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His Excellency President Cyril Ramaphosa in the State of the Nation Address of 2018 indicated that government would prioritise interventions to take advantage of rapid technological changes. These changes brought by the Fourth Industrial Revolution are inevitable, not optional and the nascent Drone Industry is perfectly poised to take advantage of these seismic advancements.

The economic implications of commercial drone use are undeniable. The market for drones is estimated to be \$127 billion globally across a variety of industries. Notably, the commercial use of drones will affect agriculture, infrastructure and commerce. Due to the ability to cover large areas, drone use in agriculture is anticipated to effectively feed and hydrate plants while also limiting exposure to diseases. The advent of the drones is associated with the phenomenon of the death of the distance. For the far remote areas of South Africa where motor vehicles find it hard to penetrate the drones are a natural solution for health, agriculture and other sectors.

On a macro-economic scale, the integration of drones could create thousands of jobs. Over a projected 10-year span, job creation from commercial drone use will consist primarily of manufacturing jobs and drone operators.

Commercial drones will also allow industries to realize savings from cost-effective means of inventory, transportation, and distribution. These cost savings can be passed down to the consumer through a reduction in prices.

Successful new economic value chains thrive when there is a solid integrated country strategy that supports them. A country strategy is the policy framework, for the long- and/ or medium-term, which has been adopted by a government as a plan of action for a particular sector of the economy or society and has input and buy-in from the commercial and government operators in that sector.

However, this strategy needs to be underpinned and driven by:

- Technological Advances
- Consumer Demand and Rapid Growth
- Commercial Market Opportunities
- Agile Regulatory & Policy Landscape

It is with this in mind that we remember that South Africa was the first country to pass drone industry regulations 5 years ago, but unfortunately other countries in Africa have overtaken South Africa in terms of embracing and rolling out drone technologies and become the leaders in Africa. Drones are currently being used in the delivery of Covid-19 supplies in rural Ghana and Rwanda, and they are also being utilised in emergency services and precision agriculture.

Several African countries have acknowledged the role South Africa has played in the development of their own drone regulatory processes and created enabling environments to create flourishing drone industries. It is time we regain our position as the leader in drone technology and regulatory policy.

The Drone Council SA was established in 2019, as an industry response to create a platform of affiliation by the various established companies and new entrants into the industry. The initiation of the Drone Council SA was facilitated by the Economic Development Department (EDD), but its involvement has since ceased when it was restructured with Department of Trade and Industry (DTI). The Drone Council SA has since requested the Department of Communications and Digital Technologies (DCDT) as lead coordinator of 4IR interventions by government. The Department of Transport is also critical in these efforts as they are the custodian of the transport industry which will be greatly impacted by the use of drones.

It is encouraging to note that the Council's main objective is to organize its members and other stakeholders to enhance robust development of the drone economy in South Africa. The Council actively seeks to promote:

- Drone Industry Collaboration
- Business Incubation
- Industry Sectoral Optimization
- Massification Of Drone Pilot Training
- SA Industry Global Competitiveness
- Industry Transformation
- Harness Manufacturing and Maintenance Capacity

## **THE CURRENT SOUTH AFRICAN DRONE REGULATORY ENVIRONMENT**

1. There is currently no regulatory issue, that is both urgent and pending.
2. The current regulations are workable. However, if there is a need for amendments the following is where to do it:
  - a. The inclusion of operational scenarios
  - b. Removal of the grey areas in the regulations between commercial and recreational operations as well as radio control planes and drones
  - c. Reduce the operational burden for small operations.
  - d. Simplify for law enforcement
  - e. Increase oversight for state security for all drones.

Having said that it is important that at all times the new business opportunities in all spheres must embrace inclusivity and be transformation in nature. This is an imperative we cannot avoid if SA is to be made a home for all who live in it. The most critical issue is that the SA Civil Aviation Authority lacks capacity and urgency when dealing with the Drone industry and as such the bottlenecks are their internal process and resources. The problem is institutional. Hence, we call for smart regulation which would apply to the use of drones by private persons, by private and public companies, and by state security actors.

The reason why regulation must be smart and anticipatory is because a one-size-fits-all model does not work.

We must use regulation to set up the playing field such that the industry can have the best chance of growing and of injecting innovation into the economy.

Our country has a Fourth Industrial Revolution to usher in. And this whole phenomenon is moving at the speed of light. At breakneck speed!

Hence, legislative and regulatory processes must move with the times and be informed and advised by highly knowledgeable, experienced and well-trained people.

## **THE ECONOMIC USES OF DRONES**

Multinational companies like Amazon and Google have been aggressively investing in drone technology to pursue their ambitions of utilizing advanced drone technology to carry out deliveries in the very near future.

Commercial delivery drones already contribute to over \$13 billion in economic growth worldwide, but that number is expected to skyrocket in the coming years as the technology improves, laws and regulations are implemented, and consumers become more comfortable with their online orders being dropped off from the air.

## **THE DRONE AGRI-TECH REVOLUTION**

The commercial drone market with some of the greatest economic potential is the **agriculture industry**. As drone technology continues to become more affordable and more accessible to farmers around the world, their ability to grow more, healthier crops could prove to be a game changer in the global economy.

While sprayer drones have given the smallest farmers access to accurate and harvest-saving crop sprayers, that only scratches the surface of the benefits of drone technology for agriculture. Many farmers are using cameras embedded with sophisticated software that can survey lands to detect soil quality, monitor crop growth, and help farmers detect and treat problems before they get out of control.

## **BUILDING STRONGER INFRASTRUCTURE**

The potential for drones to impact the global economy via infrastructure cannot be overstated. Drones for infrastructure are helping construction crews, building inspectors, and utilities managers around the world build roads, bridges, homes, and skyscrapers bigger, better, and safer. Drones are capable of viewing areas of construction sites or demolition

zones that humans are not able to see to help contractors and inspectors alike make more informed decisions.

According to the World Economic Forum, which conducted a drone market analysis in 2015, the infrastructure sector is the single most promising area where drones could have a significant impact on the global economy, underscoring the potential for drones to help establish better infrastructure in developing countries,

## **CONCLUSION**

The new reality of the Fourth Industrial Revolution forces us to think and act in a new way: we can't solve new problems by applying old methodologies or outdated mind sets. The current Drone Industry regulatory environment must be harmonised and benchmarked against international best-practices, and this process must be expedited to ensure South Africa takes its place as a leader in this field on the African continent.

Technology creates more jobs than it destroys, but change is painful. Whether they are being deployed for supply and logistics services, advances in agriculture, or building a bigger and better skyscraper, the commercial drone market presents enormous opportunity for South African economic interests.

Thank you.