talent and build a commercial ecosystem for AI and AI research.

The user domains currently in focus are government agencies, banking, manufacturing, and finance, with expectations that this will expand as funding and the Park's reach increases.

While the specific location of the Park has not been decided, cloud service and a research base platform, built by SenseTime, will be created to help support the Park both before and after construction. G3 Global will be responsible for industry partnerships and support.

Though Malaysia has a National Big Data Framework, The country and the Malaysia Digital Economy Corporation (MDEC) will introduce a national AI framework by the end of this year, enhancing the guidelines mentioned in the Big Data Framework.

After the Framework is launched, Malaysia will have a stronger foundation to help national industry partnerships foster and grow the local AI community.

“

The idea to set up the AI park is vital to building AI research-related public service infrastructure as the base to promote AI technology in Malaysia. Also, this becomes a place for talents to be trained on AI and machine learning.”

Wan Khalik Wan Muhammad, Executive Chairman, G3 Global.

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AI & IOT

UK- Regulations for IoT Cybersecurity Updated

In May 2019, the UK updated its Internet of Things (IoT) Regulation requiring the government to consult and establish guidelines and measures to ensure cybersecurity for all connected devices.

The government has hinted that a labeling scheme requiring all retailers to sell products only with approved labels indicating the safety of the product will be implemented. This rule will be supported by mandatory, device unique passwords and disclosure policies.

The UK has geared up for the expansion of the IoT and brings in new measures, which will see a considerable rise in the number of household items that are connected to the internet ranging from smart TVs to toys.

This update is imperative to ensure not only security but also sustained the profitability of the industry. Prior to this update, the average cost in 2019 to businesses that have lost data or assets through cyber-attacks was £4,180 (the US \$5,298), higher than the £3,160 (the US \$ 4,005) reported in 2018.

Thus, the update is meant to affect an encompassing industry, public, and consumer ecosystem.



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Many consumer products that are connected to the internet are often found to be insecure, putting consumers privacy and security at risk. These new proposals will help to improve the safety of internet-connected devices and is another milestone in our bid to be a global leader in online safety.

**Margot James.
Digital Minister**

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SPACE INDUSTRY

Global Space Economy

Today the most extensive space programs belong to the United States of America, the European Union, Russia, Japan, China, and India. Within these, the fastest-growing program (by growth in investment amount) is the Indian Space Program.

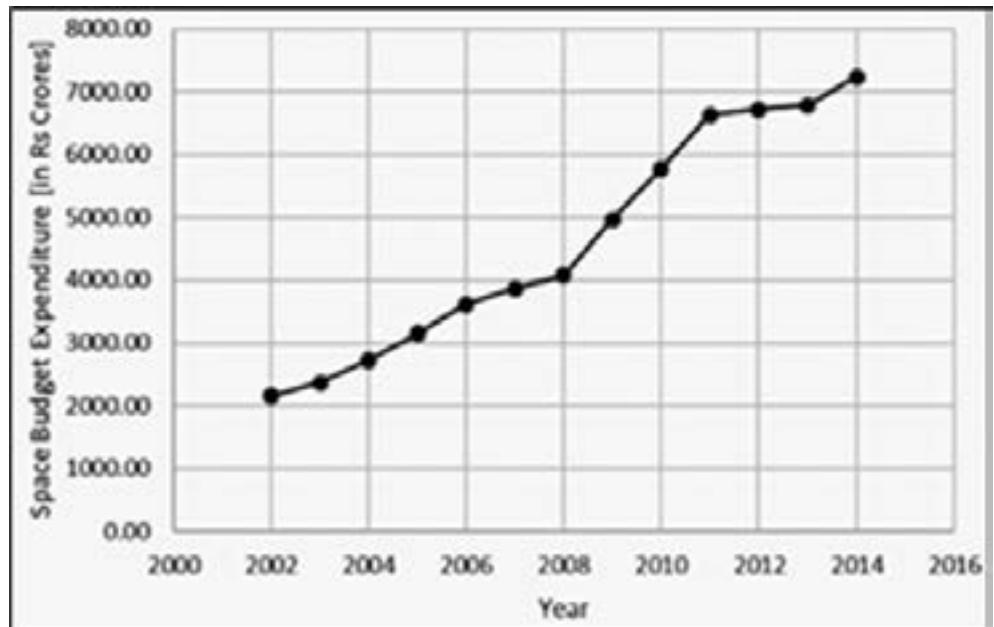


Image 1: Growth of Indian Space Budget in local currency.

