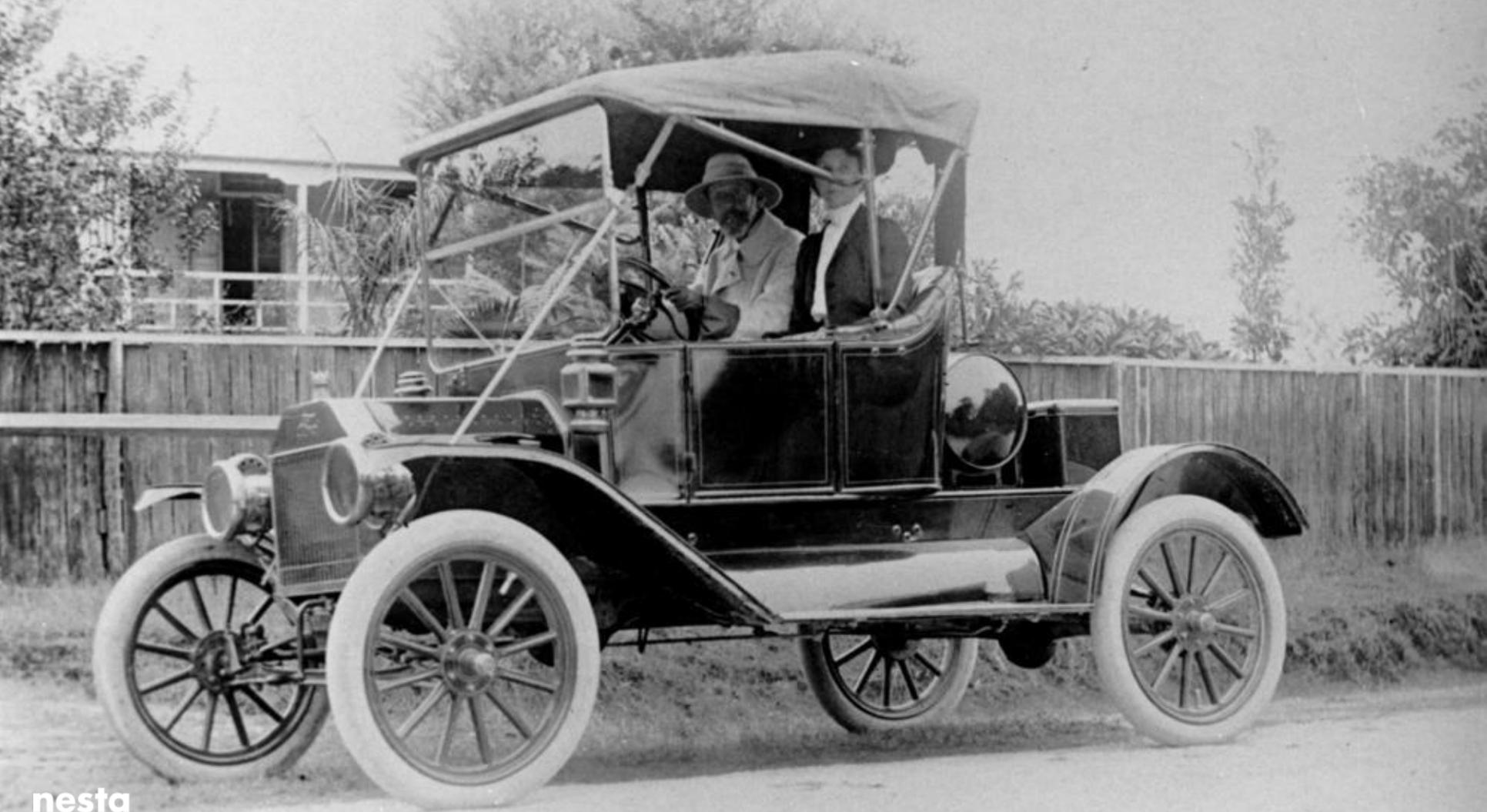


FLYING HIGH

A collaborative approach to shaping the future of drones in cities

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= infrastructure and regulation

Things that...

- directly support faster or more frequent cars
Motorways, slip roads, service stations
- eliminate rivals
Removal of light rail, restrictions on non-motor traffic
- look like they exist for other road users, but aren't
Cycle lanes, bus lanes, pedestrian underpasses, zebra crossings
- mitigate the harms of road traffic
C-charge, tolls, air quality monitoring, speed limits
- impose order on chaos
Highway code, parking regulations, speed cameras, road markings, signage

Drones today are like cars a century ago.

We have the Model T.

We don't yet have Hanger Lane.

The future is not set in stone.

We need to embrace many possible scenarios.

We need to engage broadly and deeply.

We can't just listen to vested interests.

