

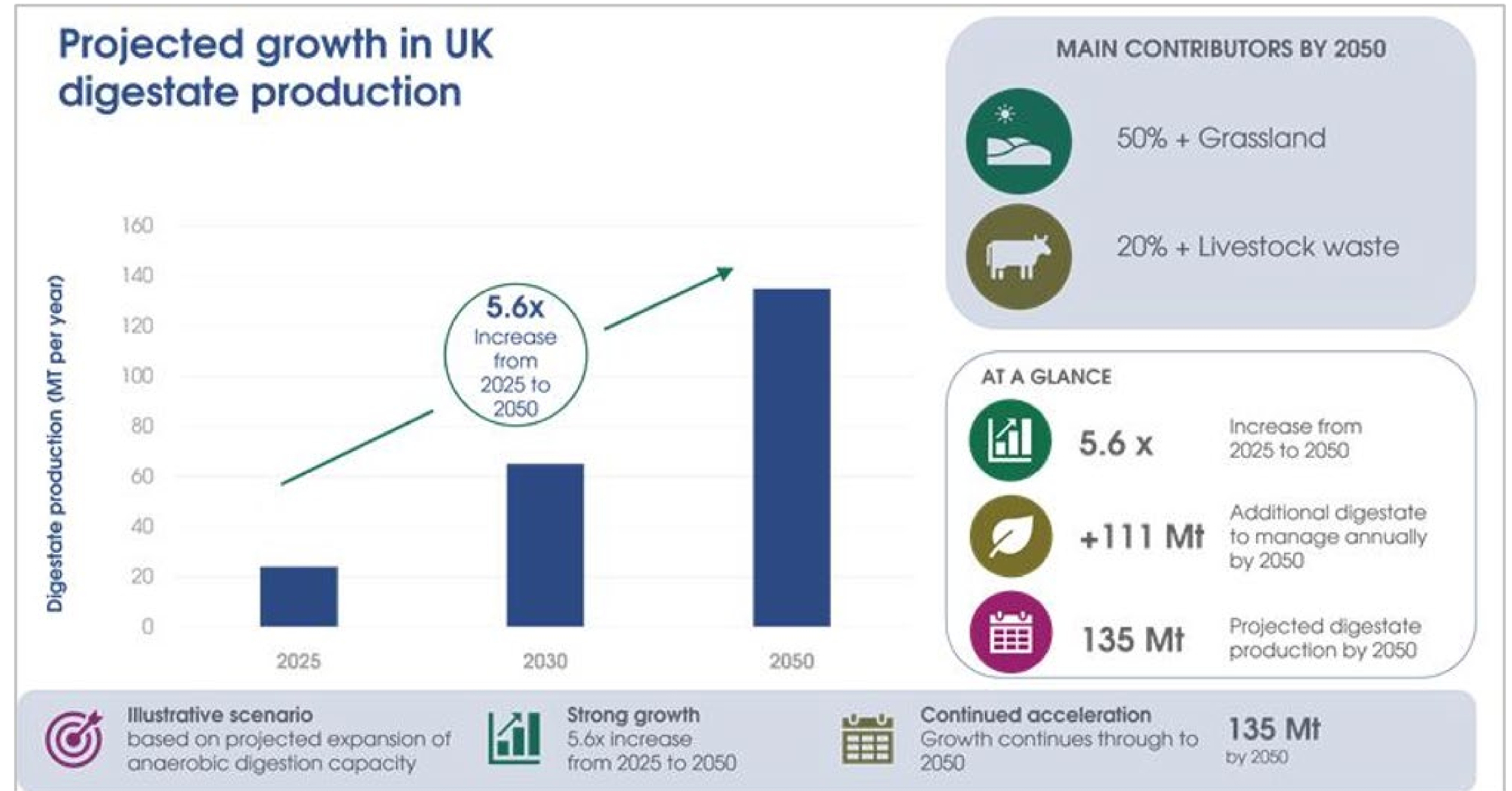
The Route to Improved Digestate Valorisation in the UK

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- Commissioned by the Green Gas Taskforce and SGN
- Full report to be published on the Green Gas Taskforce website in due course

Digestate Outlook to 2050

- Biomethane expansion to 2050 will drive rapid growth in digestate production
- Digestate production:
 - ❖ ~24 Mt today,
 - ❖ ~65 Mt by 2030,
 - ❖ ~135 Mt by 2050.
- Without improved management, digestate risks becoming a barrier to AD growth.



