

Innovative approaches to biomass multiplication

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TAEDA
TECH PROJECT



NET
ZERO
INNOVATION
PORTFOLIO

Funding

The Biomass Feedstocks Innovation Programme is a £36 million programme, funded through the Department for Energy Security and Net Zero's £1 billion Net Zero Innovation Portfolio, which aims to accelerate the commercialisation of innovative clean energy technologies and processes through the 2020s and 2030s.



Department for
Energy Security
& Net Zero

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ZERO
INNOVATION
PORTFOLIO

The Biomass Feedstocks Innovation Programme aims to increase the production of sustainable UK biomass feedstocks.



TEAM LEADS



Dr. Zoe M Harris
Whole Project Lead
& Science Lead



Simona Stangaciu
Project Manager



Prof. Tao Chen
Data Modelling Lead



Prof. Richard Murphy
LCA Lead



Dr. Lirong Liu
Socio-economic
performance lead



Mark Horler
Management Support
& Commercial Lead

FULL TEAM



Dr. Johnny Stormonth-Darling
Technical Guide



Katia Zacharaki
Plant Trials Guide



Dr. Mohammed Khandaker
Experimental Officer



Dr. Pranav Sahu
Plant Trials Research Fellow



Xiaoyang Wu
Plant Trials Intern



Alan Foy
Facilities Manager



Victoria Palumbo
Plant Science PhD Student



Dr. Yuqing Xia
Data Modelling Research Fellow



Lekan Jolayemi
Plant Breeding Research Fellow



Dr. James Suckling
LCA Research Fellow



Linqi Sun
Data Modelling PhD Student



Huan Huang
Computer Science Intern



Laura Nelson
Plant Trials Technician

PARTNERS

The project is supported by partners from across academic institutions and commercial industries.



ROTHAMSTED
RESEARCH



Forest Research



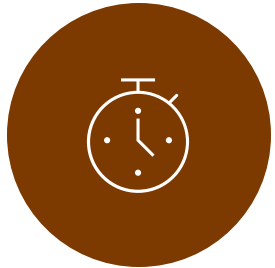
PRIFYSGOL
ABERYSTWYTH
UNIVERSITY



LettUs
GROW

CAPITAL AGRICULTURE
INTERNATIONAL LTD

FINDINGS



Faster



achieve a higher
yield



on a smaller land
footprint



and a greater
degree of quality
control



Field Trials

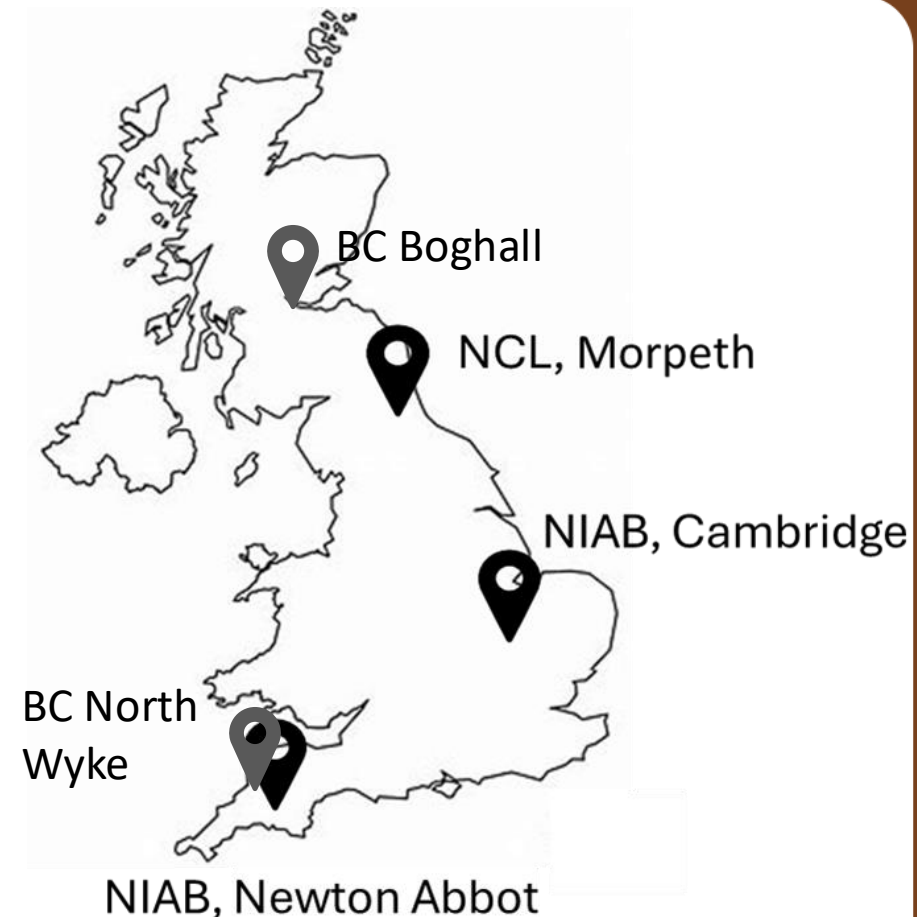
Field trials are being conducted for assessing the performance of willow cuttings generated in aeroponics system



