

5 hurdles India needs to overcome to become a global drone hub by 2030

By Nishant Kumar Verma and Shiril Sajuj| Apr 18, 2022

IIM-Bangalore identifies some of the potential roadblocks and suggests initiatives that can help the government and the industry to achieve the vision



[CAPTION]Workers test a CSIR-NAL octocopter drone at the Wings India 2022 Air Show held at Begumpet Airport in Hyderabad, India, on Thursday, March 24, 2022. Image: Dhiraj Singh/Bloomberg via Getty Images[/CAPTION]

India aims to become the global drone hub by 2030. Prime Minister Narendra Modi and Union Minister of Civil Aviation Jyotiraditya Scindia have made remarks on this vision on

various occasions. The worldwide drone market size is projected to grow exponentially in the coming years (See Figure 1). The government of India expects the annual sales turnover of the Indian drone manufacturing sector to cross Rs 900 crores and the drone services sector to cross Rs 30,000 crores in the next three years. The market development is expected to generate more than 5 lakh jobs. We highlight some of the potential roadblocks and suggest initiatives that can help the government and the industry to achieve the vision.

RSS The government, with social welfare as a priority, urges the industry to primarily focus on applications in the field of agriculture, military, and healthcare. Spraying of nano urea, [transport of Covid-19 vaccines](#), rural surveying, and so on are some recent drone operations which followed and demonstrated this vision of the Indian government.