Image Source: ORF Online

Currently, these space programs serve as models for the rest of the world, resulting in a top-down approach for exploration for scientific research or commercial purposes.

Strengths, weaknesses, opportunities, and threats for this traditional space model are shown below



SPACE INDUSTRY



With a traditional space model, there is a heavy reliance on building upon proven and reliable technology and handholding from the space agency. Thus, long-term roadmaps are often lacking in creating an environment of multiple industry players or industry consortiums with the ability to deliver end-to-end systems, while maintaining competition in the national ecosystem.

Enabling a bottom-up model, as compared to the top-down models may also stimulate young start-up organizations, further enhancing SME expansion. In this sense, a bottom-up approach is not so much a phenomenon, but more of a framework that can act as an enabler to expand capacity and capability for the industry to offer end-to-end products and services.

SPACE INDUSTRY

New Age Space approach discusses the following SWOT:



A practical framework can thus be formed for a nation better understanding the comprehensive space economy.



Image source: ORF Online

SPACE INDUSTRY

In 2018, the USA released a New Space Strategy whereby it strategized to collaborate with the commercial sector to ensure that companies remain world leaders in space technology. The EU in 2016, also released a new strategy, where they aimed to support new Space Start-ups, and become a haven for start-ups with an aimed growth of 10% control of the global space market.

Private funding for space-based ventures has grown exponentially over the past decade, leading to the rapid growth of a private space sector, which now includes well-known companies. A final factor of emerging developments in space is government funding and policies -- especially visible in the global north, where commercial space organizations are becoming increasingly involved in national space activities.

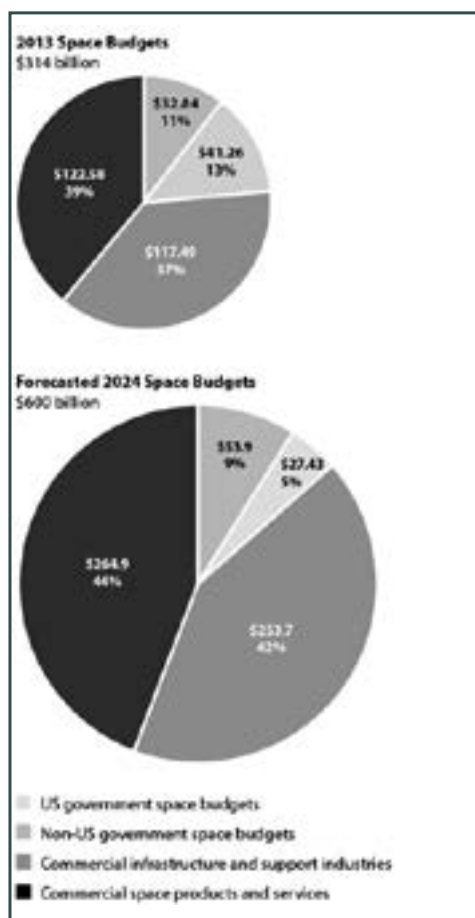


Image: International Space Budget

Image Source: Issues Online

SPACE INDUSTRY

Spacefaring countries generally have the following three options in policy adaptation:

- Accepting trends as inevitable, so that the global policy framework is something to which they respond;
- Actively fighting trends and attempting to reverse these trends, e.g., by suppressing the emerging private sector; or
- Not responding to any change and thereby reacting spontaneously to any trends on an as-needed basis.

The first option is generally the most preferred as .more governments worldwide can be expected to perform better to reach their space aspirations by participating in space-faring activities in different ways, and a globalized private sector will lead to providing and increasing the amount of space-based products and services.

As the number of actors increases globally, the space sector will likely see increased competition and overcrowding which, will further serve as a driver for more products, services, and governance structures that can support the needs of the ever-expanding sector.



World Geospatial Industry Council