Digestate Valorisation Opportunities



Nutrient security

Digestate supplies N, P & K. **Replaces energy-intensive fertilisers** and reduces exposure to volatile gas/fertiliser prices and the upcoming CBAM.



Reduce CO₂ Emissions

Digestate use reduces emissions through the replacement of manufactured fertilisers.

Potential net avoided emissions:
~2.5 MtCO₂e by 2030
~4.4 MtCO₂e by 2050.



Add Economic Value

Digestate could replace manufactured fertilisers worth **~£835m by 2030**, with the potential to double to **1.71B by 2050.**

Better logistics, infrastructure and product development will unlock more commercial value.



Premium Products

Processing can create **higher-value products:**

- Recovered ammonia
- Recovered Struvite
- Nutrient concentrates
- Fertiliser pellets & granules
- Biochar

These are easier to transport, store and market than raw digestate.



Unlock New Markets

Beyond agriculture, digestate can support **emerging markets:**

- Animal bedding
- Construction materials
- Renewable fuels (e.g., SAF).

These outlets could ease pressure on farmland as volumes grow.



Boost Circular Economy

AD recycles nutrients from organic wastes back to farms, improving resource efficiency, nutrient circularity, and food/energy security.

Digestate is a strategic co-product – not a residual waste.



Recommendations for Improved Digestate Valorisation in the UK

- Alder's report proposes **10 recommendations** across 3 themes:
 - 1) Building an integrated legal framework,
 - 2) Practical Measures, and
 - 3) Education & Knowledge.
- Rather than proposing a single solution, a **coordinated approach involving government, industry and the agricultural sector** is needed across each of these 3 areas.



1) Build an Integrated Legal Framework

Recommendations for Government



01

Recognise digestate as a valuable co-product

Change the viewpoint of regulatory authorities, from a need for waste management to a positive view of digestate as a **low carbon fertiliser** product. Action is required across Defra to achieve this; rather than all digestate activity being viewed from a safety and control perspective it should be viewed as value.

Timescale :

1-3 years



02

Support for digestate management activities

Financial support is being offered to farmers across GB to improve slurry storage infrastructure and to invest in low-emissions precision spreading equipment; this support should be extended to digestate activities.

Timescale :

1-3 years



03

A national cross-departmental policy framework

As agriculture is projected to play a major part in the increase in biomethane production align the AD industry and the agricultural industry with a common and coherent policy framework that would provide both producers and users with confidence in digestate production, management and use.

Timescale :

1-3 years



04

A pragmatic approach to spreading windows

Review fixed spreading windows in light of UK-specific climate and weather shifts. Guidance should focus on land conditions and crop growth stages, giving farmers flexibility while avoiding spreading at inappropriate times.

Timescale :

1-3 years



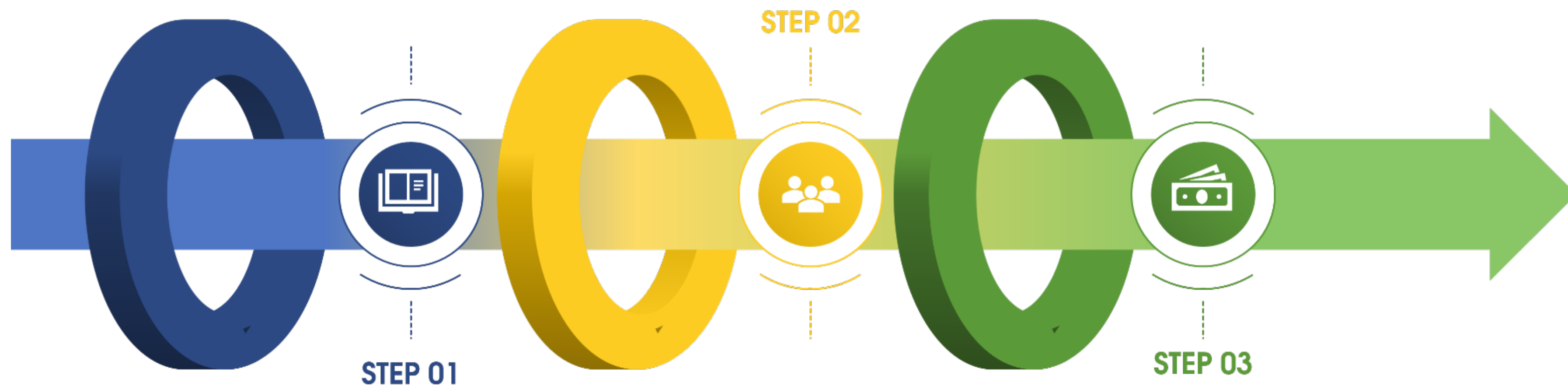
2) Practical Measures Recommendations for Industry

Development of storage protocols 3-5 years

Create a unified storage strategy to improve capacity, cut costs and support local use.

