UNIVERSITY OF TWENTE.

THE MISSING LINK…

REGULATION & EXPERIMENTING WITH DRONES

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OUTLINE

1. Why regulate drones?
2. How regulate drones?
3. Current regulation & trends – NL & EU
4. Regulating drone experimentation
5. Final remarks

WHY REGULATE DRONES?

No rules: no constraints & no support!

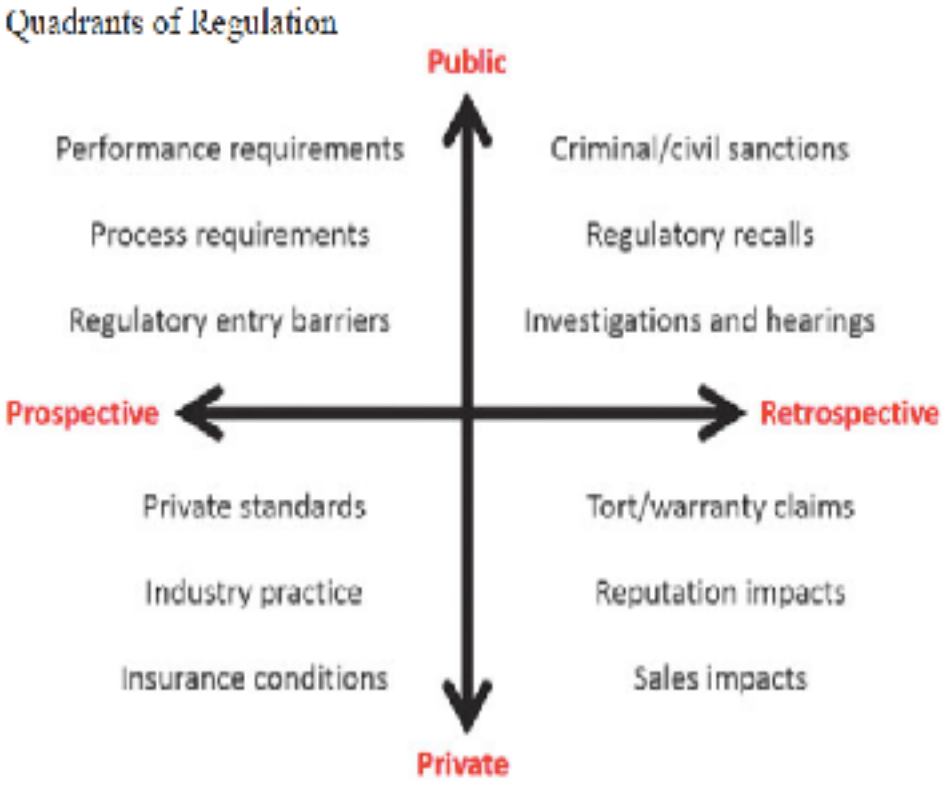
Regulatee (developer/user)

Legal protection

Legal facilitation

3rd Party

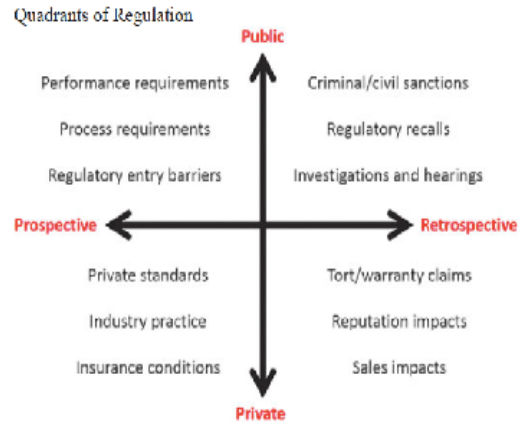
HOW TO REGULATE DRONES?



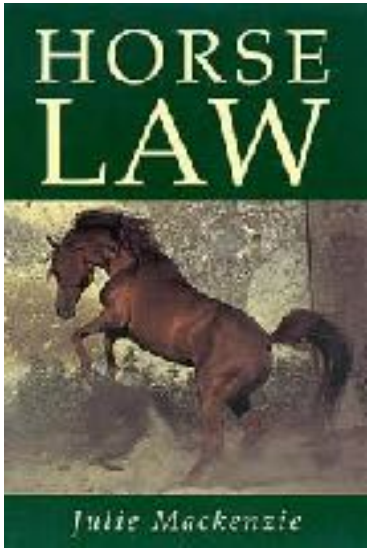
Operator — Object (Techno)

National — Supra/International

HOW TO REGULATE DRONES?



