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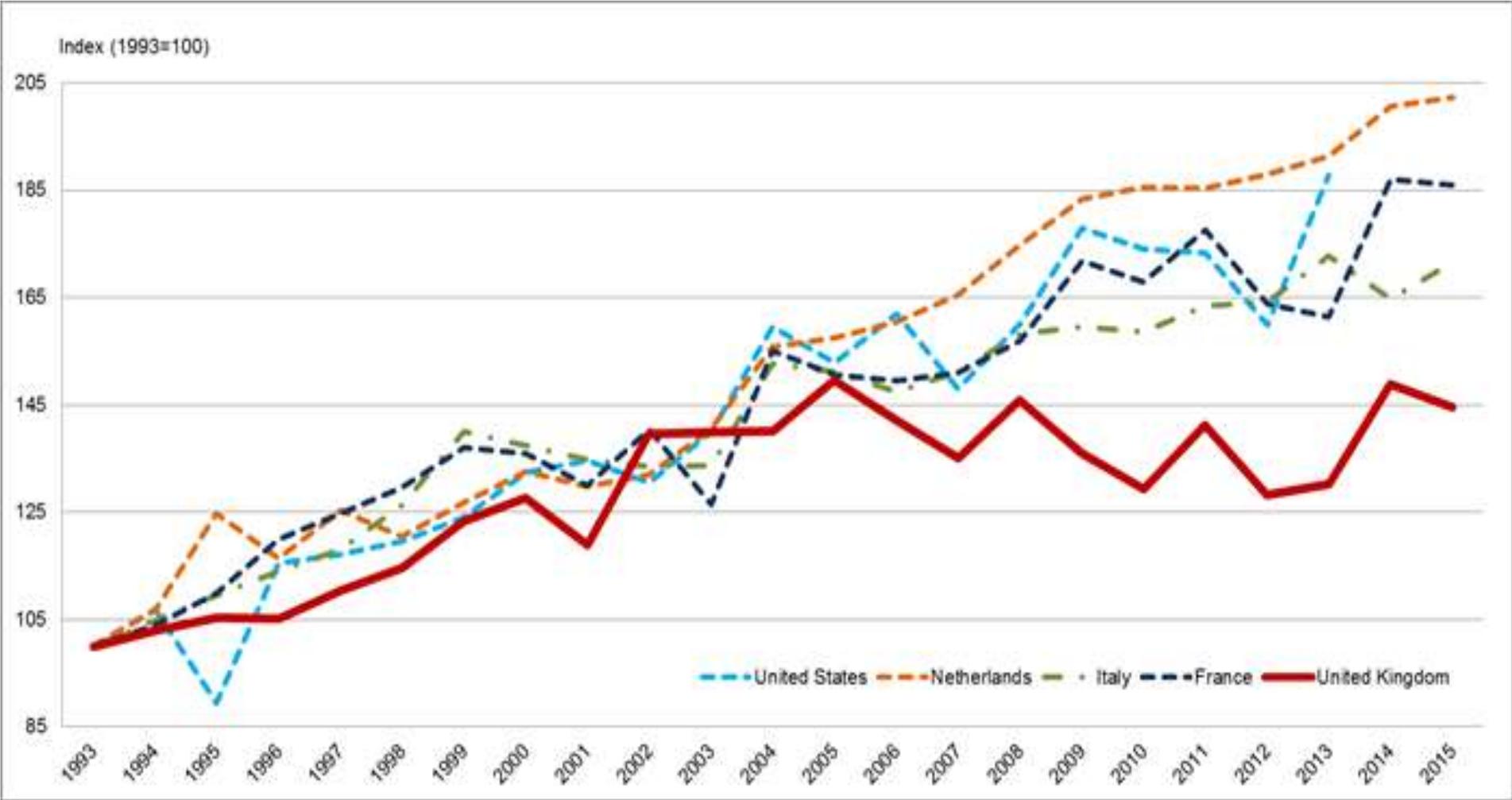
Department for Environment, Food, and Rural Affairs

Approaches and innovations to improve farm productivity  
while looking after the environment

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# Productivity – what does it mean and what’s the problem?



