Using Strategic Foresight

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What do we mean by ‘strategic foresight’?

UK Government defines foresight as:

> *“The systematic examination of potential threats, opportunities and likely future developments which are at the margins of current thinking and planning. [The research] may explore novel and unexpected issues, as well as persistent problems or trends. Overall, it is intended to improve the robustness of policies and the evidence base.” (*from: Defra, 2002*)*

- Foresight research is the act of gathering new insights that may point us towards affirming or discrediting existing trends and developments as well as identifying new and emerging trends and developments which are on the margins of our current thinking, but which will impact on our lives in the future

- Foresight methods include horizon scanning, scenario building, back-casting, visioning, and wind tunnelling, etc.

Strategic foresight research

Strategic foresight research aims to…

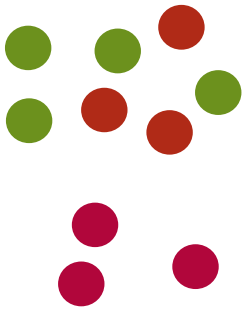
Enable resilience over time and to meet the needs of government and society, by identifying:

- Risks and preparing for them to future-proof policies; and
- Opportunities to foster innovation, where this might help deliver strategic objectives and improve competitiveness

This helps organisations and individuals to…

- prepare for events that may happen in the future, which are uncertain and not necessarily under their control;
- gain efficiencies by ensuring that policies and strategies are robust and resilient over time;
- take a structured approach to exploring a range of futures rather than predicting a single expected or ‘most likely’ future

What's in the toolkit?

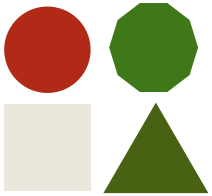


Horizon Scanning

- What are the emerging risks and opportunities we need to consider?

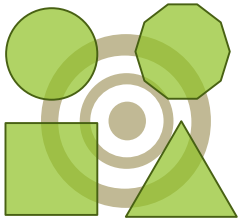
Risk prioritisation

- What are the top issues?



Scenario building

- What are the plausible, alternative future scenarios?



