Delivering excellence to the global sugar industry

Queensland University of Technology (QUT) offers expertise in sugar milling and refining technology to the global sugar industry, and is the largest supplier of R&D services to the Australian raw sugar manufacturing sector. The Centre for Tropical Crops and Biocommodities (CTCB) within QUT is the main provider of those services in partnership with the Sugar Research Institute. Our transdisciplinary team of engineers and scientists build on over 65 years of sugar industry experience to solve technical and operational challenges in sugarcane harvesting, milling, and sugar processing. Our team works across the full project range from discovery and laboratory testing, through pilot-scale development, to commercial design, installation, commissioning, evaluation, auditing, and training.

Key areas

- Harvesting, transporting, and cleaning
- Handling, storage, and logistics
- Reducing environmental impact
- Cane preparation, milling, and diffusion
- Sugar processing (clarification, filtration, evaporation, crystallisation, sugar separation, drying, and refining)
- Boiler assessment and improvements (combustion, erosion, corrosion, and emissions)
- Design of greenfield sugar factories and refineries
- Design of sugar processing equipment
- Process modelling, computational fluid dynamics, and structural analysis including finite element modelling
- Performance enhancement, auditing, and strategic planning
- Life cycle assessments
Outcomes for industry

- Australian sugar industry-wide adoption of proprietary software for optimisation of sugarcane rail scheduling
- Cost-effective factory optimisation through audits and implementation of world sugar industry best practices
- Major reductions in capital and maintenance costs
- Global industry training configurable for all levels from operator to senior technologist
- Substantial technology developments for sugar manufacturing processes providing increased efficiency, improved sugar quality, increased profitability, and environmental sustainability
- Development of process equipment designs
- Australian sugar industry-wide improvements in energy efficiency and increased export of renewable electricity

Global presence

Queensland University of Technology is currently delivering these outcomes in the following countries.

Oceania – Australia, Fiji, Papua New Guinea

Asia – Cambodia, China, India, Indonesia, Iran, Malaysia, Myanmar, Pakistan, Philippines, Thailand

Africa – Kenya, Mauritius, Nigeria, Reunion, South Africa

Americas – Argentina, Brazil, Colombia, Guatemala, Mexico, Nicaragua, Peru

Contact

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