UAS regulation in foreign countries: Alternatives to UAS operations in the United States.

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The “Drones” are coming...

- Wide range interest in Unmanned Aerial Systems (UAS) across the globe
- Rapid growth has been stymied in the U.S. due to slow progression of integration and privacy concerns
- U.S. may lose competitive advantage
- Other countries provide opportunities for potential research and collaboration
Many countries have been more open to UAS than the US
- Australia
- New Zealand
- Japan
- Brazil
- Mexico
- African nations

Others are more lenient, but still not “open”
- Canada
- UK
Two groups: “Unmanned Aerial Vehicles” (commercial use) and “model aircraft” (recreational use).

Model aircraft: less than 77.2 pounds, individually owned (no companies allowed) and not profit-seeking.

“Unmanned Aerial Vehicles” and require Special Flight Operations certificates.
Much of mainland Europe operates under the jurisdiction of the European Aviation Safety Agency (EASA),

- Need certification in any situation
- Certification granted on a case-by-case basis
- Requests proposing flight in unpopulated areas usually approved
* 20 kg (or 44 pounds) – considered “small unmanned aircraft”
  * Needs “Permit to Fly” classification, which is relatively easy to acquire
* Anything heavier or used for aerial photography requires a “Permit to Carry Out Aerial Work;” has tougher restrictions
  * E.g.: pilot qualification, design & construction certificates.
* Privacy less of an issue due to differences in laws
An “Unmanned Aircraft System” profit-seeking “air work,”
* Has requirements including pilot certification, but relatively easy to meet
* Otherwise “model aircraft, flown for sport & recreation and education,” which essentially are not regulated (except VFR required)
* Privacy loop hole – current law does not apply to individuals
New Zealand

* Very few limitations up to 25 kg (55 lbs)
* No operations near airports, above 400’, line of sight (over 15 kg [33 lbs])
Brazil

- Brazil has become a leading player in UAV use
- Uses UAVs to patrol its borders
- No laws that cover civilian use
No Civil Aviation Authority regulations on UAV users in Mexico.

Actually encourage UAV use.

UASs used to monitor drug trafficking and university research.
Japan

- UASs have been in use since 1980
- Mainly agricultural purposes – in response to aging farming population
Japan

* No common rules outside agriculture
* Relatively open but under development
* Recently used in Fukushima disaster monitoring
Africa

- Relatively open slate
- Continent wants drones
  - Agriculture
  - Wildlife monitoring
  - Medicine delivery
  - Military/enforcement purposes
  - Many places $$$ = yes
Opportunities

* Manufacturers should utilize lax rules in foreign nations to research and test their vehicles
* Research institutions should partner with schools or other organizations in countries with less regulation
* Research into legislation and rules in other countries should be used to assist in the development of those items here in the U.S.
  * Use success stories / avoid errors
References