

Drones: Beyond Visual Line of Sight

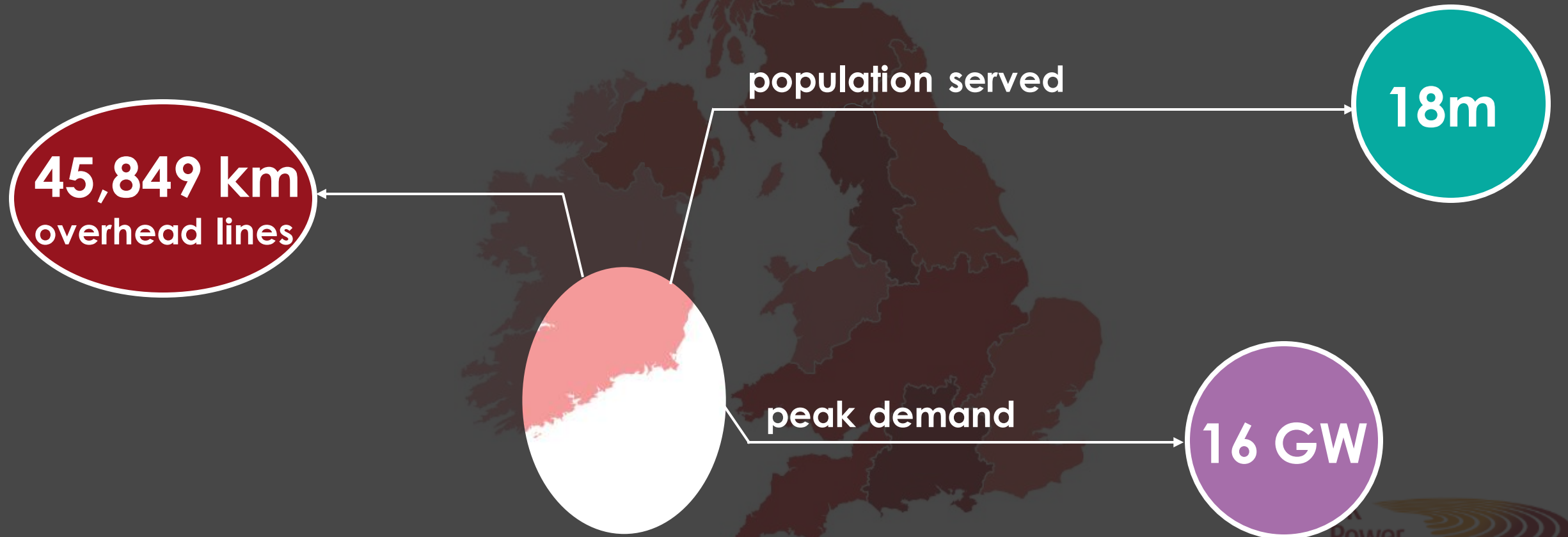
Rona Mitchell



Agenda

- Introduction
 - What we do now
 - What the future holds
 - How we get there
-
- Q&A

UK Power Networks



Our Vision



**Safest
Best employer**



**Most reliable
Best service
Most innovative
Most socially responsible**



Lowest cost



Looking after the network

- 45,849 km of overhead lines
- Inspection regime:
 - Towers (yearly)
 - Wooden poles (6 years)
 - Pre-outage and post-fault

