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
Canada

- 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
Australia

* 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 has become a leading player in UAV use
- Uses UAVs to patrol its borders
- No laws that cover civilian use
Mexico

- No Civil Aviation Authority regulations on UAV users in Mexico.
- Actually encourage UAV use.
- UASs used to monitor drug trafficking and university research.
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