Aeroponically multiplied



Conventionally multiplied



Trial Site	Plots (No.)	Trial cuttings planted (No)
NIAB, Cambridge	162	3240
NIAB, Newton Abbot	126	2520
NCL, Morpeth	75	1500

What else can we do?



UK Tree Action Plan: The UK needs to plant 23,000 ha per year by 2050



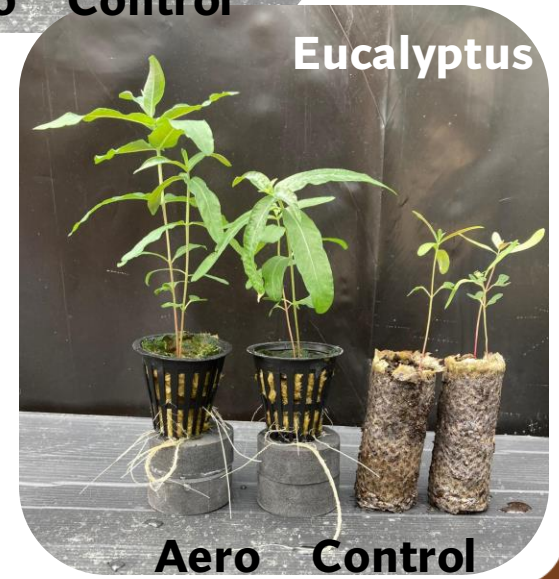
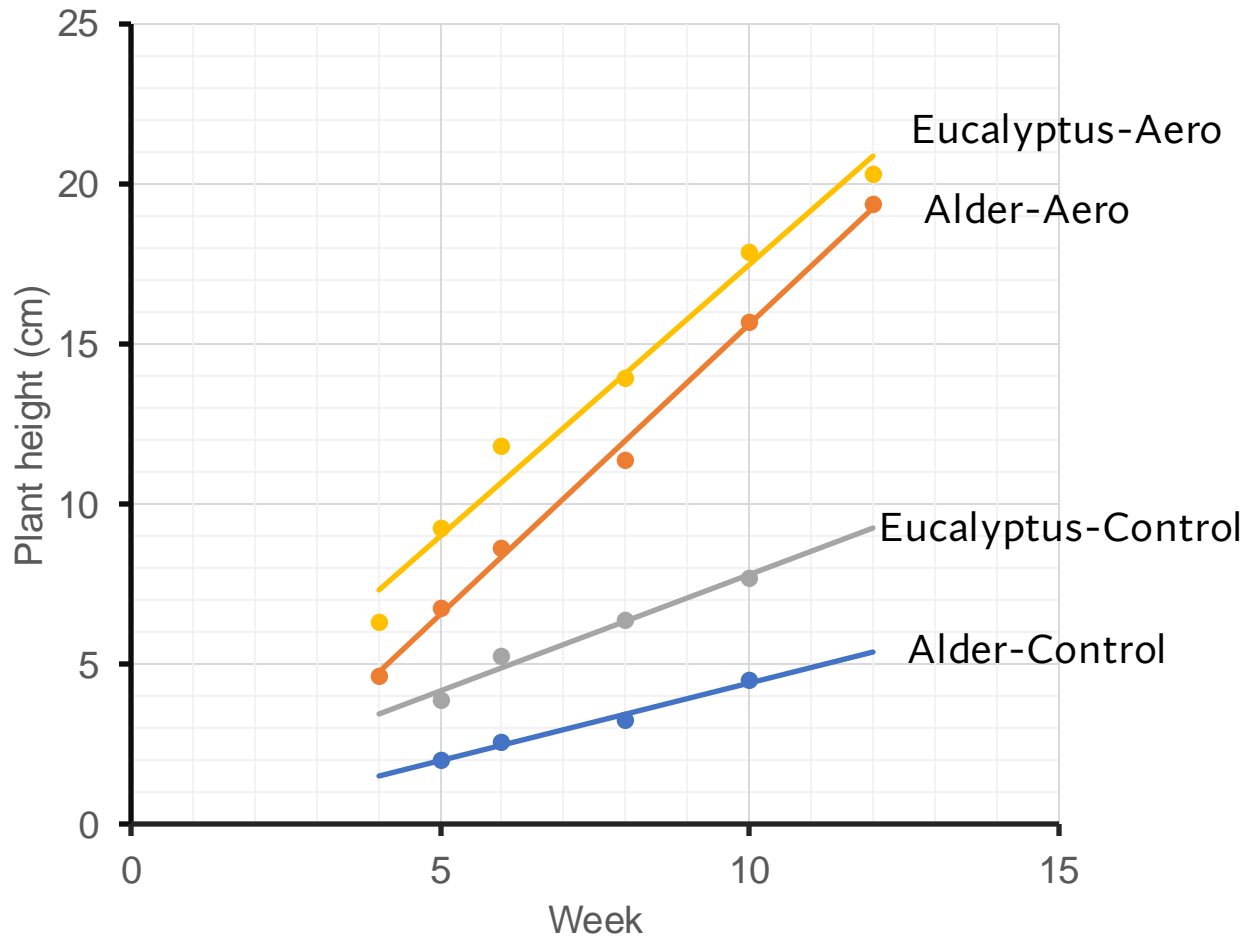
Medicinal crop market is currently worth \$166b to rise to \$348b by 2028