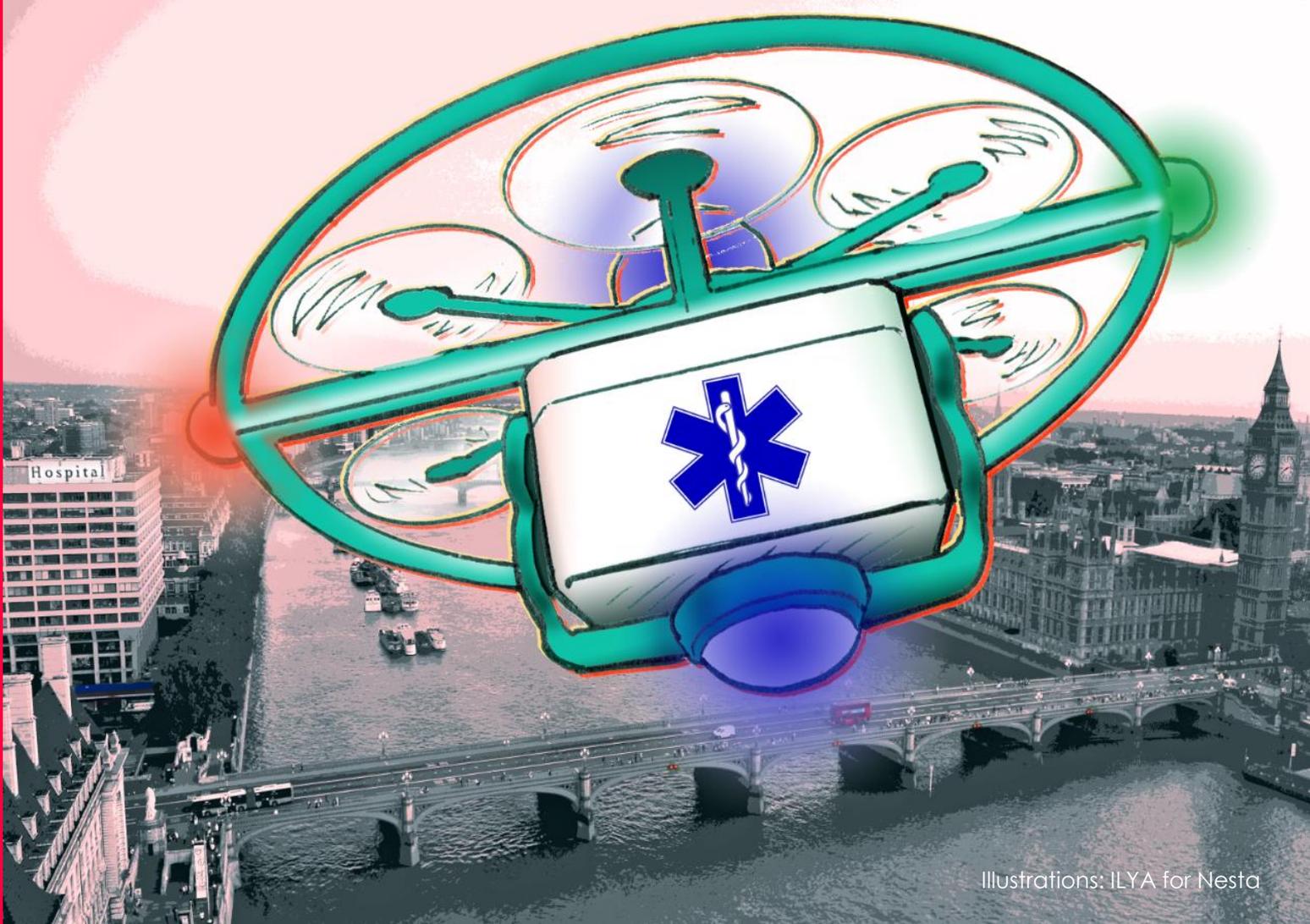
Progress is worth nothing unless it is shared by all.

Drones need to solve societal problems and be a driver for social equity.