Invest in processing technologies 5-10 years

Process digestate into higher-value products, cutting storage pressure and creating new AD revenue.



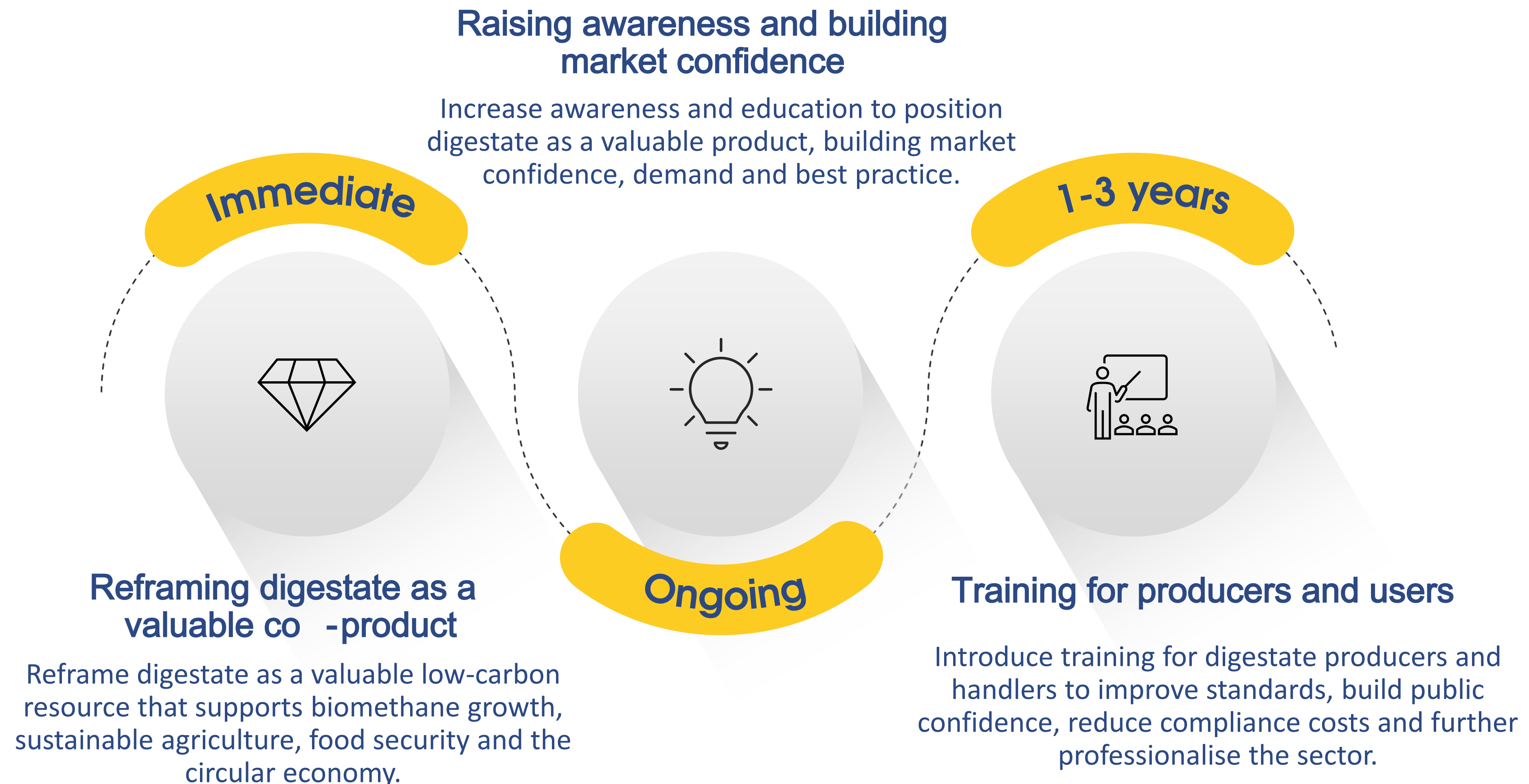
Establish digestate management hubs 3-5 years

Centralised digestate hubs can improve logistics, overcome local land constraints, achieve economies of scale, and support investment in higher-value processing technologies.