Global market for plant-based proteins to rise to \$25b by 2030



Accelerating forestry species

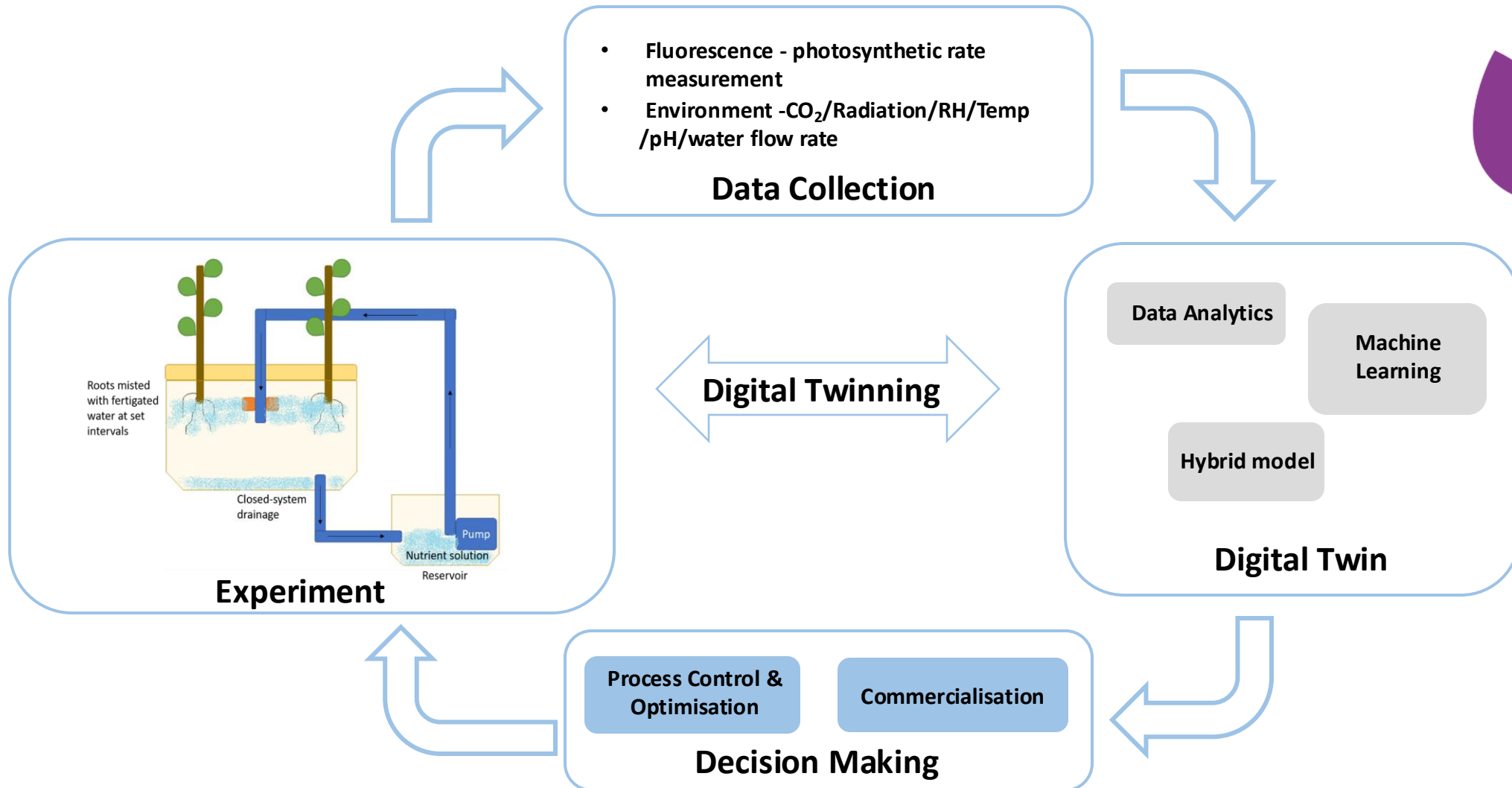


How can we make better decisions?