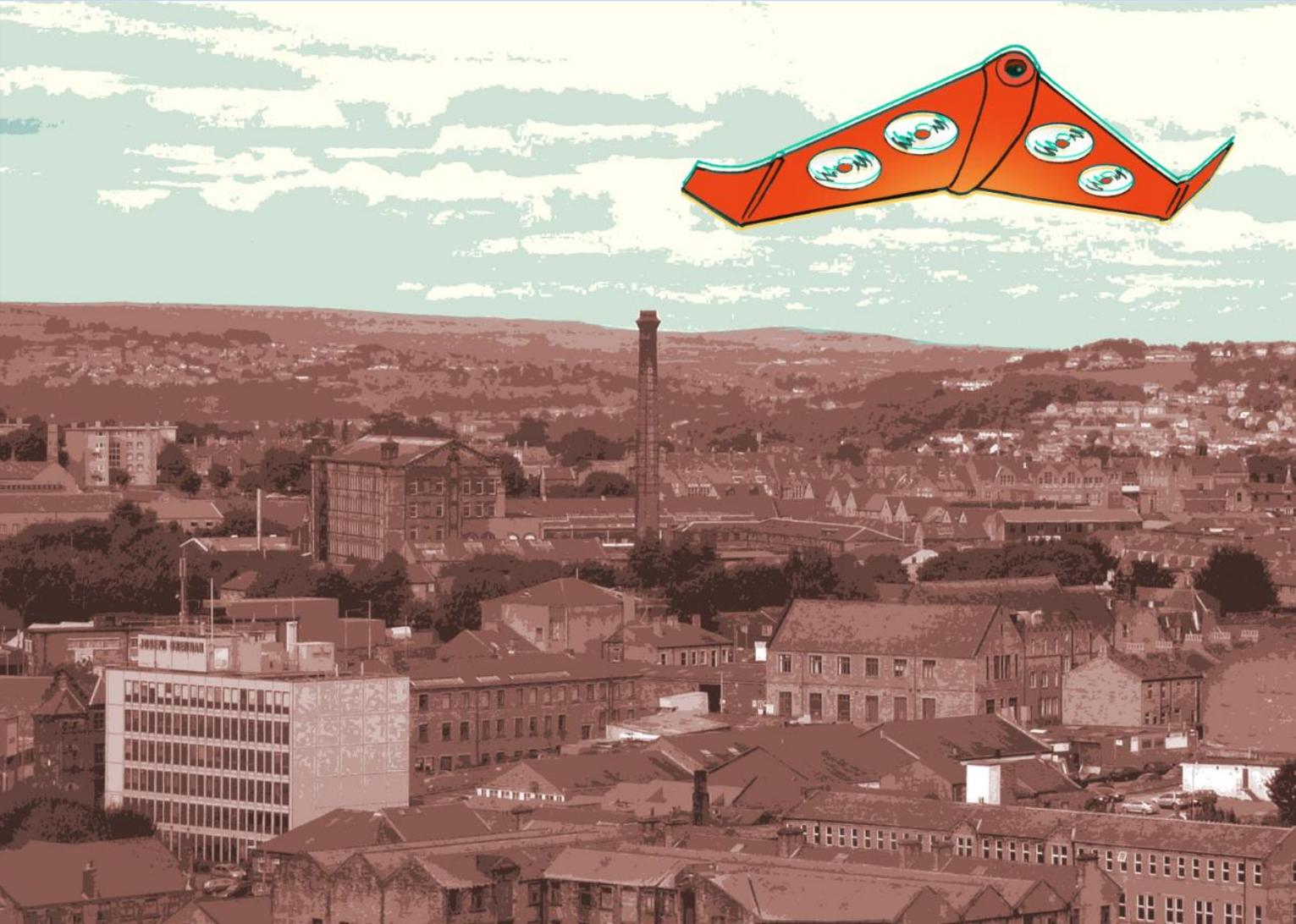
Our starting point: cities

- Drones are a very location-specific technology
- Cities are all different
- Public acceptance is unknown
- Many of the tasks that drones will be put to fall under the authority of local government
- They are the most complex, challenging environments
- They are where most of us live