# Some big issues

## Economy

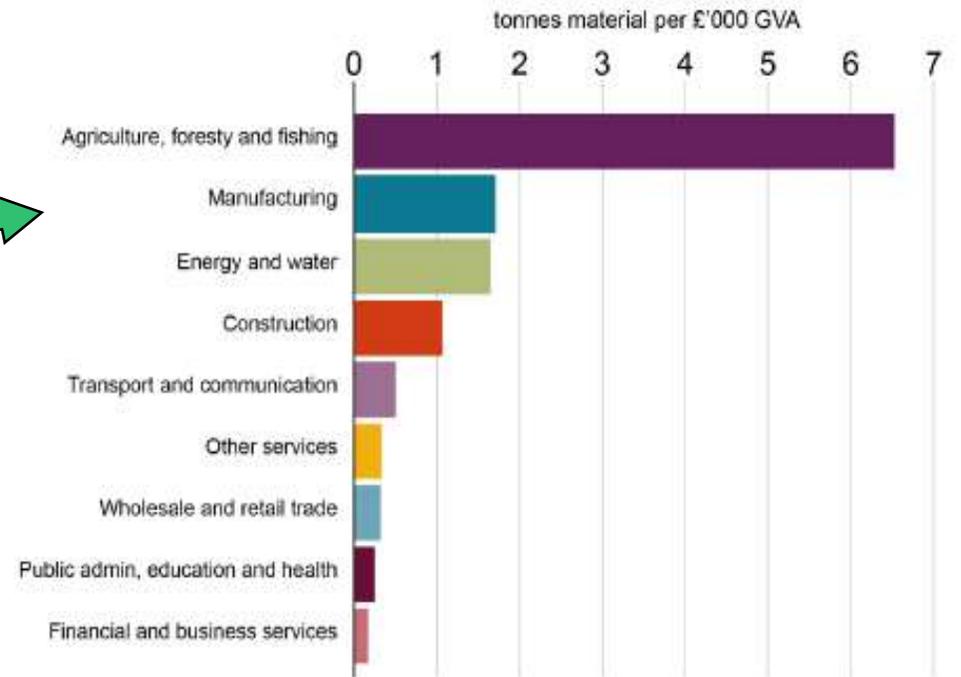
- Agriculture is 3x less efficient than other sectors of the economy
- Farm productivity in the UK has not increased since the early 1980s

## Environment

- Agriculture accounts for 9% of UK GHG emissions, and 30% of global GHG emissions
- UK Government is committed to reaching net-zero in carbon emissions by 2050. NFU is aiming at net-zero for UK agriculture by 2040.

## Population

- World population set to reach 9.6 billion by 2050
- UK population has increased by 12.5% since 2001 – expected to increase by further 10% by 2041



## Addressing Low Productivity

The Food & Drink Sector Council's Agricultural Productivity Working Group has made 5 recommendations to address low productivity growth. We'll be working closely with industry to develop these ideas further:

- 1) Drive effective use of data
- 2) Transform knowledge exchange
- 3) A collaborative Mission-led approach to innovation
- 4) Drive uptake of professional training and development
- 5) Enable Rural Infrastructure

# Farming: Supporting sustainable innovation and productivity

## Investment

*Grants for farmers to support sustainable productivity*

- Funding for equipment, technology, and infrastructure that will improve productivity, deliver public goods, reduce emissions, and improve the environment.