3) Education & Knowledge Building

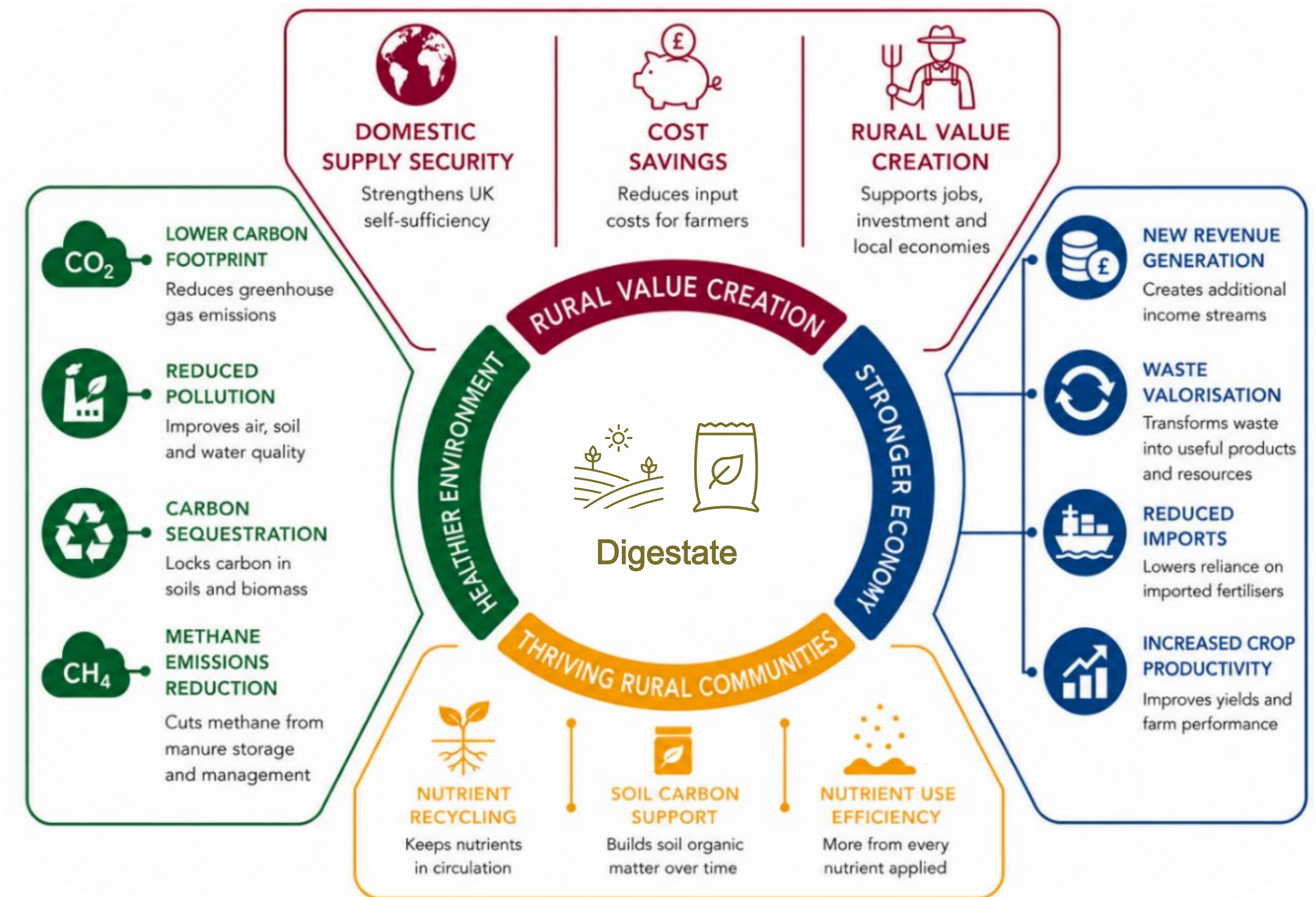
Recommendations for Government & Industry