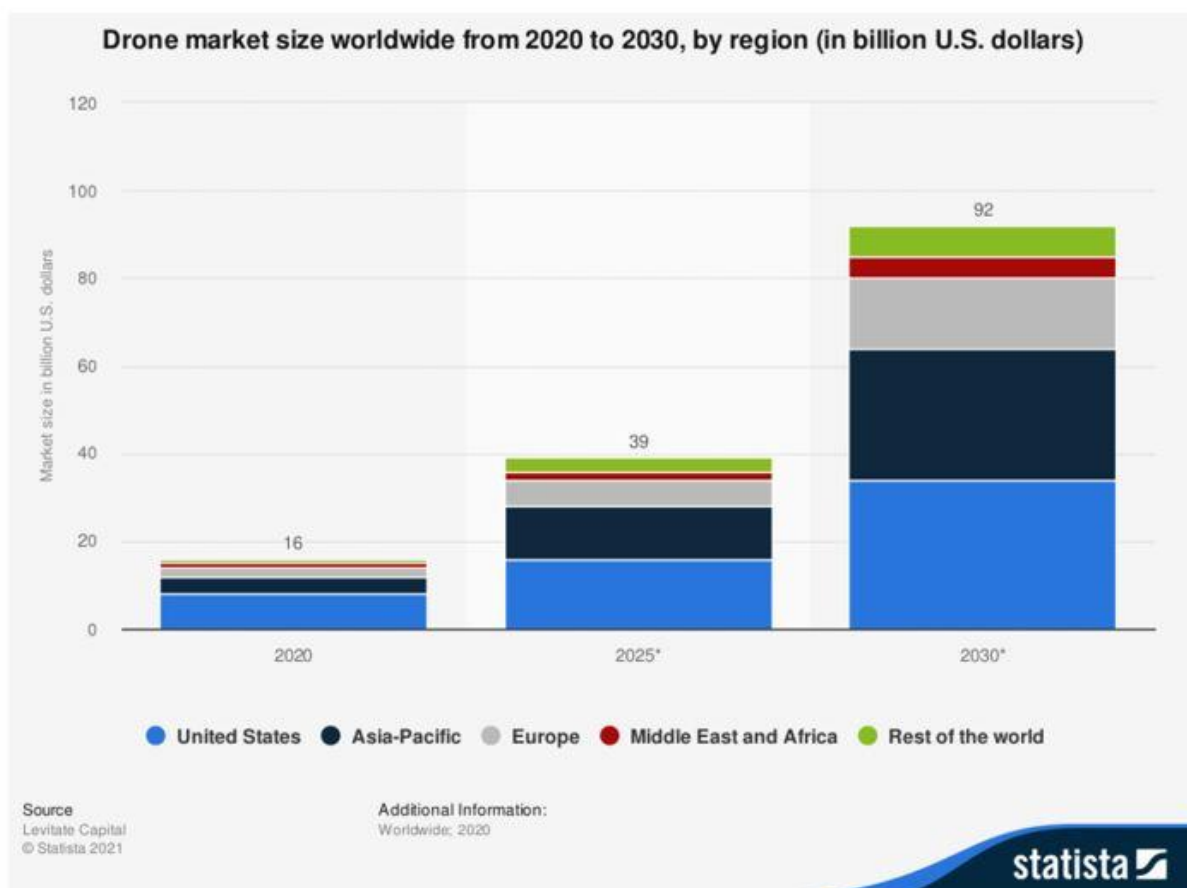
Journey so far

1. Drone Rules 2021

A new liberalised set of rules on drones was released as '[Drone Rules 2021](#)' in August 2021 after incorporating suggestions from different stakeholders. The major highlights of the rules include: reducing the number of forms required to be filled to operate drones from 25 to 5, reducing the types of fees collected from the operator from 72 to 4, slashing the rates of fees, and so on. In short, the government has made the official procedures a lot simpler; thereby reducing the time spend on paper works for registration and operations.

2. DigitalSky website

An airspace map has been published by the government on the 'DigitalSky' website. The map zones the Indian airspace into green, yellow, and red categories. Green zones, covering the majority of the geographical area, are free-to-fly zones. This eliminates the requirement to get operational approval from local authorities before drone operations. The DigitalSky website also acts as a single-window portal for filling all five forms under [Drone Rules 2021](#) for respective approvals.



[CAPTION]Figure 1: Drone market size worldwide Source: Statista[/CAPTION]

3. Production-Linked Incentive (PLI) scheme

The government has allocated Rs 120 crores for the [PLI scheme to incentivise drone and drone component manufacturing](#). The incentive will be provided at a fixed rate of 20 percent of value addition for the next three years. The government has given several special relaxations to the PLI scheme for the drone industry compared to the PLI scheme for other industries.

4. Banning drone imports for commercial applications

As per the latest notification from the Directorate General of Foreign Trade (DGFT), the import of drones has been banned with exceptions provided for R&D, defence, and security purposes. This will help the Indian drone manufacturers to capture the huge domestic market potential. Import of drone components is free, and it is justifiable given the nascent stage of the drone component industry.

5. Abolishing drone pilot license requirement

Now, a remote pilot 'certificate' issued by a DGCA-approved drone school through the single window DigitalSky Platform is sufficient for operating a drone in India, and no remote pilot certificate is required for operating a drone up to 2 kg for non-commercial purposes.

Potential hurdles: what more needs to be done?

1. Ease of import

Most drone components are still imported. The process of importing some components, especially batteries, directly from origin countries (mainly China) is cumbersome because of the complexities involved in approvals, permissions, and order caps. Startups mostly order these through third parties which increases the cost of components. Shipping delay further accentuates these issues. DGFT's recent notification on drone component import is expected to solve major import issues, but that is yet to realise.

2. Development of drone and component manufacturing ecosystem

Any manufacturing ecosystem development is investment intensive and hence needs strong initial encouragement. While government funding and support (relaxation in taxes, infrastructure cost, and so on) is anticipated to accelerate the growth, the role of industry institutions is going to be critical as well. For instance, component manufacturing companies may need support from drone manufacturers in the development stage. Component manufacturing SMEs having funding issues can also be supported through technology hubs with shared facilities.

3. Ensuring safety

From the industry side, technological advancements should be there to support localisation and ensure safety. Drone manufacturers should ensure the redundancy of drones. Failure of the motor or battery should not lead to a free fall in an ideal case. Advanced algorithms, auto-pilot, and drone parachutes/airbags should be developed and implemented to ensure safety even in case of system failures.

4. Insurance

Currently, drone insurance needs a lot of paperwork. For custom drones, which is the case for most Indian startups, the process of obtaining insurance is highly cumbersome. The price of insurance is high too, which reduces the profit margin. A simpler and affordable insurance option is required to ensure every drone is insured.

5. Skill development: Drone pilots

DGCA, through the Indian Institute of Drones (IID) and approved drone schools, provide training and pilot certification. Though the government is facilitating this, there is a requirement for systematic capacity building to take care of the shortage. Also, there is a requirement for close monitoring of these certification processes to ensure the quality of pilots. The absence of a sufficient supply of quality pilots forces the operators to recruit and train pilots in-house. This leads to additional expenses, especially when service sites are sparsely located. If the supply of trained and certified drone pilots can match the demand,

operators can hire pilots on a need basis at work sites. This can reduce the service cost of drone operators, who can then price it lucratively to their buyers.

These are some initiatives that can accelerate the drone industry growth in India. With the present approach toward drone industry development, hopefully, India's presence will be felt in the global market soon.

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