DESIGNING THE FUTURE OF

LIVESTOCK WASTE MANAGEMENT

Turning Agricultural Waste into Renewable Energy & Biochar

PYROLITEC

PITCH DECK - MAR 2026

Livestock waste should never be a problem or a cost.

It could be one of the world's most valuable resources.

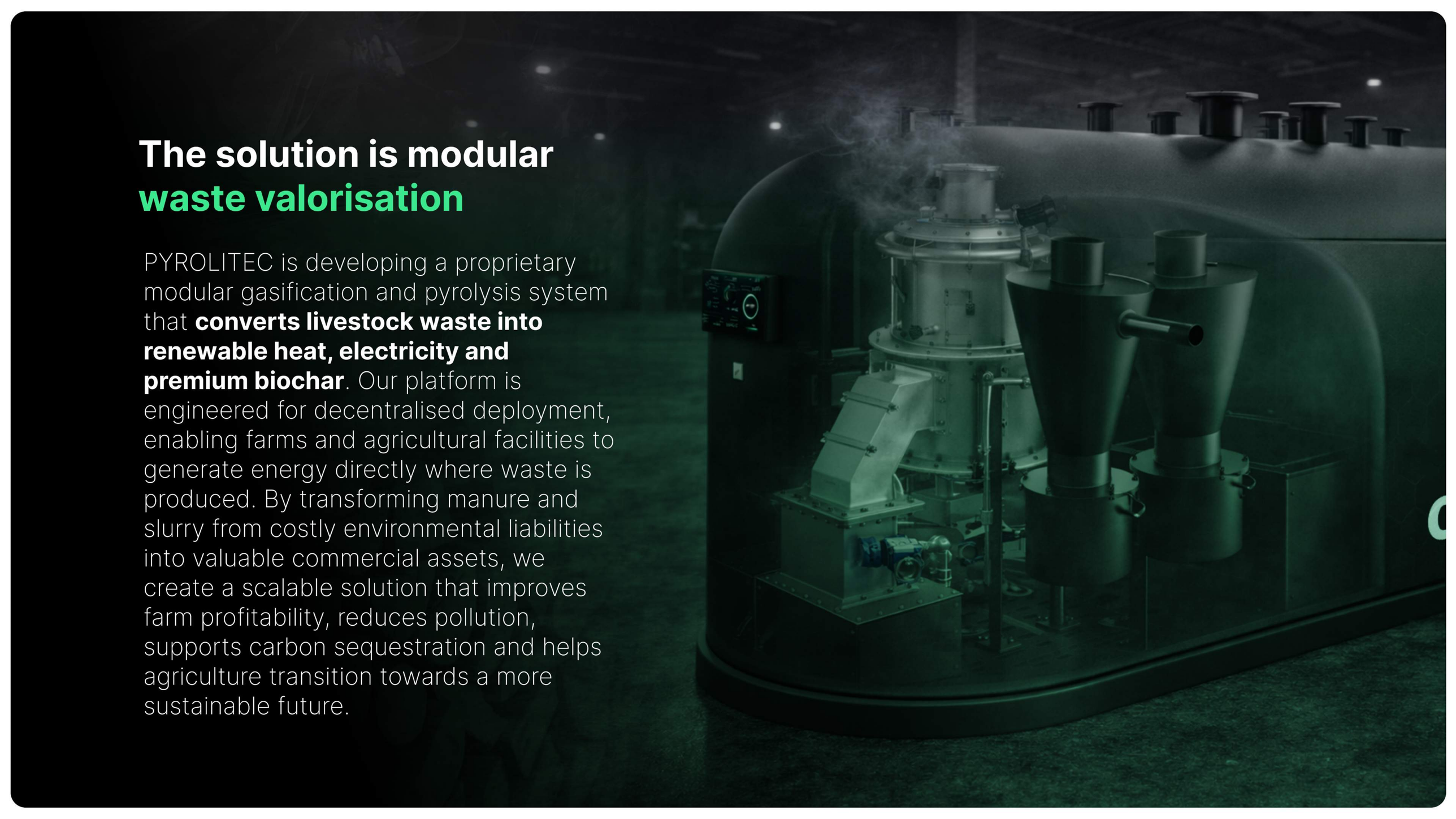
We live in a world where livestock farming is under increasing pressure to manage growing volumes of manure and slurry while meeting stricter environmental regulations. Traditional disposal methods contribute to nutrient runoff, greenhouse gas emissions and rising compliance costs, turning valuable organic material into an expensive liability.

