End user Advancement and Sharing Exchange (EASE)

2025 paper // Part 2 | Pathways forward

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DRAFT FOR STAKEHOLDER FEEDBACK

ARPAS-UK The UK Drone Association · AirWards · Ajuno

Executive summary

As highlighted in part 1, global dynamics create a promising economic landscape for the UK drone industry. However, critical challenges for drone end users and the industry more widely mean that **now is a crucial point to enable scalable, sustainable models for the UK drone ecosystem.**

Beyond Visual Line of Sight (BVLOS) drone capability is often seen as the capability that will enable an industry tipping point. However, part 1 highlighted a common theme: regulations and funding remain critical challenges for the UK drone ecosystem. Commercially sustainable, routine BVLOS operations at scale are expected to take at least another five years. This is arguably too long to sustain an industry without significant and ongoing end-user funding, which won't come for BVLOS capabilities until they are proven.

What's exciting is that we are only engaging the tip of the iceberg, with a potential 100x market growth in the coming years. But how many will survive the journey there? We should continue to drive forward BVLOS, enabling impactful drone uses worldwide, though we also **need to scale the multitude of applications that can have an impact now**.

1. **Maximise VLOS** – Expand current and scale new applications, delivering internal inspections and tactile solutions like Non-Destructive Testing & spray capabilities.
2. **Enhance data value** – Ensure drone data is well integrated within organisations in an accessible form, utilising AI analytics to maximise insight.
3. **Embrace autonomy** – Increase levels of automation in planning and operations, boosting efficiency, output, and impact.
4. **Focus on returns** – Communicate clear 'return on Investment' to senior buyers in language they recognise and respond to.
5. **Establish shared vision –** Collaborate as the UK drone ecosystem to refresh a 10-year vision for the drone-enabled world we are creating.

Expanding current applications will pave the way for more complex cases, build desire and impact within organisations, and establish procurement routes for scale. These steps are crucial not only to sustain the UK drone ecosystem past a tipping point, but also to lay the essential building blocks for more complex operations like BVLOS to scale.

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Introduction

This paper

This paper draws on recent activity and key insights from leading drone end users within EASE, a national drone end user group. It's the second of two parts, building on the end user appraisal and providing pathways forward to accelerate drone impact.

Changing global landscape

As highlighted in part 1, Global dynamics have pushed drones to a transformative point in warfare, with increased Defence spending and 10% of MOD equipment budgets allocated to drones and AI. Combined with investment in electrification, renewables, and transport, this creates a promising economic landscape for the UK drone industry.

End user appraisal

Part 1, captured the current state and perspectives of UK end users. It highlighted:

- **Critical challenges** - regulations and funding gaps were highlighted as most critical end user challenges, with senior stakeholder buy-in tied closely to both.
- **Key cross sector opportunities** - were highlighted from leading end users on themes of inspection, emergency response and delivery.
- **Maturity benchmarking** – with leading end users sharing insights and revealing that most feel they are at the beginning of their journey with much to develop.

These provide the basis of the pathways forward outlined in this paper.

Now is a critical point to enable scalable, sustaining models for UK drone ecosystem

