Session	Emerging Innovative Technologies: Novel Fermentation and DSP Innovations
Title	Turning industrial CO_2 into high-value biomass.
Company	Carbon Harvest Ltd
Speaker	Martin Lawton
TRL	TRL 4 - 7
Keywords feedstock (max 2)	Off-gas Microalgae
Keywords technology (max 2)	Novel bioreactor
Keywords End-Product (max 2)	Polymers/Materials Chemicals

Abstract:

Carbon Harvest Ltd has developed the BioTron Tower, a modular, internally-illuminated photobioreactor that converts industrial CO2 off-gas directly into high-value, non-food micro algae biomass — feedstock for bioplastics, industrial lubricants and future SAF precursors. Unlike open-pond or credit-monetised carbon-removal approaches, the BioTron Tower is a closed, compact system designed for on-site retrofit at industrial emitters, targeting product revenue rather than carbon-credit revenue. A 100-litre prototype has been previously trialled and now scaled to 1,500 litres. The 1,500-litre unit was built and operated in New Zealand and is now at the University of Cambridge's Algal Innovation Centre, ahead of recommissioning and baseline testing. We now wish to run a staged validation programme — physical performance testing, lightweight process modelling, techno-economic and life-cycle assessment — toward a 4,000-litre demonstration and TRL 6. We are seeking, an industrial CO2 emitter or biomass off-taker to host real flue-gas validation, and investors for a staged development round following a costed scoping stage. Join us to discuss partnership and co-development opportunities.