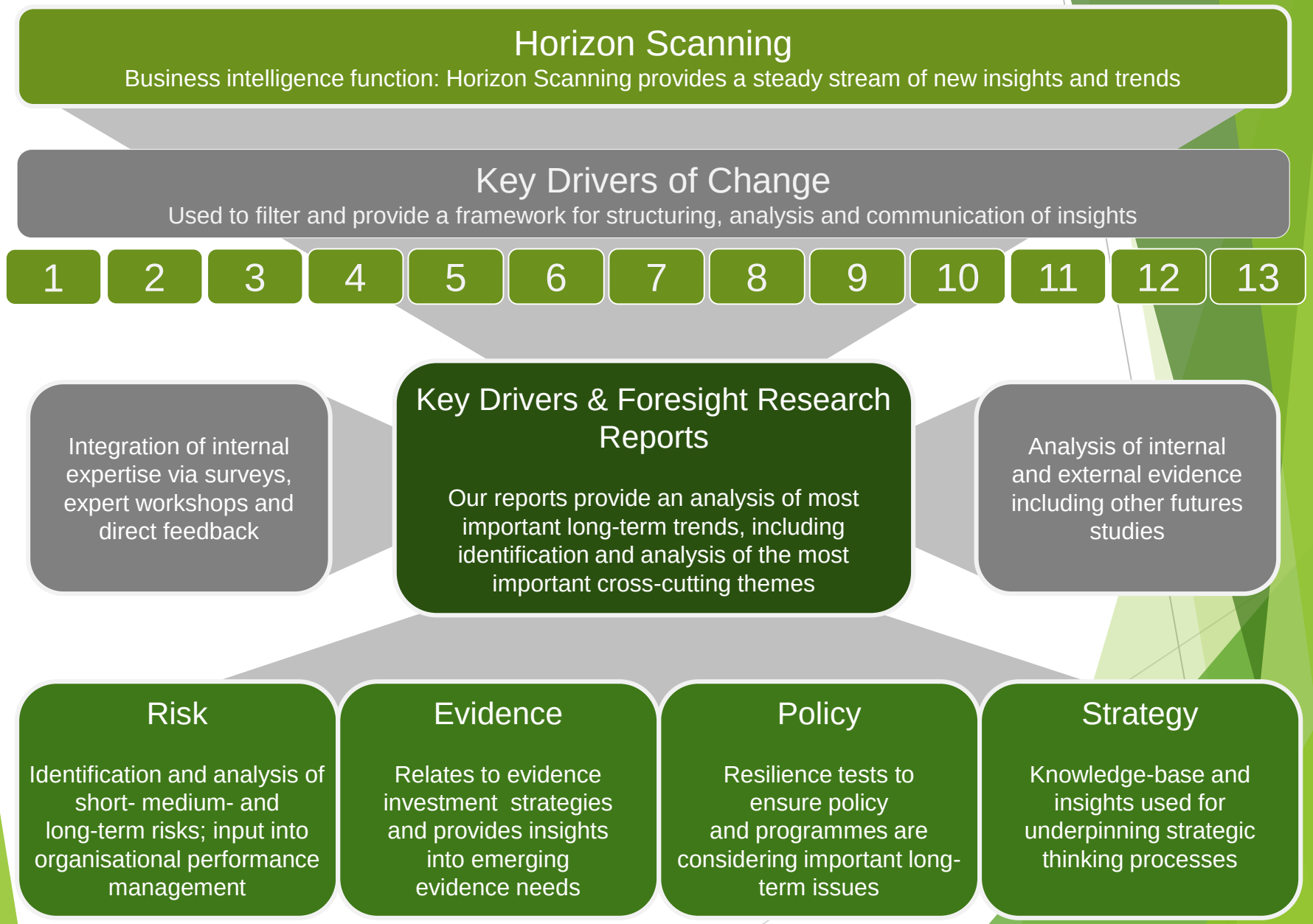
Stress testing

- How could the different scenarios affect our ability to achieve our vision/ objectives/ corporate plan?

Visioning

- What do we want to achieve in the future?

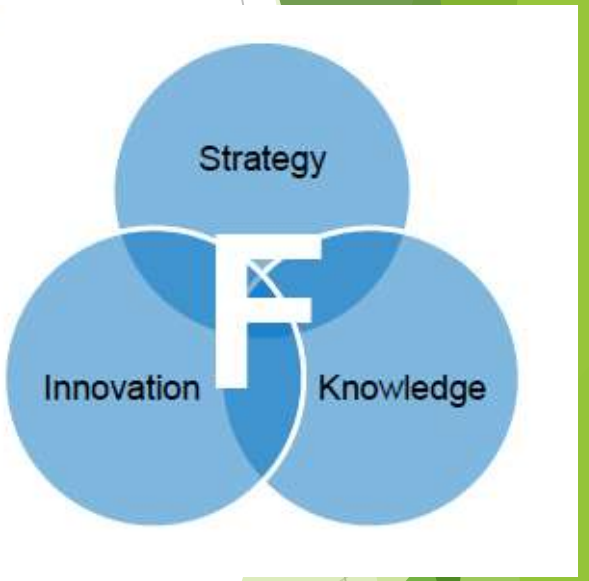
Linking to decision makers



What will you get out of it?

Foresight research helps organisations to...

- Reduce uncertainty by identifying new and relevant information
- Prepare for and test strategic decisions
- Develop new and future business fields/markets
- Create orientation on future developments
- Build a knowledge base
- Identify and manage emerging risks and opportunities
- Identify risks or opportunities which may challenge/contribute to your objectives
- Inform long-term planning
- Facilitate strategic discussions and plan for resilience
- Identify new information needs and inform investment



Regulations relating to the commercial use of small drones

A permission from the CAA is required for any commercial work with a drone

- Unmanned aircraft and drones
- Our role
- Recreational drones and private flights
- Model aircraft
- Commercial operations with small drones
  - **Regulations relating to commercial work**
  - Permissions and exemptions
  - Guidance for small drone operators
  - Changes to applications for UAS approvals
- Larger unmanned aircraft
- Information for the public

Small unmanned aircraft are now widely available for commercial use. More popularly known as drones, just like many other devices, they can cause injury or damage if they are not used responsibly and so are subject to specific safety rules relating to the way they are operated, which are underpinned by UK law.

The regulations are contained within the Air Navigation Order 2016 (ANO 2016) and there are some specific additional steps that must be taken if a drone is being flown for commercial operations.

Anyone using a small drone needs to be aware of the regulations shown below.

Article 241 - endangering safety of any person or property

Article 94 - small unmanned aircraft

Article 95 - small unmanned surveillance aircraft

A **small unmanned aircraft** is defined as 'any unmanned aircraft, other than a balloon or a kite, having a mass of not more than 20 kg without its fuel but including any articles or equipment installed in or attached to the aircraft at the commencement of its flight'.