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5 years to BVLOS at scale

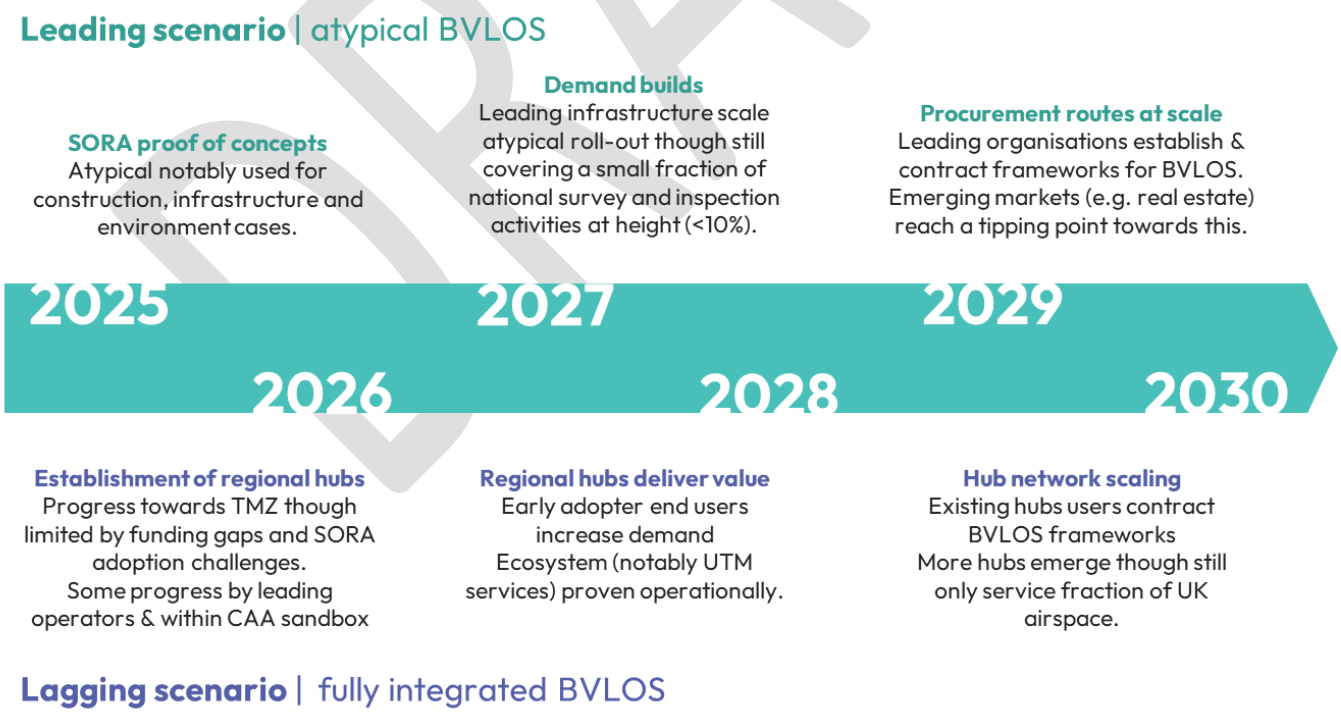
BVLOS is often seen as a critical capability for drones, indeed it features heavily in almost all drone projects within the UKRI's £300million Future Flight Challenge. However, part 1 highlighted a common theme, that regulations and funding continue as critical challenges for the UK drone ecosystem over the last few years.

The UK CAA has a strong programme forward and £16.5million now committed to support this type of capability. This section reflects on the current trajectory and CAA programme commitments; it's reasonable to expect commercially sustainable, routine BVLOS operations across the UK, 'at scale', to take at least another five years.

BVLOS scenarios forward

Last year the Future of Flight Action Plan outlined a three year route to BVLOS at scale. However, a changing government has meant a pause on commitment to the timelines within this, expected by most to be 2028 at the soonest. It can take one to three years for larger public companies to establish necessary frameworks and procurement routes at scale, and they will only do so once the capabilities are demonstrated.

The below timeline outlines are likely route forward towards the realisation of BVLOS at scale. It does so considering the CAA's BVLOS streams definitions, considering the atypical cases likely to scale sooner and the fully integrated BVLOS to follow.



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Between these leading and lagging scenarios in complexity terms lies 'Integrated, low-level BVLOS over urban areas', i.e. Apian and Wing's London Health Bridge Project, and the police's Drone First Responder trials, will likely be realised at scale somewhere between the above two scenarios.

What does this mean?

Most of the projects funded through Future Flight Challenge will need a sustaining funding route until end user procurement of BVLOS capabilities scales. Many drone industry organisations saw larger private funding 3-5 years ago, on the basis of starting to deliver returns to investors now - though arguably they are only halfway there. With the current level of focus primarily on BVLOS based models, it's likely many will not survive the journey to a sustainable 'at scale' end user funded model.

We must scale and deliver more impactful VLOS and atypical BVLOS capabilities, alongside continuing to scale towards fully integrated BVLOS.

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Tip of the iceberg

We are still only engaging the tip of the UK drone market.