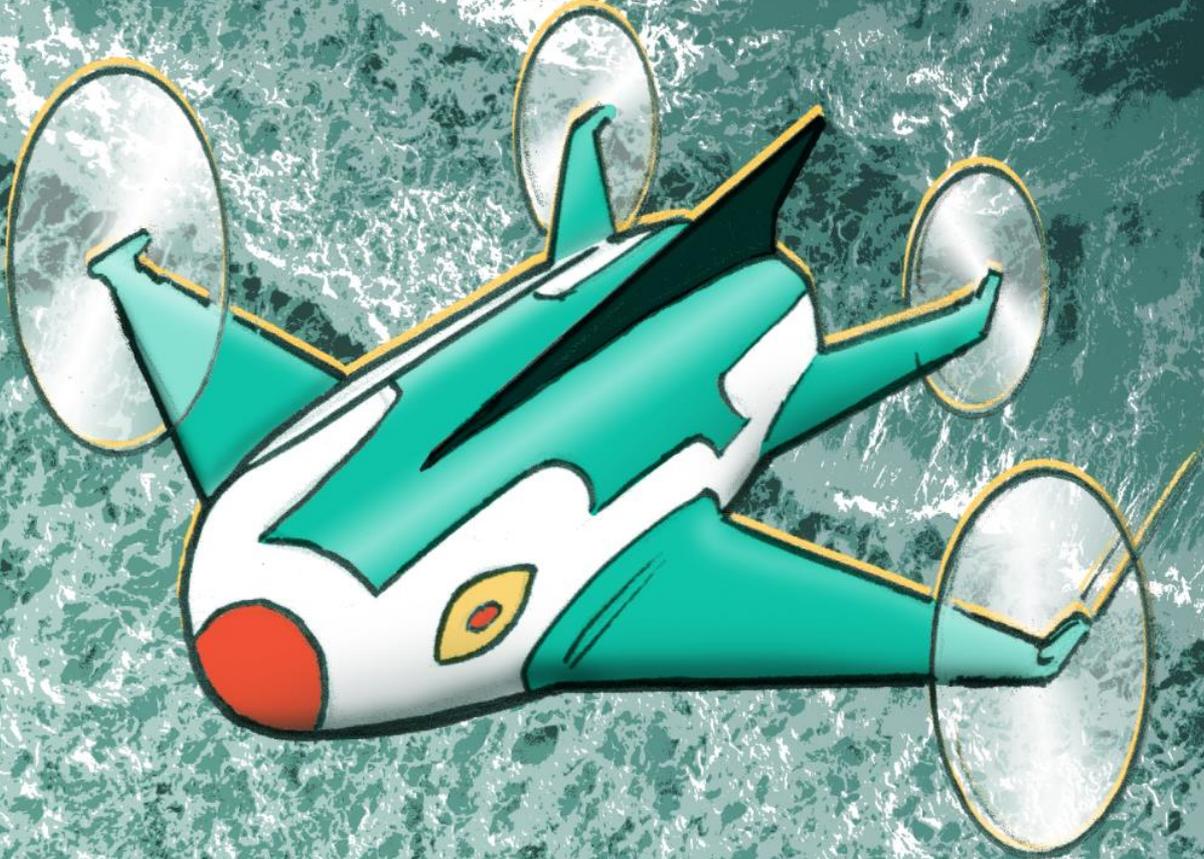
London: short-range medical logistics



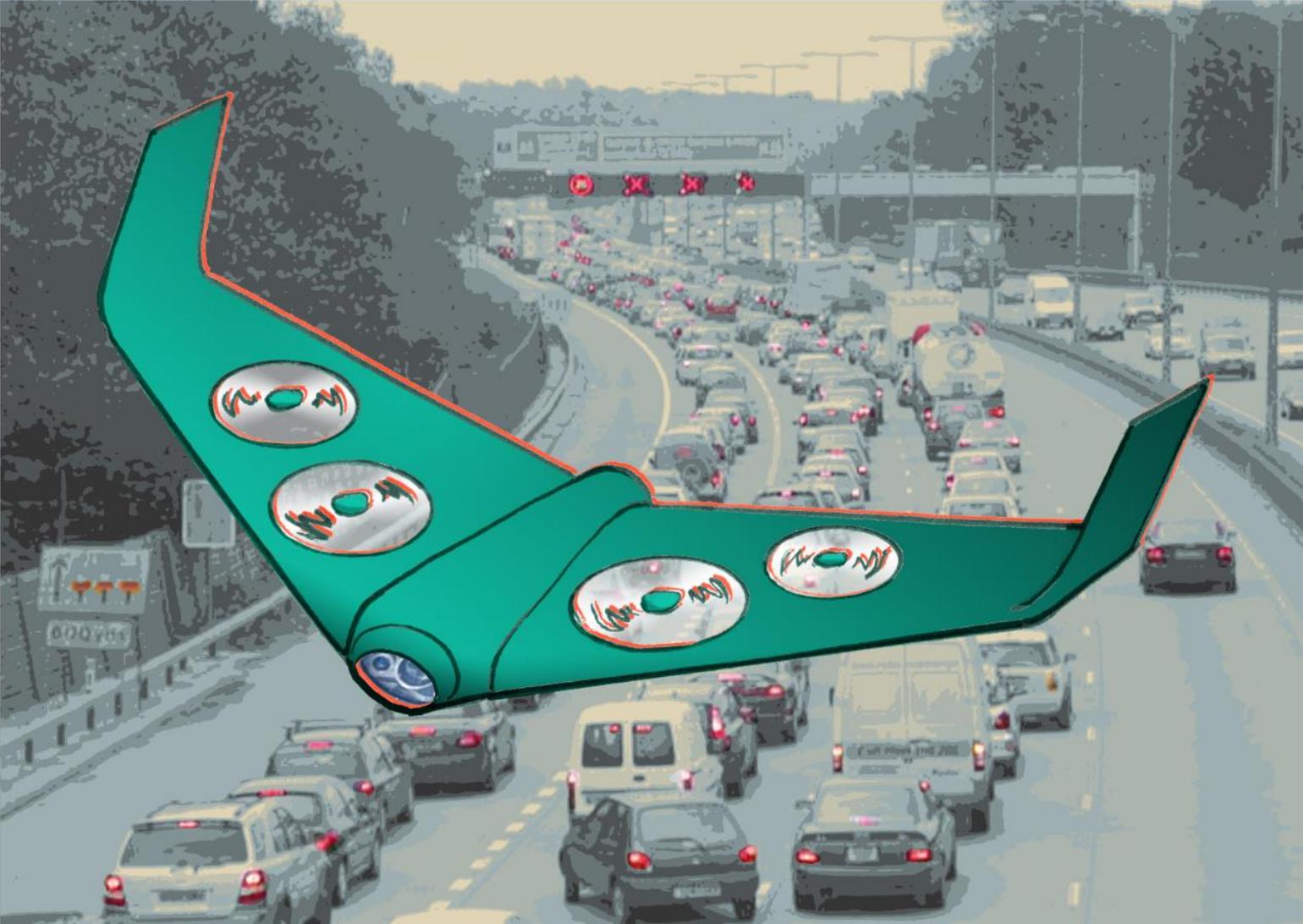
Bradford: fire
response