A **commercial operation** is defined as:
'any operation of an aircraft other than for public transport;

- which is available to the public
  or
- which, when not made available to the public, is performed under a contract between an operator and a customer, where the latter has no control over the operator,

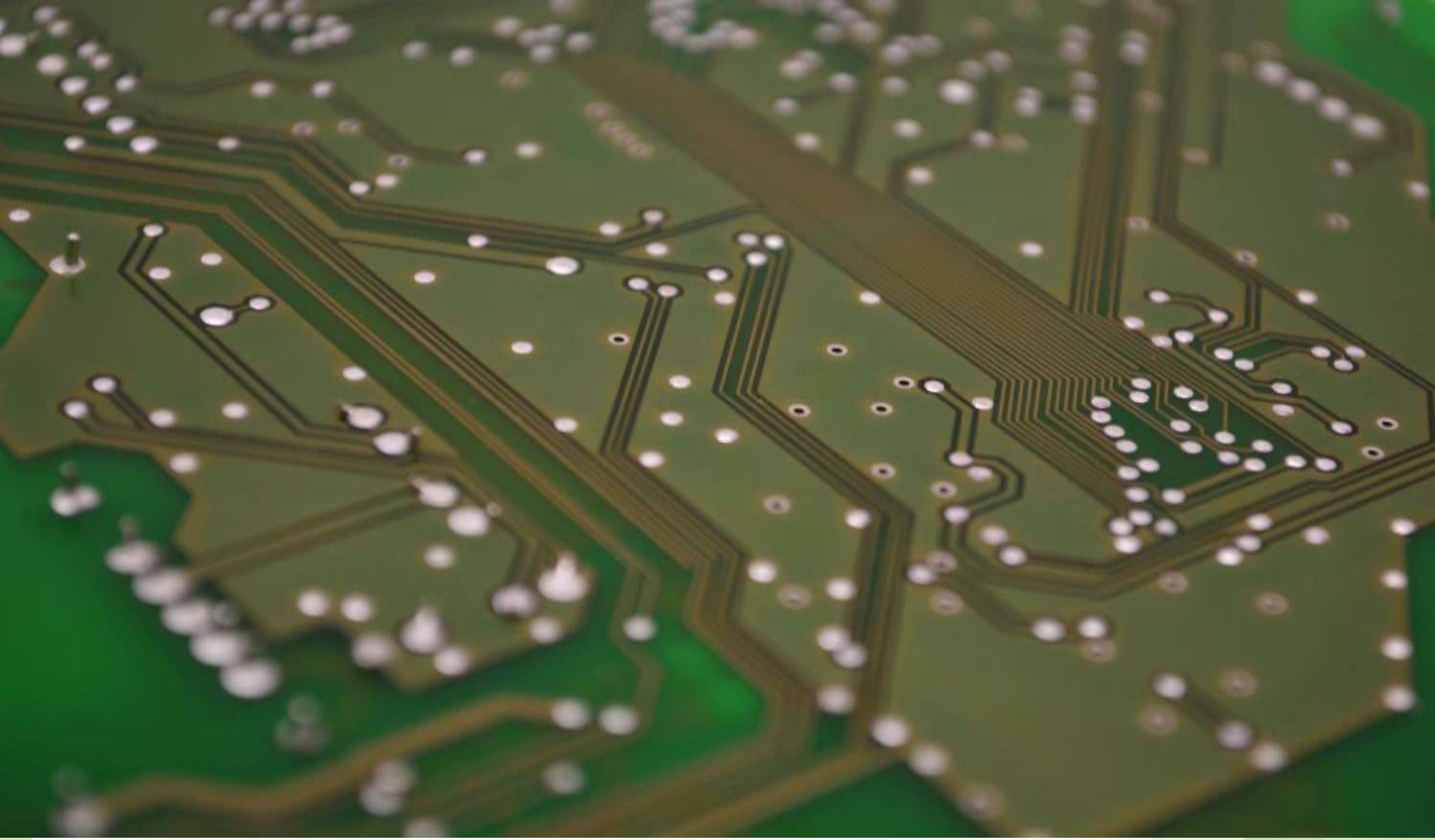
in return for remuneration or other valuable consideration.'

The key elements in understanding this term are '…any operation of an aircraft…in return for remuneration or other valuable consideration'.

The term 'available to the public' should be interpreted as being a service or commodity that any member of the public can make use of, or actively choose to use, (e.g. because it has been advertised or offered to someone).