EASE has 20 or so leading end users. In rough terms, there are probably 200-300 or so in the UK's 'early market', i.e. currently regularly using drone services, and perhaps 2000-3000, maybe more, in the mainstream market. As highlighted is part 1, even the UK's most advanced drone end users feel they are comparatively immature and early in their exploitation of drone capability. When you consider the percentage of drone use now in leading end users, compared with the traditional methods they are replacing, it suggests we are capturing just 10-20% of the potential impact that we might see in say, 10 years.

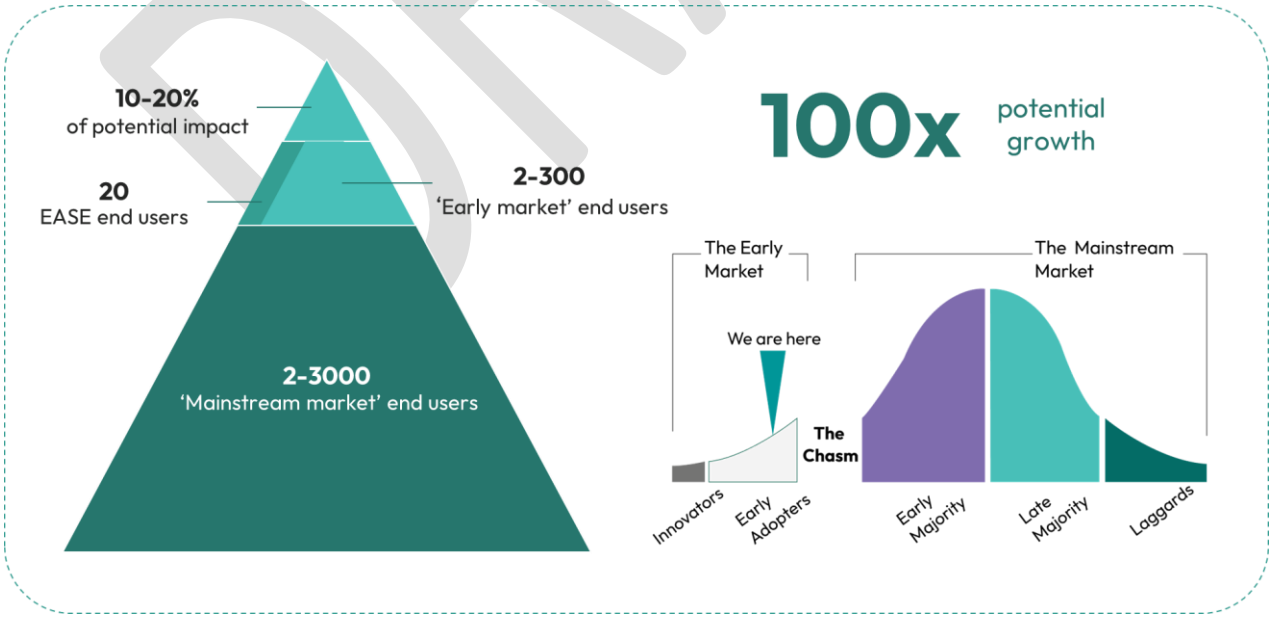
100x growth?

What if we can scale to reach a tipping point in the coming years, and the main market over the next 10 years? Drawing on the above factors, that could see potentially 100x growth on the market today, servicing 10x more new end users as an industry and expanding service impact again by 10x or more.

PwC's Skies Without Limits paper cited £45bn contribution to the UK economy by 2030 but has received increased questioning over recent years as the market struggles to grow. However, when you consider the above, what's to say the numbers aren't still achievable?

How many will survive?

A critical question remains though, with funding an increasingly critical challenge, and a number of 'leading industry names' in the UK and internationally already falling into administration, how much of the industry will survive the journey to the tipping point?



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Ask to government

In the final section of the February 2025 EASE workshop, expanded on in part 1, the community shared 'asks for government' to address, moving us towards a sustainable growth. Their responses (see appendix) can be summarised across the five themes below and feed in, alongside wider themes highlighted in part 1, to the route forward.