At PYROLITEC, we are developing a proprietary modular gasification and pyrolysis system that transforms livestock waste into renewable heat, electricity and premium biochar.

By converting agricultural waste into clean energy and high-value soil products, we help farmers reduce environmental impact, generate new revenue streams and transform one of agriculture's greatest challenges into a scalable, sustainable opportunity.

The solution is modular waste valorisation

PYROLITEC is developing a proprietary modular gasification and pyrolysis system that **converts livestock waste into renewable heat, electricity and premium biochar**. Our platform is engineered for decentralised deployment, enabling farms and agricultural facilities to generate energy directly where waste is produced. By transforming manure and slurry from costly environmental liabilities into valuable commercial assets, we create a scalable solution that improves farm profitability, reduces pollution, supports carbon sequestration and helps agriculture transition towards a more sustainable future.



Transforming Waste **Into Clean Energy**

We are building a scalable platform that helps farmers turn one of agriculture's greatest environmental challenges into a long-term commercial opportunity.

Livestock Waste

Manure and slurry have traditionally been viewed as costly waste streams, creating environmental challenges through emissions, nutrient runoff and increasing regulatory pressure.
Our system transforms agricultural waste into a valuable feedstock instead of an expensive disposal problem.

Heat & Electricity

PYROLITEC converts livestock waste into renewable heat and electricity that can be used directly on-site or exported where infrastructure allows. By generating energy where waste is produced, farms can reduce operating costs, improve energy resilience and lower their carbon footprint.

Premium Biochar

Our proprietary process also produces high-quality biochar — a stable, carbon-rich soil amendment that improves soil health, increases water retention and reduces nutrient leaching. Biochar provides farmers with a valuable secondary product while supporting carbon sequestration and long-term agricultural sustainability.

Real World **Application**

Gasification and pyrolysis are established industrial technologies with decades of successful deployment across the world.

Proven at Industrial Scale

Across Europe, gasification and thermal conversion technologies have successfully processed municipal waste to generate renewable electricity and district heating for decades. These facilities demonstrate the long-term reliability and commercial viability of waste-to-energy systems.

Established Technology

Biomass energy plants already convert wood, forestry residues and agricultural biomass into renewable heat and electricity, providing proven evidence that organic waste can become a valuable energy resource. PYROLITEC builds upon these established principles while optimising the technology specifically for livestock manure and slurry.

A Purpose-Built Solution

While gasification has been successfully applied across multiple industries, livestock waste presents unique engineering challenges including high moisture content, inconsistent feedstock and handling complexity. PYROLITEC is developing specialised reactor designs, feed handling systems and process optimisation for these challenges.

STAGE ONE **RESEARCH & DEVELOPMENT**

CURRENT RAISE

PHASE 1 PRE-SEED

Research & Planning

The Pre-Seed investment will fund the core research and engineering phase required to adapt proven gasification and pyrolysis technologies specifically for livestock waste. Over a six-month period, the Company will complete detailed engineering designs, undertake computational fluid dynamics (CFD) modelling, optimise reactor and feed handling systems, and develop digital prototypes to validate performance with manure and slurry feedstocks. In parallel, PYROLITEC will seek to collaborate with leading universities and research institutions to benchmark livestock waste characteristics, validate pyrolysis performance, and strengthen the scientific foundation of the technology. Alongside the technical programme, the Company will establish key supplier relationships, engage with agricultural partners and local authorities, and complete the planning and feasibility work for its pilot-scale demonstration facility, which will be delivered during the Seed round. This phase is focused on reducing technical risk, validating the agricultural application, protecting intellectual property and preparing the platform for successful commercial deployment within the farming sector.