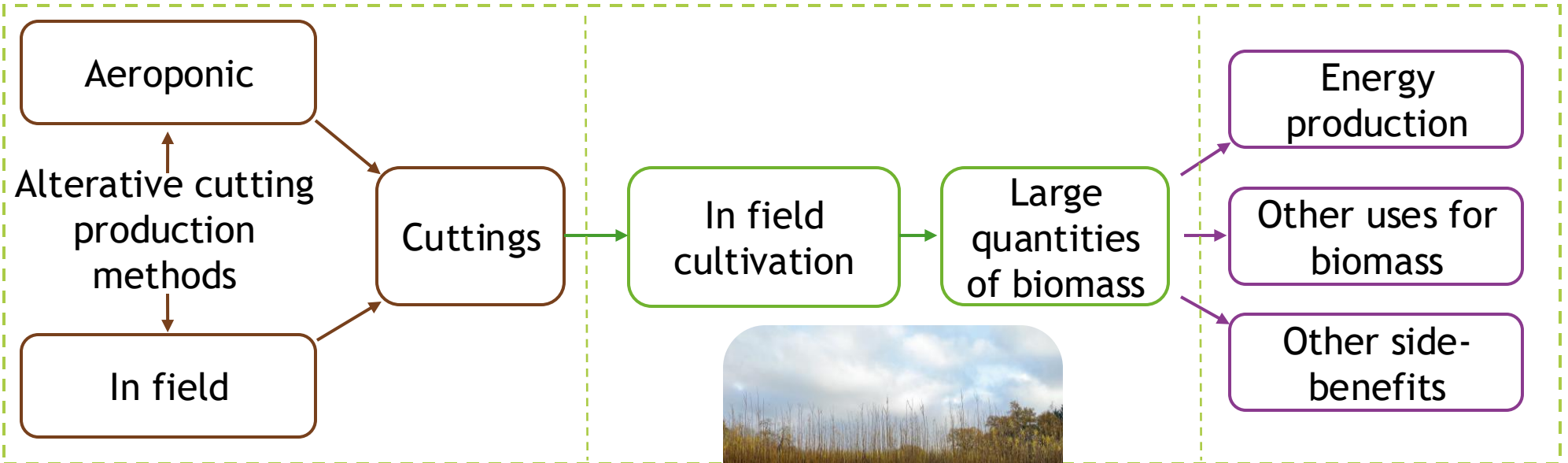


Building a digital twin to help us optimise operations, make better decisions and be more sustainable

Digital Twin



Is it sustainable?