Southampton and
the Isle of Wight:
long-distance
medical logistics



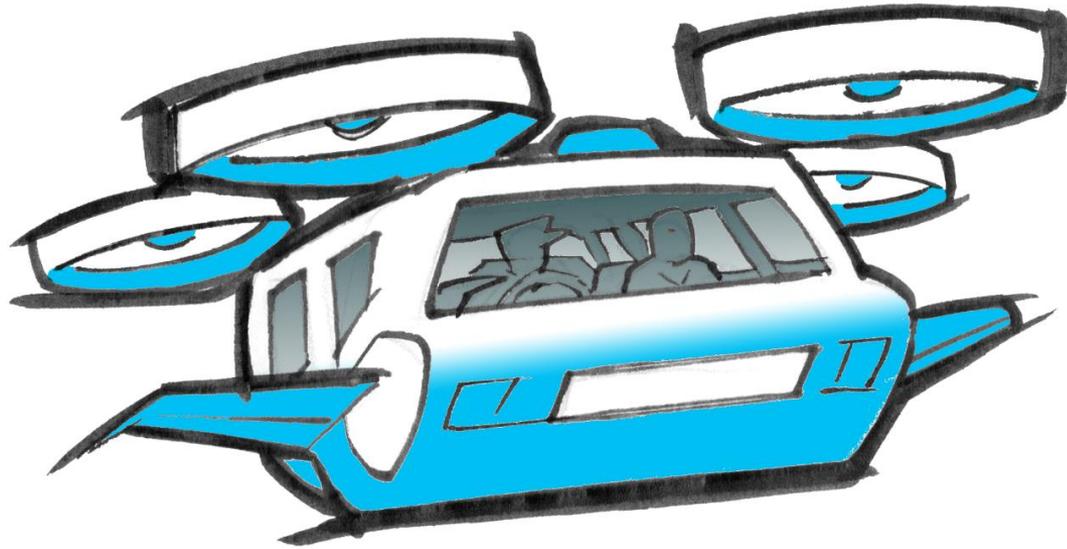
West Midlands:
traffic incident
response



