



Session	Start-ups/SMEs looking for Finance: pre-seed/angel/seed funding
Title	Containerized On-Site Fermentation
Company	Niskus Biotec
Speaker	Vincent Farrelly
Keywords feedstock (max. 2)	Wet BSG
Keywords technology (max 2)	Modular Biorefinery
Keywords End-Product (max 2)	Enzymes, Biomass
Abstract:	
Niskus Biotec delivers modular, rapidly deployable, containerized on-site fermentation that upgrades wet brewers' spent grain (BSG) into high-value bioproducts such as tailored enzymes and protein-rich microbial biomass, creating new revenue with minimal disruption at breweries. On-site valorization of wet BSG reduces water handling, logistics, and CO2 burdens while unlocking proteins, fiber, and bioactives for higher-value food and feed applications. Our compact 20-ft shipping container mini-pilot integrates upstream processing, downstream processing (DSP), and advanced water reuse for rapid, real-world deployment by brewery staff, using fit-for-purpose technologies for brewery environments. Niskus is developing low-cost fermentation configurations, IoT feedback-control sensors, and edge-AI to run real-time virtual scenarios from live pilot data for adaptive optimization. CAPEX-lite and OPEX-smart, the piloting platform generates site-specific techno-economic (TEA) inputs and operating envelopes that de-risk and accelerate biorefinery scale-up, market evaluation, and regulatory readiness of pilot bioproducts. Built as a building-block modular platform, it supports tailored revenue-sharing and financing models for economically sustainable, multi-side stream, multiproduct biorefineries, and the same piloting approach transfers across food and drink side streams for cross-sector deployment. Niskus is building a partner ecosystem—including hardware, bioware, engineering, and finance—to accelerate CAPEX-lite biorefinery roll-outs, and is engaging food-and-drink partners and offtakers for pilots to scale up biorefineries.	