National ⟷ Supra/International

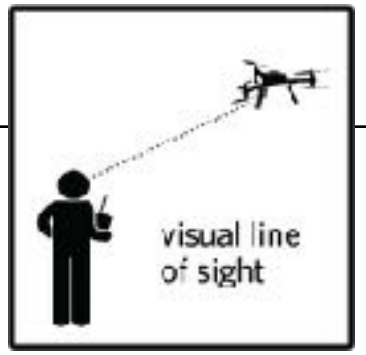


Specific Privat ⟷ Specific Public

Aviation ⟷ Robotics

CURRENT REGULATION & TRENDS

ESP. THE NETHERLANDS & THE EU



- **Aviation – key elements**

General: all aircraft:	Specific RPA: (?)
Competent pilot	Pilot on board? (B/E)VLOS)
Airworthy aircraft	Certificate/registration?
Capable air service	AoC?
Proper air traffic management	Captain? NOTAM?
Suitable airport	Anywhere?

Aircraft $\subseteq$ **Drone**

CURRENT REGULATION & TRENDS

ESP. THE NETHERLANDS & THE EU

Two interesting developments

EU: Prop. Amendment 2017-05A


European Aviation Safety Agency

Notice of Proposed Amendment 2017-05 (A)

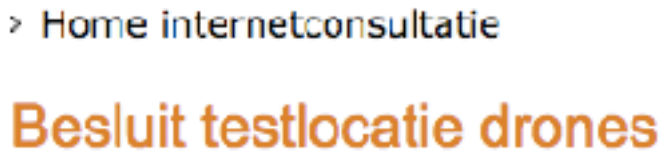
Introduction of a regulatory framework for the operation of drones

Unmanned aircraft system operations in the open and specific category

Art.12. Special zones

- risk mitigation
- exemptions to requirements

NL: Experimental Test locations


› Home internetconsultatie

Besluit testlocatie drones

Test and Experimental zones

- no pilot license
- non-certified RPA

REGULATING DRONE EXPERIMENTATION

- **Experimentation – Legally**
  - By derogation – exceptional permission
  - By devolution – decentralised regulation (OMC)
  - By open texture – interpretive practice

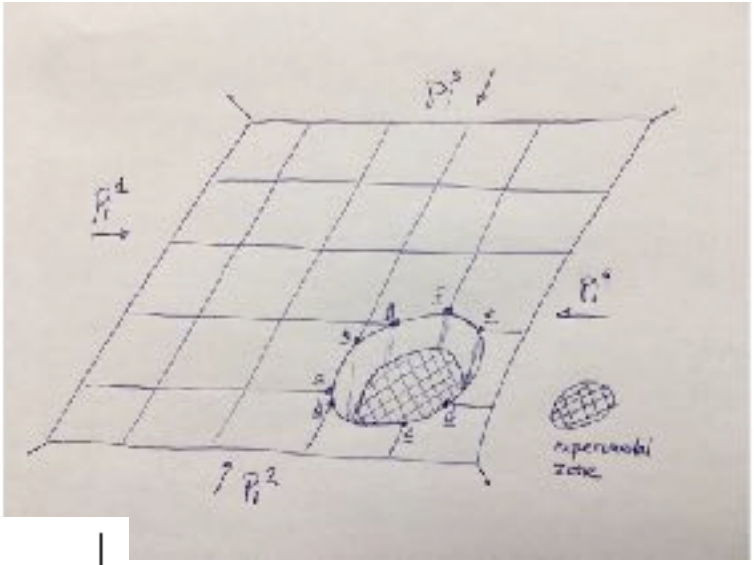
of technology

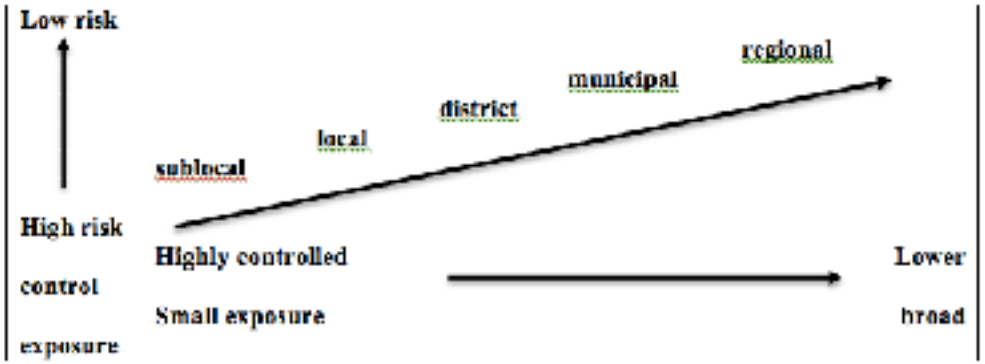
of governance

of regulation….

REGULATING DRONE EXPERIMENTATION

- **Experimenting by derogation**
  - Zoning
  - Sequential experimental upscaling





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FINAL REMARKS

- Proposed NL zones ⇔ EU/EASA exceptional zone
- Opportunities for …..
  - derogation!
  - co-regulation?
  - participation?
  - sequencing?
  - experimenting by devolution (‘OMC’)?
- .