Preston: infrastructure
construction

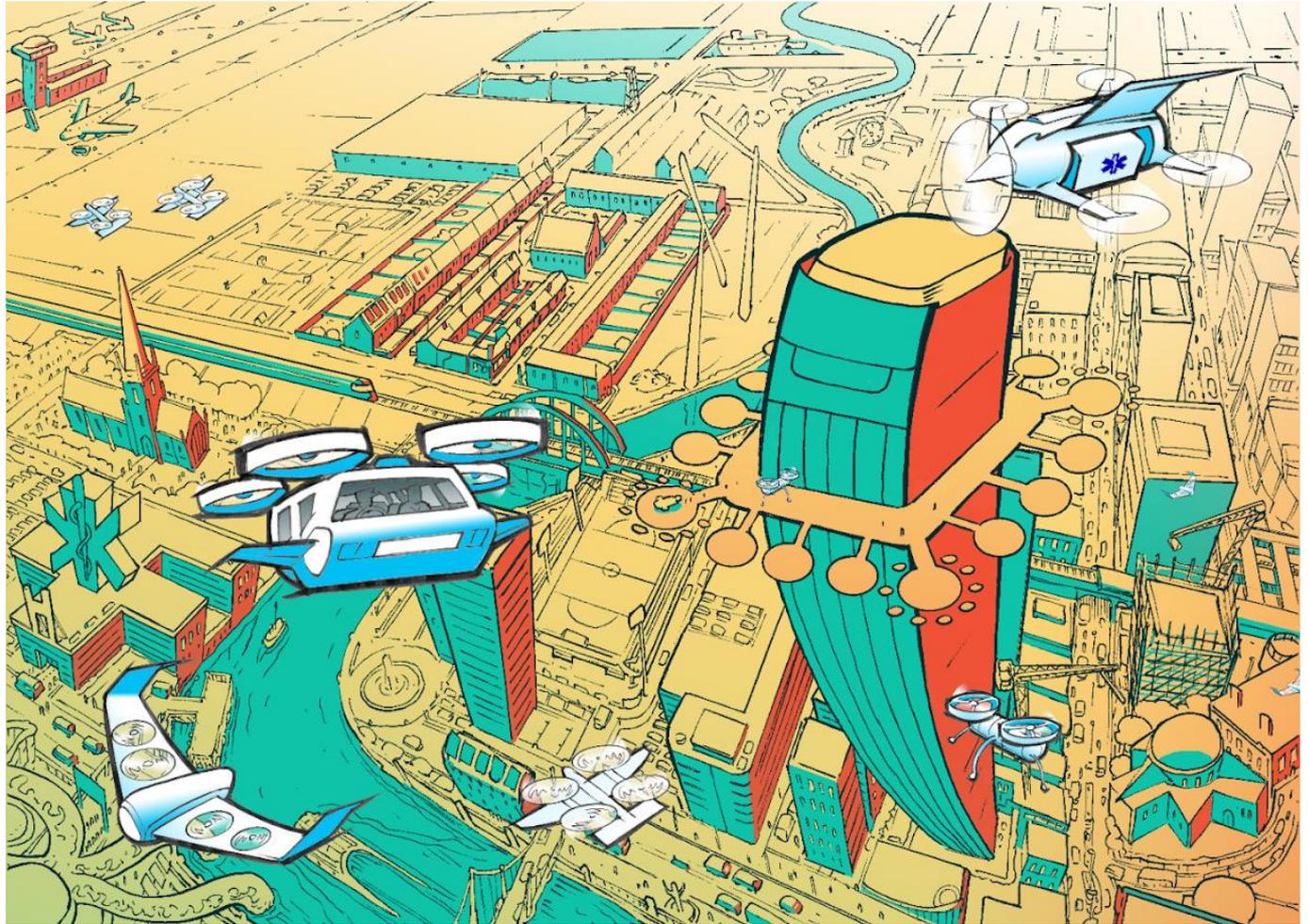


Taking a systems approach