1. **Regulatory and policy support**
    - Streamlined regulations and longer-term permissions for Beyond Visual Line of Sight (BVLOS) flights.
    - Call for dedicated test areas with minimal regulatory hurdles to accelerate technology development.
    - Government-defined UTM (Unmanned Traffic Management) systems and electronic conspicuity requirements.
2. **Funding and commercialisation**
    - Requests for increased funding, including commercialisation support *(e.g. Future Flight Challenge Phase 4, or equivalent and tax incentives referenced.*
    - Need to increase maturity of industry to provide more resilience to end users.
    - Publicly funded projects should make data available for industry-wide benefit.
3. **Collaboration and coordination**
    - More leadership and coordination between industry, regulators, and public sector stakeholders.
    - More collaboration via pilot projects and shared data initiatives.
4. **Education and workforce development**
    - Support for educational programs, apprenticeships and initiatives, growing the industry, whilst driving adoption.
5. **Use case prioritisation and industry vision**
    - Government to clarify priority drone use cases.
    - Desire for a clearer national vision of the drone landscape, including operational corridors, altitudes, and overall strategy.

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How do we get there?

Now is a critical point to enable scalable, sustaining models for the UK drone ecosystem, but what are the paths forward to get there?

We can and should continue to drive forward BVLOS in the UK, working to enable the cases that are demonstrating impact around the world. However, we should also do more to scale the multitude of applications that can have impact now.

1. **Maximise VLOS** – Expand current and scale new applications, delivering internal inspections and tactile solutions like Non-Destructive Testing & spray capabilities.
2. **Enhance data value** – Ensure drone data is well integrated within organisations in an accessible form, utilising AI analytics to maximise insight.
3. **Embrace autonomy** – Increase levels of automation in planning and operations, boosting efficiency, output, and impact.
4. **Focus on returns** – Communicate clear 'return on Investment' to senior buyers in language they recognise and respond to.
5. **Establish shared vision –** Collaborate as the UK drone ecosystem to refresh a 10-year vision for the drone-enabled world we are creating.

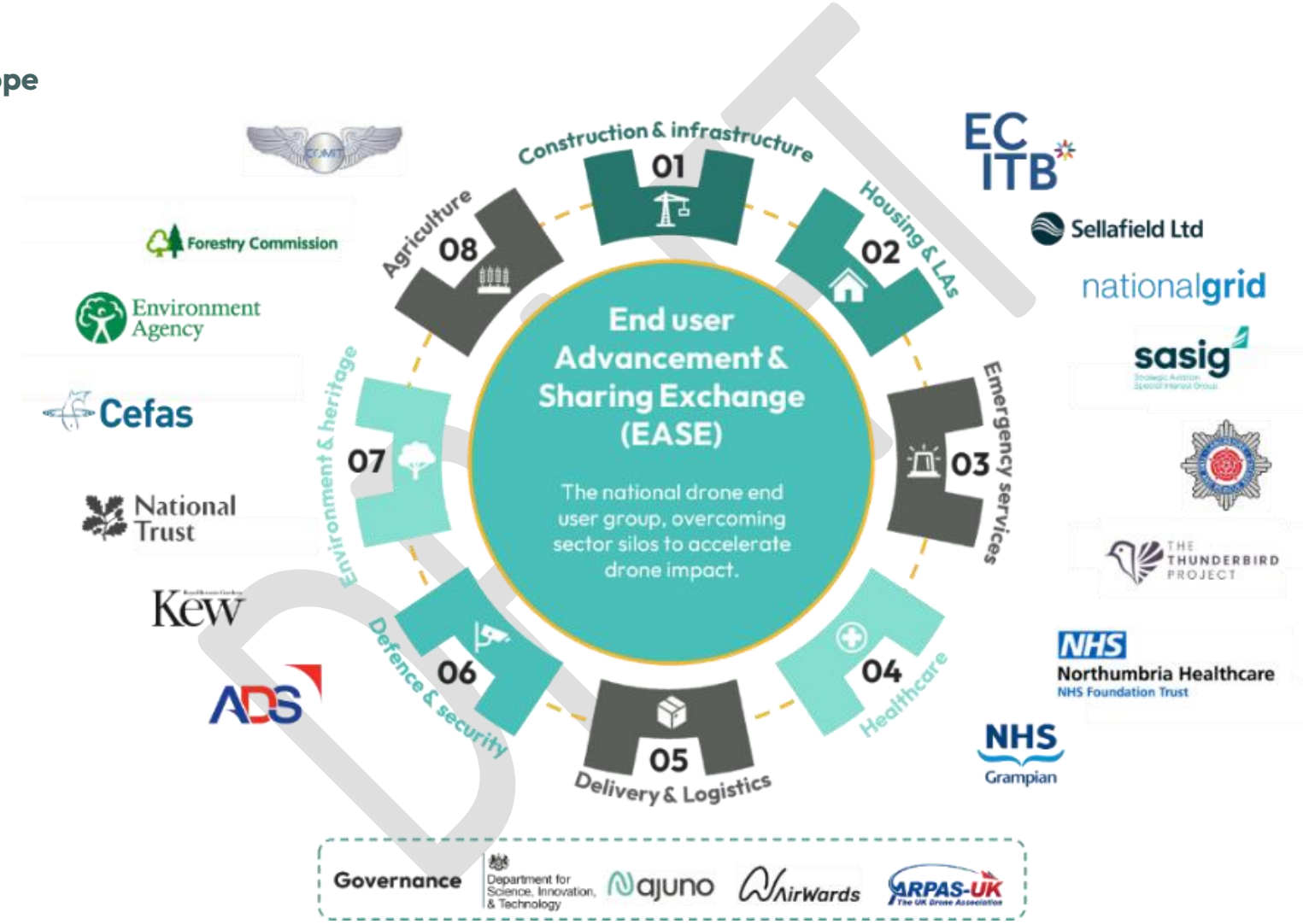
Expanding on current applications will pave the way for more complex cases, build desire and impact within organisations, and establish procurement routes for scale.