## Supporting R&D

*Enabling science based approaches to innovation*

- Developing follow-on to £90m 'Transforming Food production' so that it:
  - Supports collaborative R&D
  - Encourages industry-led research syndicates
  - Accelerates rate of adoption of new technologies

## Structural Changes

*Improving fairness and flexibility for farmers in the supply chain and tenancy agreements*

- Regulation of contracts in supply chains.
- Improving data transparency in supply chains
- Creating a domestic producer organisation regime
- Reforming agricultural tenancies

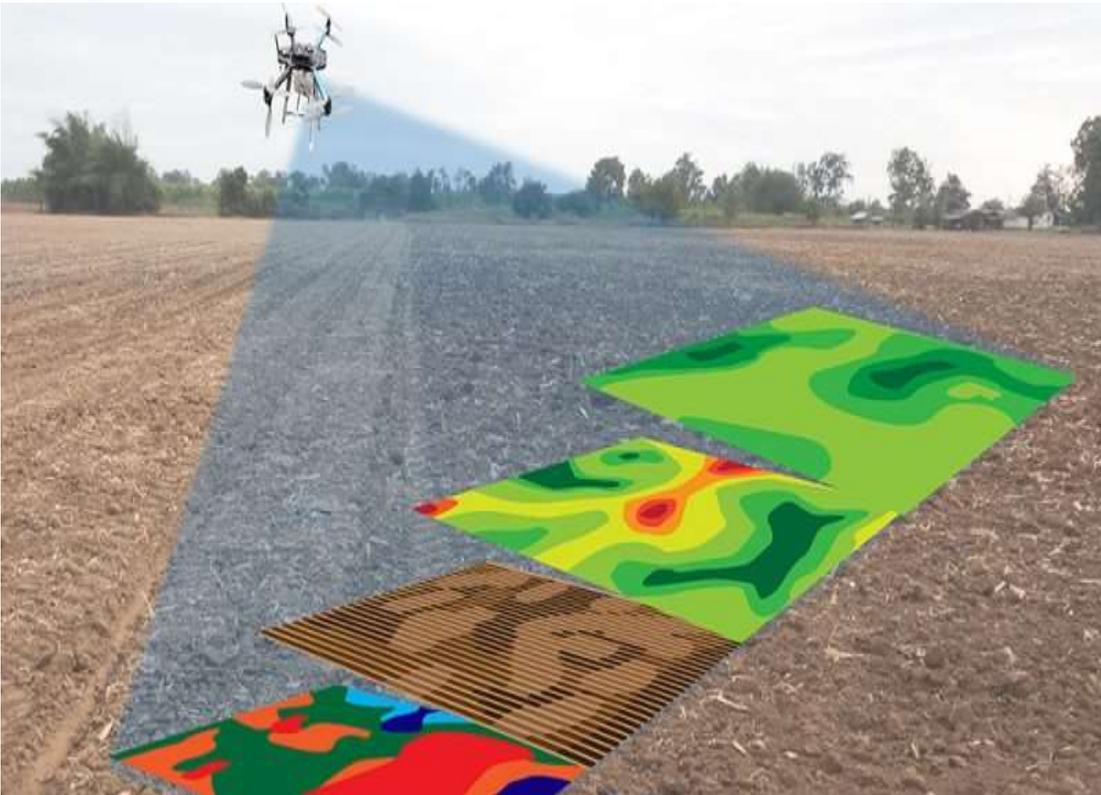
## Capability and Skills

*Increase business performance of farms and farmers*

- Supporting industry-led skills and education initiatives
- Promoting knowledge exchange, farmer to farmer learning, and benchmarking against standard key performance indicators

# Case Studies

Smart Crop Protection



Tuberscan



# Case Studies

## Smart Crop Protection

Using AI to develop blackgrass forecasting models that could save farmers in the region of £0.58 billion per year. Farmers across the country will be able to input data on blackgrass and identify successful management strategies and improve productivity

## Tuberscan

Seeking to develop new non-destructive technologies that can measure potatoes as they grow in fields, ensuring the potatoes can be harvested at the most appropriate stage thereby optimising crop yield and resource use.

# Some Questions

- What can we (that's government and farmers) do to be more productive and sustainable?
- Do the measures I've outlined look right?
- What are the barriers and how do we overcome them?