Helicopter and foot patrol

Faults identified by helicopter



Leaning pole

Drones

Small

Safe

Quiet

Cheap

Green



Drone Pathfinder Programme



Department
for Transport

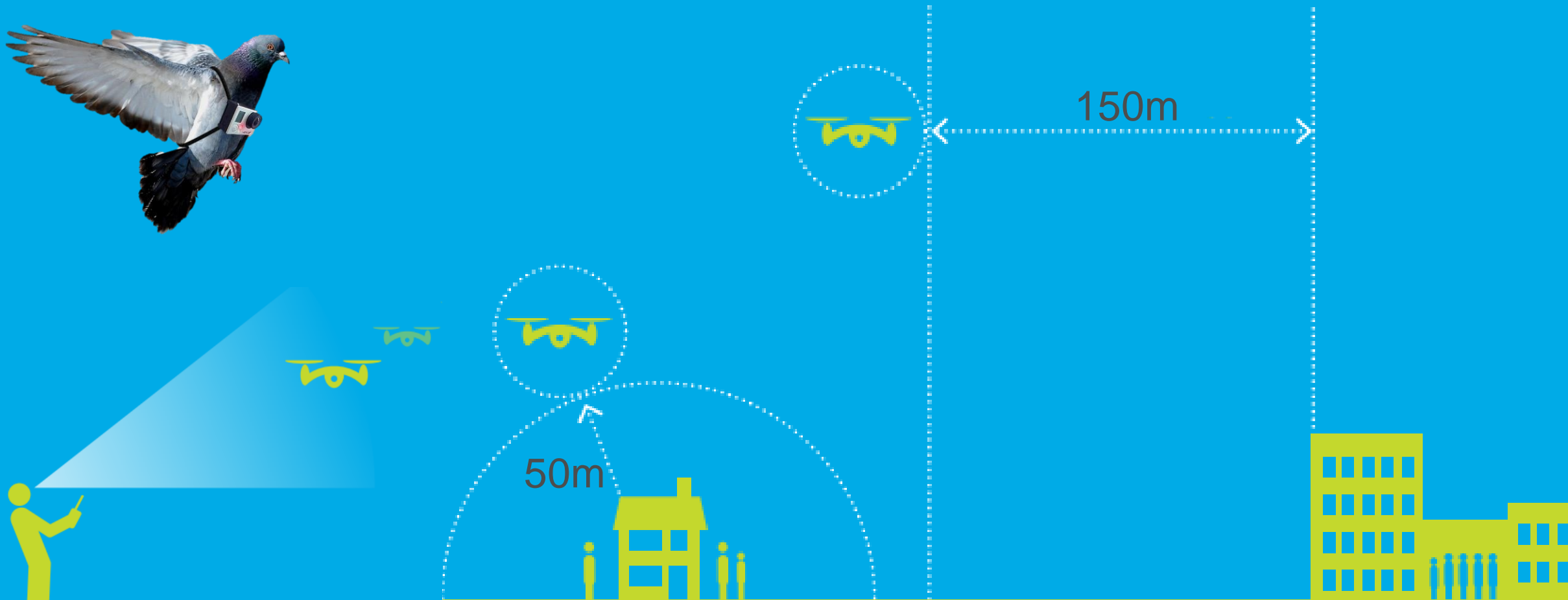


Department for
Business, Energy
& Industrial Strategy

CATAPULT
Connected Places



The Drone Code



Project: Above and Beyond

Funding Partners



Delivery Partners



Wales & West Utilities

- 2,362km of high pressure pipelines
- Fortnightly surveillance flights



Callen-Lenz



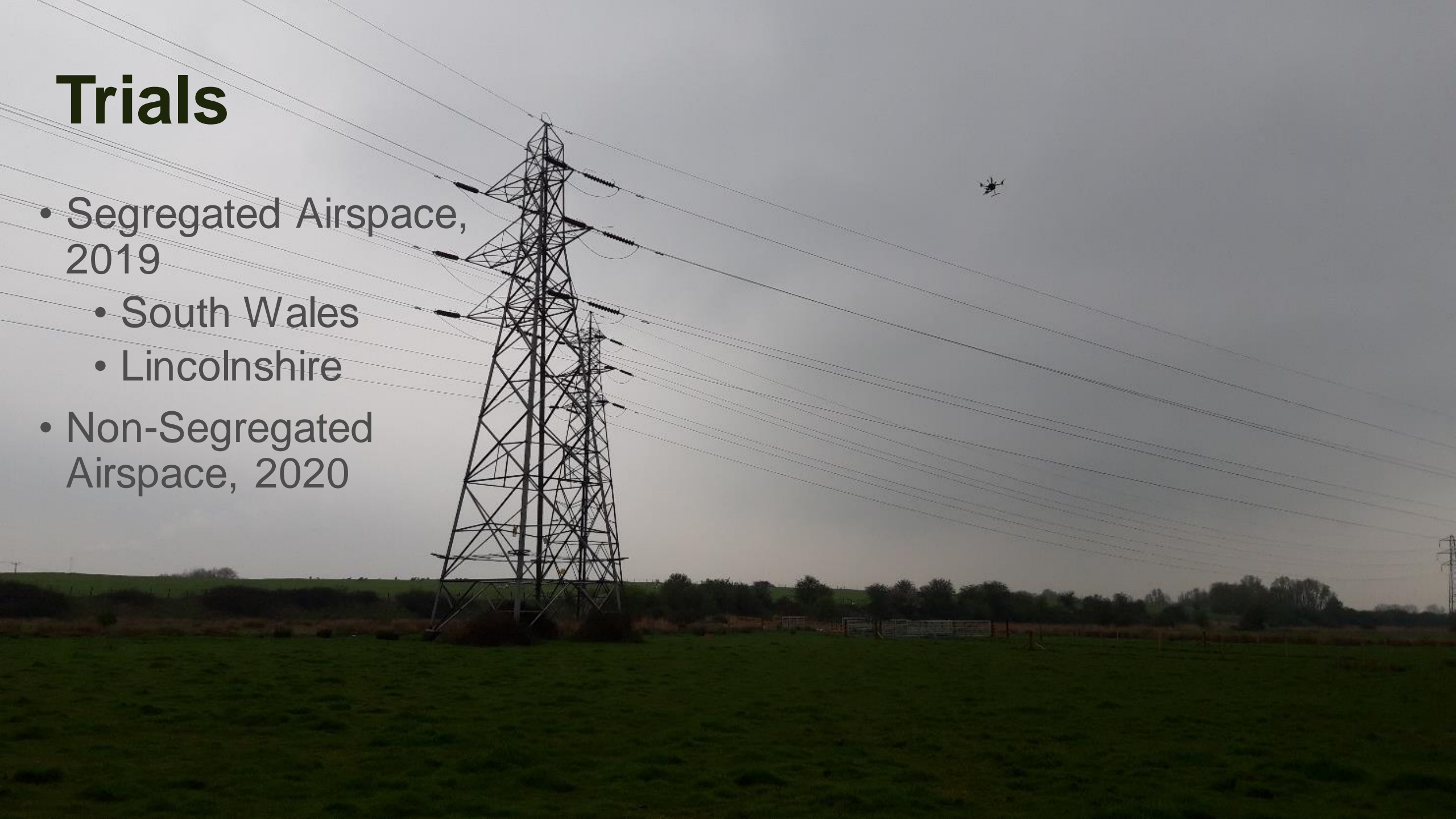
Project Outputs

- Concept of operations
- Operational planning software tool
- Technical business enablers
- Safety cases
- Acceptable to regulators, networks and the Connected Places Catapult



Trials

- Segregated Airspace, 2019
 - South Wales
 - Lincolnshire
- Non-Segregated Airspace, 2020



Case Study – Baglan Bay



Traditional survey



Drone survey

Case Study – Chepstow Bridge



Traditional survey



Drone survey

Photos from a helicopter



“Ivy pole”



Child's tricycle on HV line

Photos from a drone





Questions?



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