All these are not just crucial to sustaining a UK drone ecosystem past a tipping point, but progress the essential building blocks for more complex operations, like BVLOS, to scale.

We welcome your feedback and action.

Appendix

EASE scope



EASE overview

End user Advancement and Sharing Exchange (EASE)

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1. End users are the gateway for the drone industry to deliver value to society.
2. To unlock the return on significant investment in the drone industry we need to address critical challenges constraining drone use.
3. EASE draws together a cross -sector community of end users, overcoming silos.
4. EASE led initiatives address critical challenges and form the basis of an enabling, industry wide commercialisation programme.
5. The resultant *ease* of drone adoption will unlock the mainstream market - crossing the chasm, scaling the value flow from the drone industry to society and enabling exponential drone returns.

Drone industry → 1 **End users** → **Society**

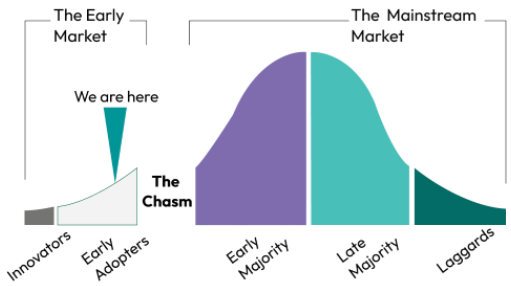
2 Commercialisation programme

Key challenges	Example initiatives
Senior stakeholder buy-in *Informed leadership, confident to adopt drone solutions.*	• Impact focused success stories • Adoption guides & senior stakeholder events
Local Bylaws & regulation *Local officials, using and enabling lawful commercial drones.*	• Bylaw consultation body • Policy menu for Local Authorities & council helpline
IT infrastructure *Effectively integrated IT systems fit for purpose.*	• Best practice software register & workshops • IT success case studies

Key benefits

- **Achieve more with less** – EASE enables greater sharing between end users and across sectors.
- **Effective communications & aligned strategy** – EASE provides a single strategic point to engage with and align this critical stakeholder group.

5 EASE enables us to cross the chasm



Unlocking greater impacts for society.[1]

- Drones could contribute up to £45 billion to UK economy.
- An estimated 650,000 jobs could be created.
- Businesses could achieve £22 billion in net cost savings.
- Carbon emissions could be reduced by 2.4 million tons.

[1]Estimated by 2030, PwC SWLv2.0, July 2022

End user asks to government

Appendix A – Our structured, costed approach

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Appendix B

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