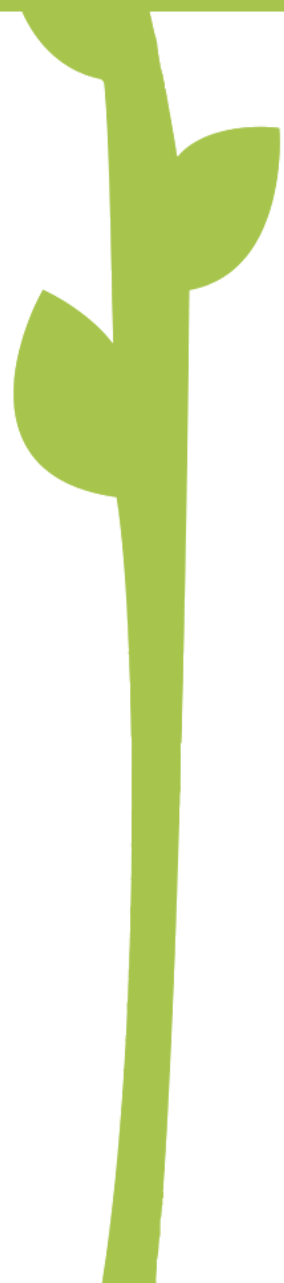
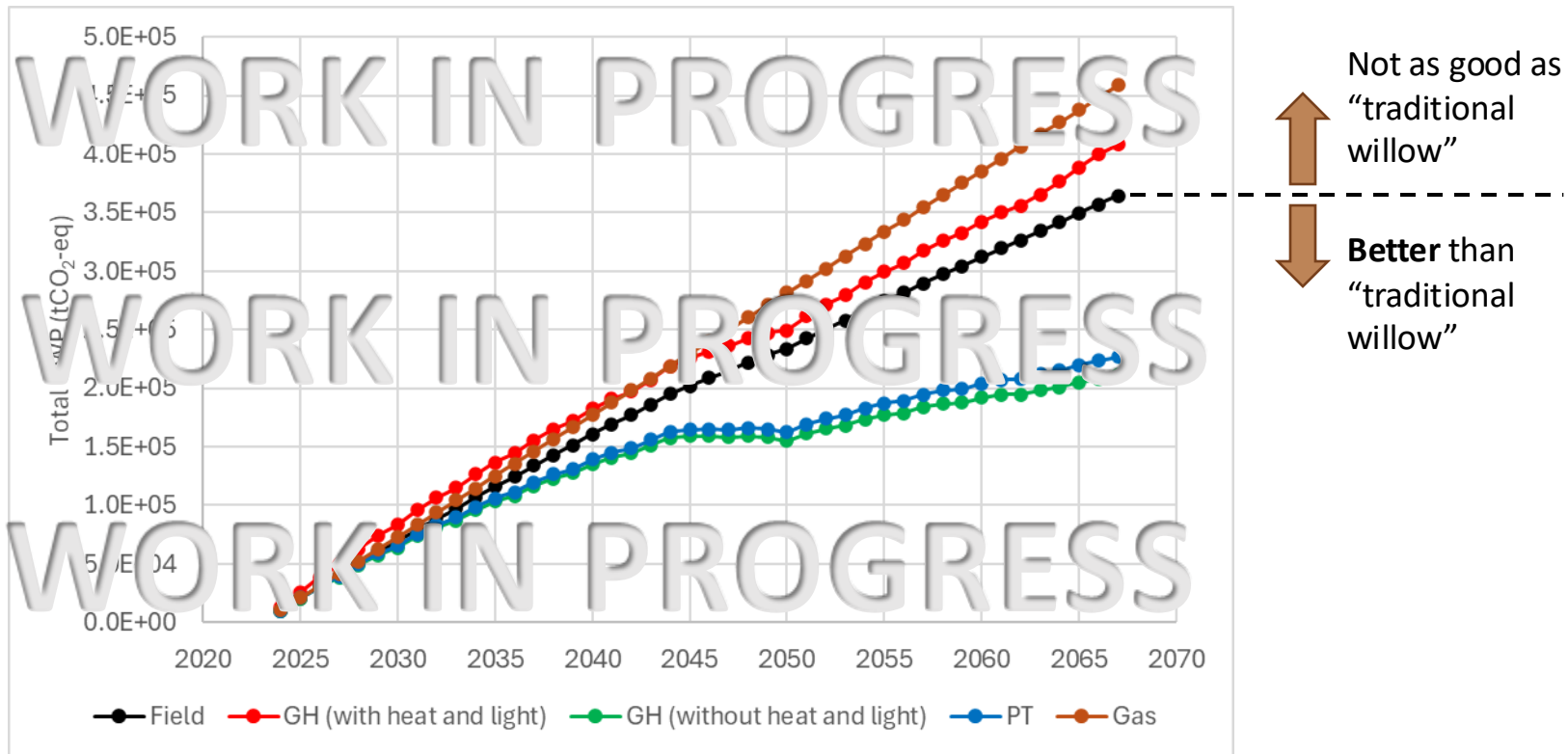


Environmental life cycle assessment



All results time sensitive
2023 → 2050+

Over time, our technology can improve environmental impact by accelerating field planting of SRC willow, despite slightly higher initial impacts



What might the wider benefits be?



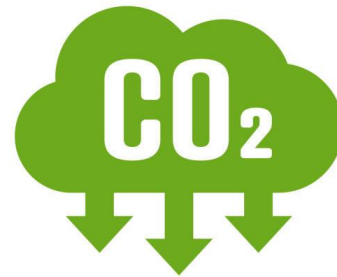
GDP impacts

Industrial output change

Emission reduction

Household income change

Welfare impacts





**Got a great idea? We're keen
to collaborate!**

Get in touch:

info@taedatechnologies.com

Thank you for listening

Any questions?



LinkedIn



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Department for
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