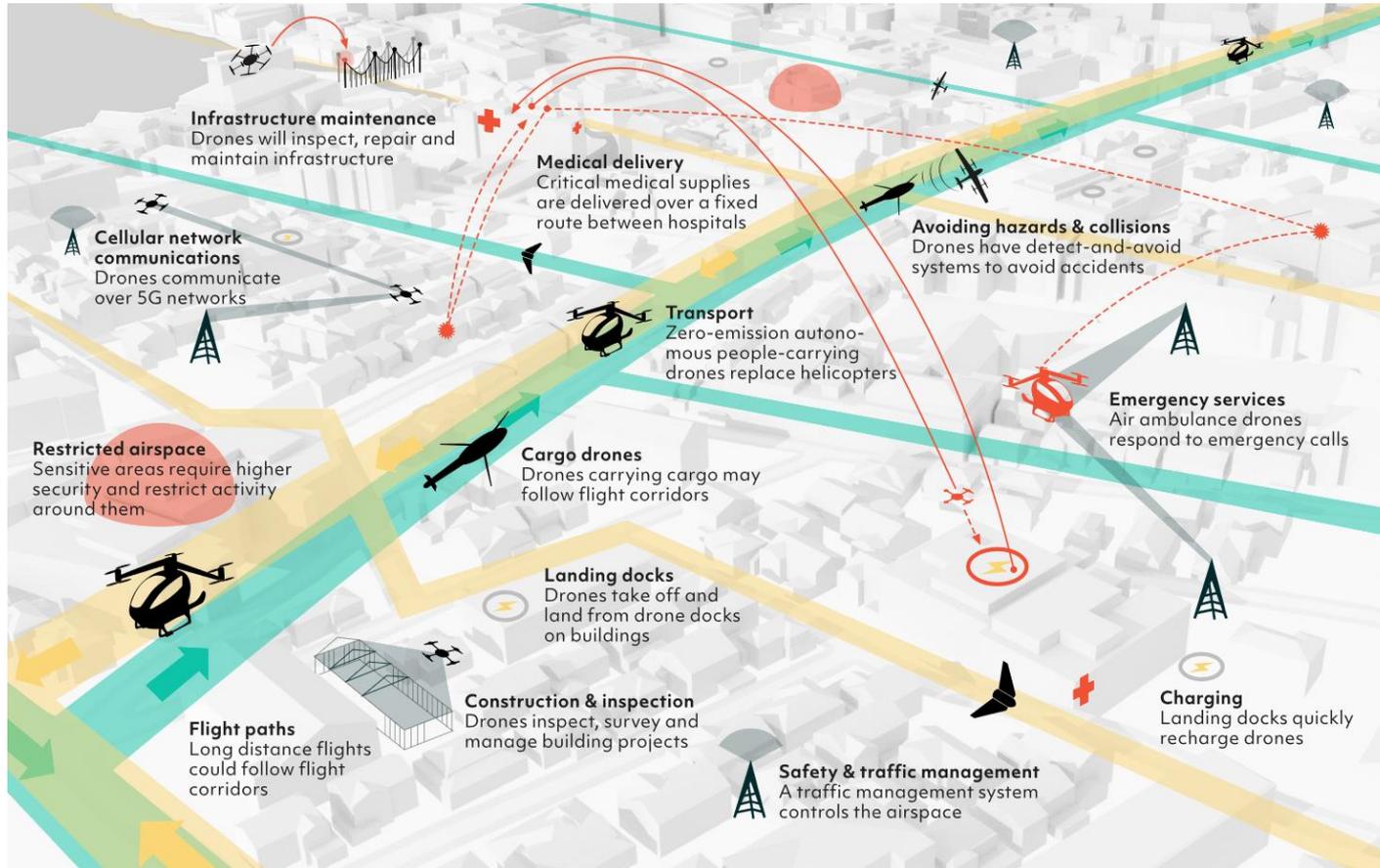


We think of this...

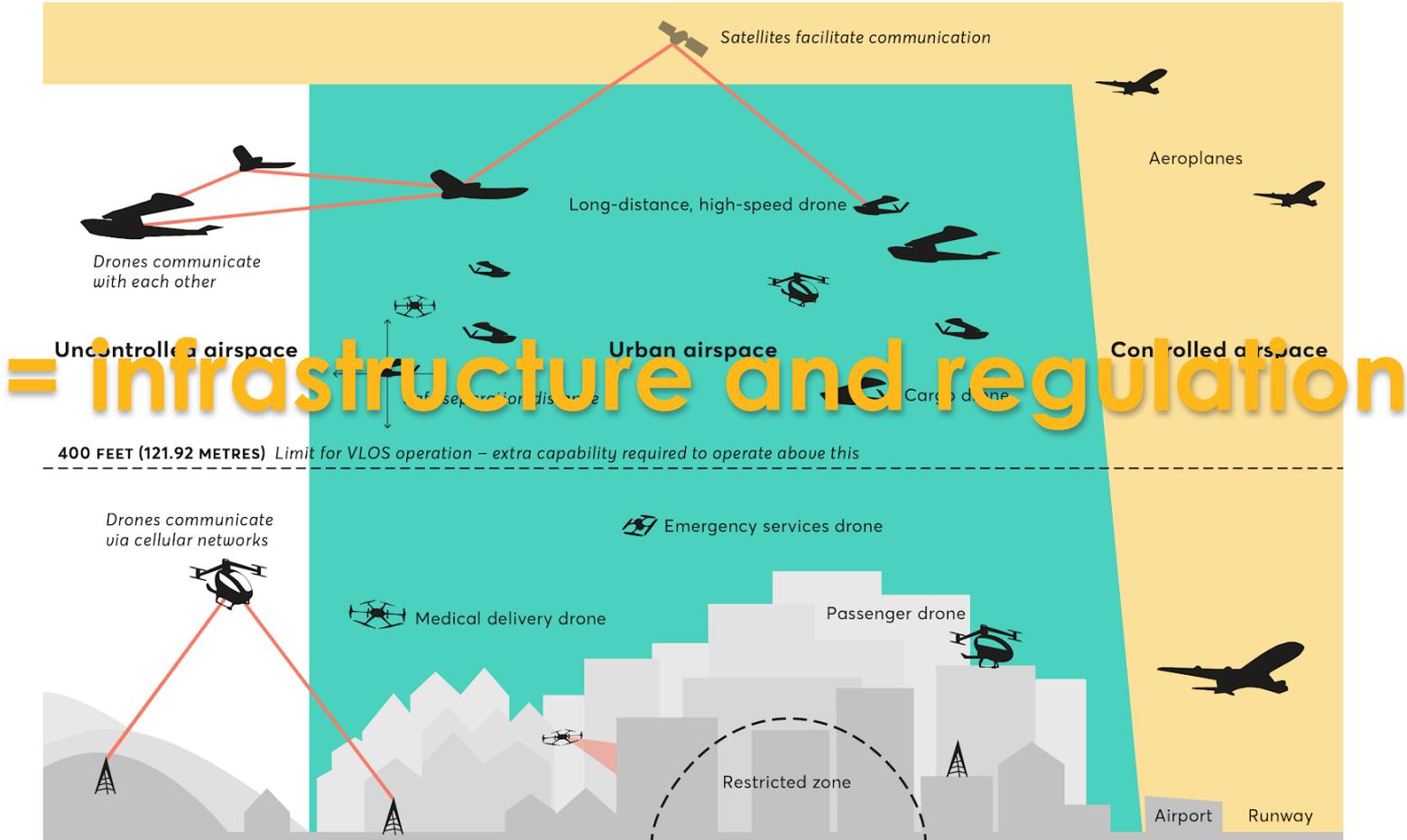
When
we
should
be
thinking
of this:



Airspace of the future could be complex...



And will need a new kind of management



This time, let's get things right

What the cities told us

Drones bring benefits to UK cities: they are worth promoting

Cities see an opportunity for drones to support public services. But:

- Public confidence is key
- There are technical and regulatory challenges to scale
- There needs to be a shared vision for the future

Public confidence is key

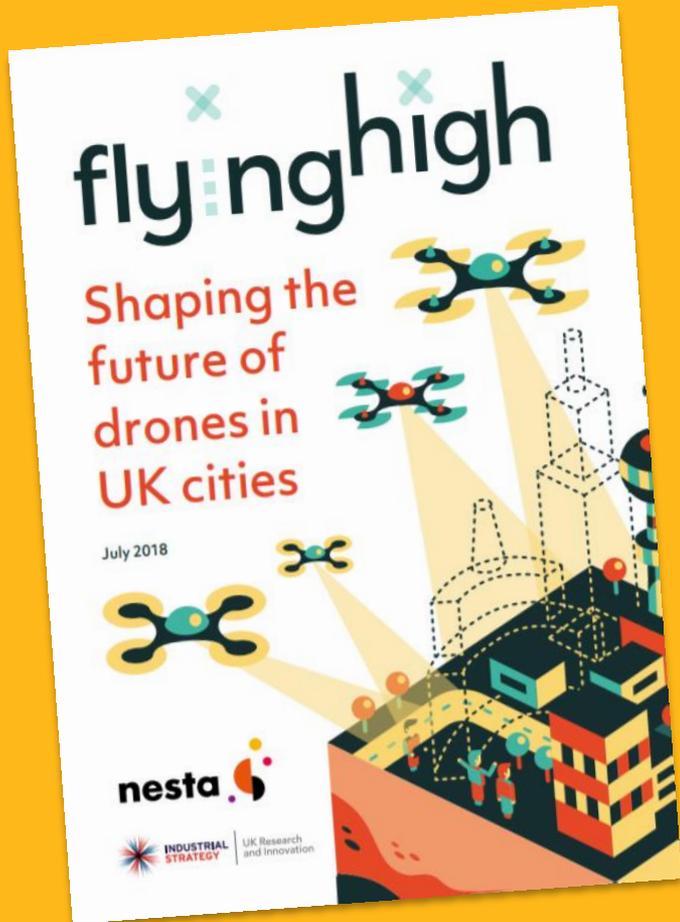
- New technologies can be contentious when they are introduced
- Real public engagement (not public relations, communications, education or promotion) is a critical enabler. It also makes sound business sense
- Without public support, the path to adoption is much harder

There are tech and regulatory barriers to scale

- Remotely-piloted and autonomous flight aren't quite ready for prime time
- Challenges are regulatory as well as technological
- One key question is how to (safely and legally) test and demonstrate the technology in urban settings

There needs to be a shared vision of the future

- There is no single player that dominates this place - we need to make an effort to broadly align objectives
- That means this isn't just a question of tech or aviation companies: cities, citizens, regulators, media, civil society...



Flying High findings report

nesta.org.uk/report/flying-high-challenge-future-of-drone-technology-in-uk-cities/

Nesta Challenges exists to design and run challenge prizes that help solve pressing problems that lack solutions.

We shine a spotlight where it matters and incentivise people to solve these issues.

We are part of the innovation foundation Nesta.



Our proposal for challenge- driven innovation

- **Urban drone development led by cities** but with strong support from public services, central government, stakeholders and regulators, and meaningful public engagement
- **Create testbeds** in which drone services can be developed, with the facilities and regulatory approvals to support them
- **Align stakeholders** and broaden the city network



Thank you

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