

Unmanned Aerial Vehicles

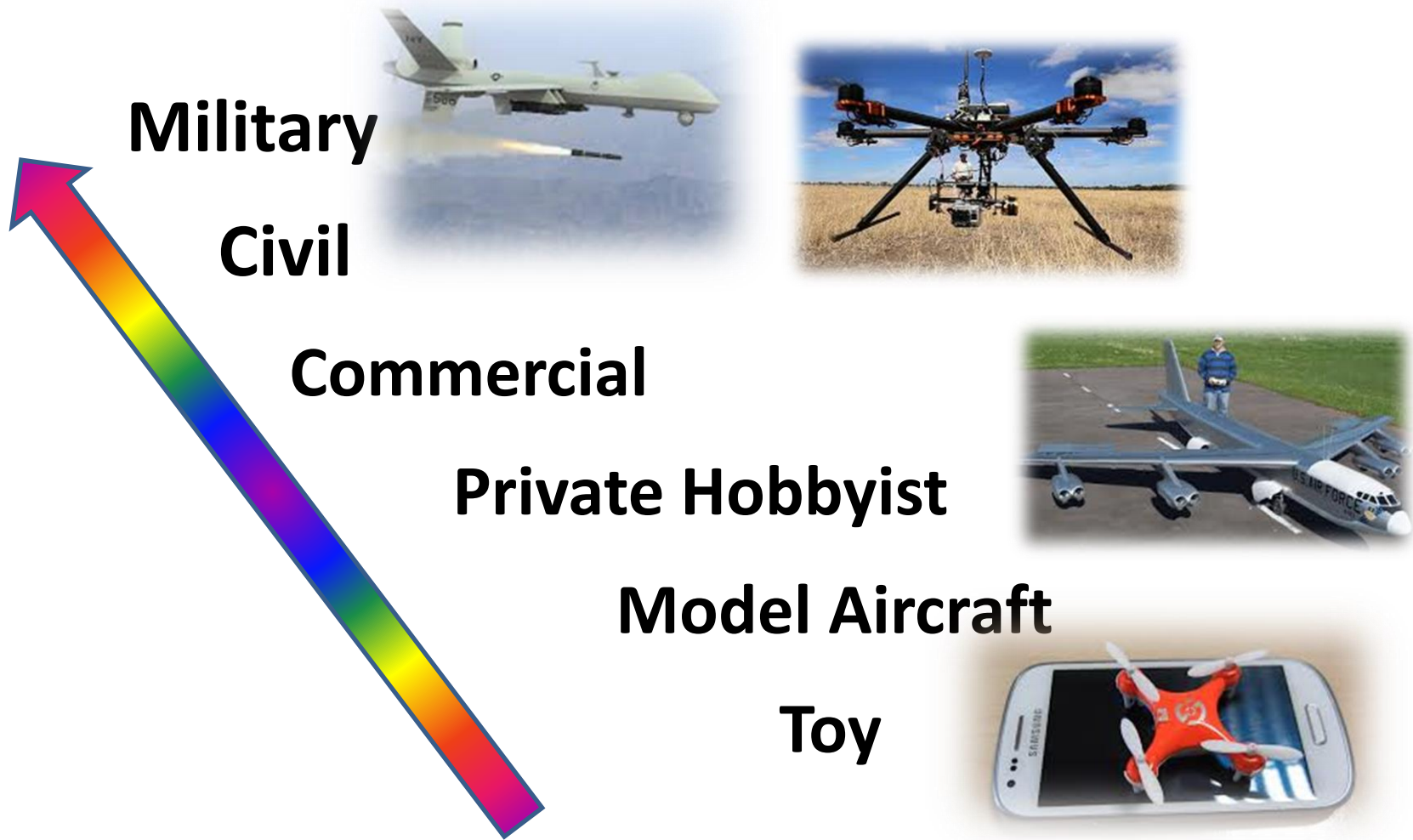
Drones

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Aug. 7, 2019

The Spectrum

“Drone” Encompasses...



What is “your personal airspace”?

Google Drone Backyard shootdown 

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[Man takes drone out for a sunset flight, drone gets shot down | Ars ...](#)
<https://arstechnica.com/.../man-takes-drone-out-for-a-sunset-flight-drone-gets-shot-do...> ▼
Apr 25, 2017 - Man takes drone out for a sunset flight, drone gets shot down ... next to a neighbor's home, where young children were playing in the backyard.

[Drone shot down over Norfolk | THV11.com](#)
www.thv11.com/features/drone-shot-down-over-norfolk/129539865 ▼
Apr 12, 2016 - What happens if you see a drone hovering over your back yard? What if your kids are playing in the back yard and you're worried someone is ...

[Is it OK to shoot down a drone over your backyard? - CNN.com](#)
www.cnn.com/2015/09/09/opinions/schneier-shoot-down-drones/index.html ▼
Sep 9, 2015 - (CNN)Last month, a Kentucky man shot down a drone that was hovering near his backyard. ... One company sells shotgun shells specifically designed to shoot down drones. ... Law enforcement can deploy these technologies, but under current law it's illegal to shoot down a drone, even if it's ...

Images for Drone Backyard shootdown



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[Report images](#)

[Is It Legal To Shoot Down Drones On Your Property? | Lifehacker ...](#)
<https://www.lifehacker.com.au/2016/.../is-it-legal-to-shoot-down-drones-on-your-proper...>
Nov 28, 2016 - A company called DroneShield recently released an 'anti-drone' ... But is it legal to shoot a drone down if it's on your own land and no projectiles are used? ... your fenced backyard and you didn't

Personal Airspace

“The landowner owns at least as much of the space above the ground as he can occupy or use in connection with the land.”

“We think that the landowner, as an incident to his ownership, has a claim to it and that invasions of it are in the same category as invasions of the surface.”

United States v. Causby, 328 U.S. 256, 264, 66 S. Ct. 1062, 90 L. Ed. 1206, 106 Ct. Cl. 854 (1946). (Military approach paths over a farm)

Aerial Surveillance

“In an age where private and commercial flight in the public airways is routine, it is unreasonable for respondent to expect that his marijuana plants were constitutionally protected from being observed with the naked eye from an altitude of 1,000 feet.”

“The Fourth Amendment simply does not require the police traveling in the public airways at this altitude to obtain a warrant in order to observe what is visible to the naked eye.”

California v. Ciraolo, 476 U.S. 207, 215, 106 S.Ct. 1809, 90 L.Ed.2d 210 (1986)

Emerging Business Cases



- **Low altitude/ small UAS offer next major opportunity to apply UAS technologies**
 - **First Responders**
 - **Precision Agriculture**
 - **Blight detection/ prec. control**
 - **Moisture detection**
 - **Harvest**
 - **Resource Survey**
 - **Mining**
 - **Electrical infrastructure**
 - **Water**
 - **Transportation infrastructure**
 - **Geospatial Mapping**
- **Future opportunities**
 - **Media**
 - **Logistics + more**