PHASE 2 SEED

Development & Pilot

The Seed round will fund the construction and deployment of a pilot-scale livestock waste processing facility. The plant will utilise PYROLITEC's proprietary gasification and pyrolysis system to convert manure and slurry into renewable heat, electricity and premium biochar, demonstrating the commercial potential of the specialised agricultural platform. During this phase, the pilot facility will generate real-world operational data, validate system performance and refine the engineering required for commercial deployment. It will also establish the supply chain and operational framework needed for scale. The objective is to demonstrate both technical feasibility and commercial viability, preparing the platform for Stage Two: full commercialisation and large-scale deployment across the agricultural sector.

STAGE TWO **COMMERCIAL PLANTS**

STAGE THREE **ALTERNATIVE FUELS**

STAGE FOUR **HYDROGEN ENERGY**

STAGE TWO **COMMERCIALISATION**

PHASE 3 SEED 2

Industrial Plant

Stage Two establishes the first fully operational commercial livestock waste processing facility, validating the complete agricultural platform and creating a scalable blueprint for national deployment. The facility will generate immediate revenue while demonstrating the operational and commercial framework required for rapid replication across the UK livestock sector.

REVENUE STREAMS

- Livestock waste processing
- Renewable electricity
- Renewable heat
- Premium biochar
- Carbon credits
- Soil improvement products

The facility operates as a fully integrated waste-to-resource platform, ensuring every output is directed towards its highest-value commercial application.

Plant Capacity

- Process up to 40,000+ tonnes of livestock waste annually
- Renewable heat generation
- Renewable electricity generation
- Premium biochar production
- High operational availability

The commercial facility integrates waste handling, renewable energy generation and biochar production within a single agricultural processing hub, maximising value from every tonne of manure processed.

FINANCIAL PERFORMANCE

EBITDA: £2.44M pa

Operating Margin: ~40%

Return on Capital: ~34%

Estimated Payback: ~3 Years

STAGE THREE **ALTERNATIVE FUELS**

STAGE FOUR **HYDROGEN ENERGY**

Stage Three expands the platform into modular alternative fuel systems capable of converting plastics, rubber, and other non-recyclable waste into energy. These transportable plants can be deployed in remote or underserved regions, turning waste into scalable distributed power.

Stage Four advances into hydrogen production, leveraging the hydrogen rich syngas to establish a nationwide network of hydrogen energy plants supporting the UK's transition to low-carbon fuels.

THE TEAM

EDWARD CHALLISS
Co-Founder & MD

Edward oversees operations, client strategy, and research at PYROLITEC. With a strong background in engineering and systems integration, he ensures every project meets the highest standards of performance and reliability. His leadership in R&D continues to push the boundaries of renewable technology, particularly in biomass gasification and intelligent energy systems.

DAVID CHALLISS
Co-Founder & TD

With over 45 years of experience in industrial manufacturing and advanced composites, David Challiss heads up development engineering, manufacturing, and materials ensuring the company's solutions are built on robust, high-performance foundations, supporting consistent quality, innovation, and long-term reliability.

GEORGE CHALLISS
Co-Founder

George leads marketing and strategic direction, shaping how PYROLITEC connects innovation with industry. Focused on long-term partnerships and measurable results, he drives the company's growth through clear communication, market insight, and a forward-thinking approach to brand and business development.

STEVEN H
Co-Founder

With decades of experience in finance and sustainable enterprise, Steve oversees funding and strategic expansion for PYROLITEC. His expertise ensures the company's innovations are backed by strong financial foundations — supporting continued growth, investment, and long-term stability across all divisions.

Turning agriculture's greatest environmental challenge into its greatest opportunity.

Scan here to view the full project flow diagram

https://one31.co.uk/pyrolitec/

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