Conclusions

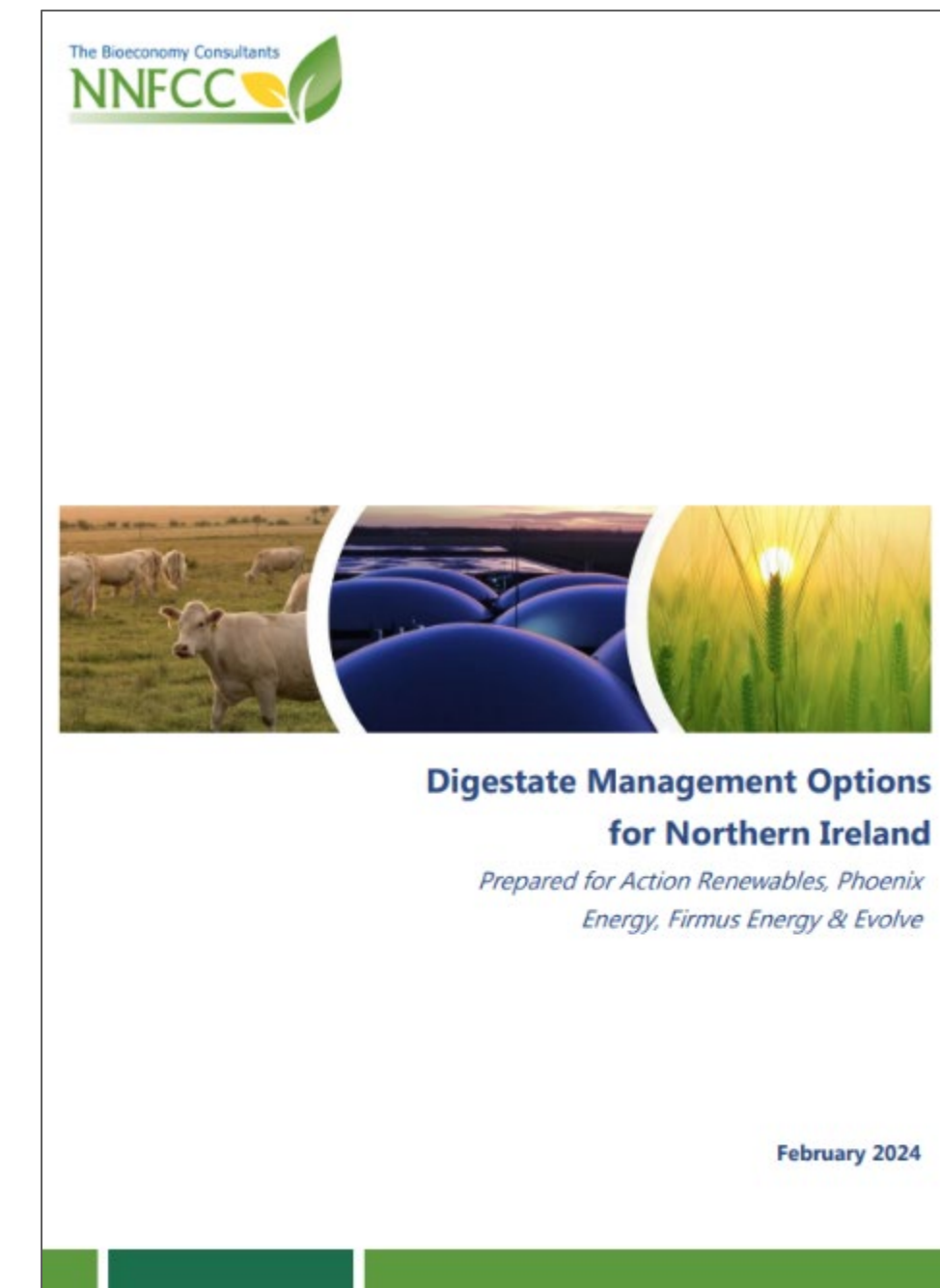
If managed as a valuable resource rather than a waste, **digestate can become a key enabler of UK biomethane growth, agricultural resilience and Net Zero.**

- **Digestate is a strategic resource, not a waste** – delivering nutrient security, healthier soils and support for the circular economy.
- **Effective digestate management is essential** to enable biomethane growth as production rises from 24 Mt to 135 Mt by 2050.
- **The main barriers are systemic** – infrastructure, regulation, market development and stakeholder confidence.
- **A coordinated approach is needed** – combining policy, investment, innovation and education to unlock digestate's full value.



Thank you

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