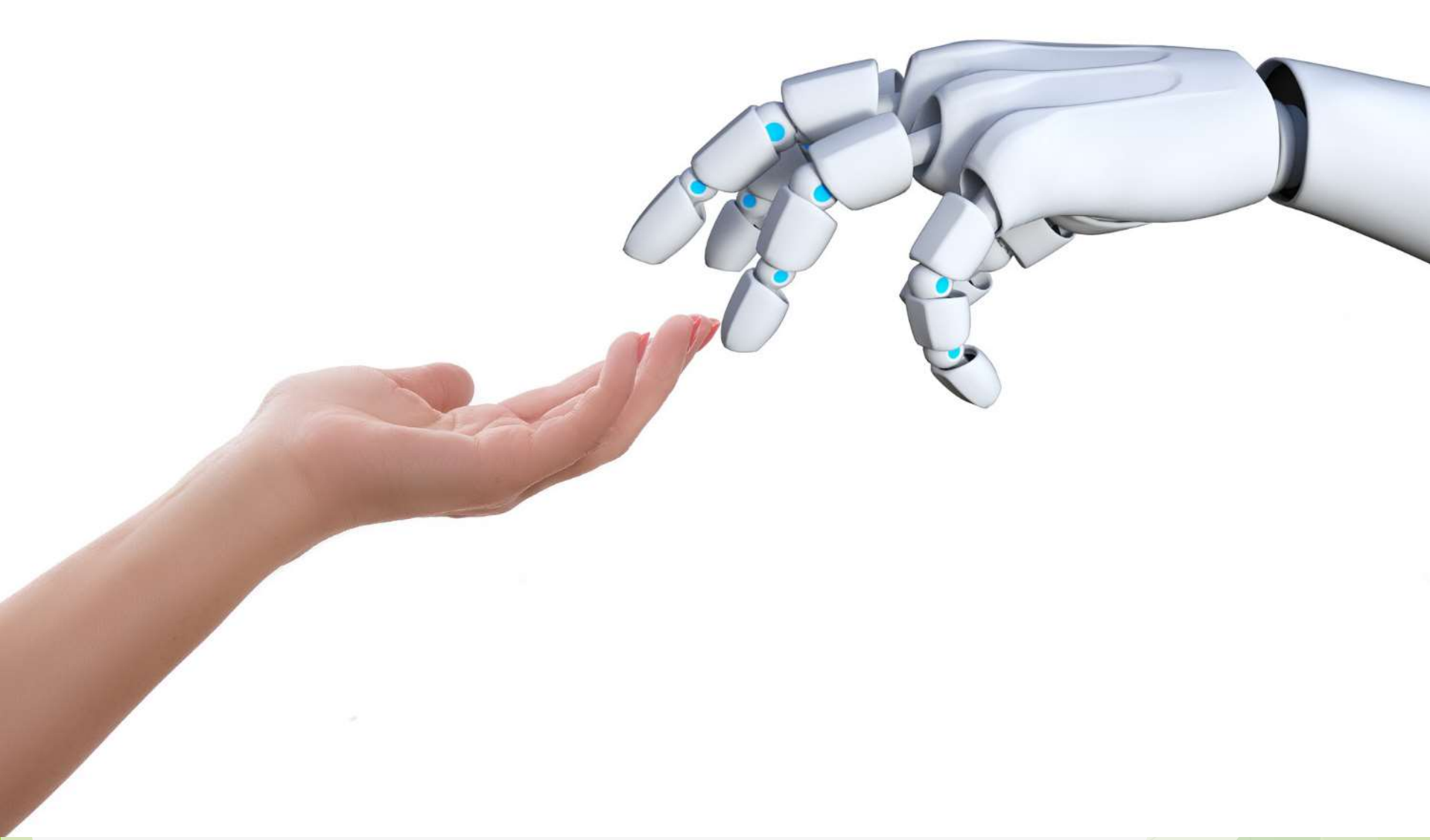
Unmanned Autonomous Vehicles

The experimental use of UAVs in forestry for precision mapping and measurement, biodiversity and sustainable planning is growing as costs are reduced. The changing skills require funding and lead-in time to acquire.



Artificial Intelligence & Machine Learning

When employed in conjunction with large datasets and outputs from UAVs, these have the potential to analyse and 'learn', using algorithms to might identify and pin-point geographically, tree disease or death and forest fires.



Robotics

Forestry robotics may provide a cost-effective increase to productivity and improve safety. The use of virtual reality, remote control, teleoperation and automation have the potential to change the required skills for foresters.

CRISPR the new tool that edits DNA

CRISPR a defence mechanism found in bacteria, is now being used as a new flexible editing tool that allows scientists to edit genomes with unprecedented precision and efficiency including in disease resistance and virus protection.

Source: www.au.fsc.org

Blockchain Technology

Best known as the underpinning for Bitcoin, the Blockchain is a decentralised public ledger with potential beyond currency. It may impact all areas that rely on record keeping and trust, including supply chains & land ownership claims.

Some chronic trends

- **Fraud** – better technology with greater sensitivity to identify it
- **Legislation** – impact of new and changing regulations
- **Capabilities** – changing skills requirements
- **Geo-political situation** – trade/legislation post-Brexit?
- **Waste** – new packaging and no packaging initiatives gaining momentum.

And finally:

- **Global supply chains** – more detail needed for environmental and consumer confidence. Shorter, more ethical chains? Cheap prices forcing out reliable suppliers – does the consumer understand their influence and impact, and do they care?

Any questions?

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