UniQuest Pty Limited

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Technology

- WWTPs produce large amounts of sludge as a byproduct
- Disposal costs are high: 20% to 60% of the total operating costs
- Anaerobic digestion reduces the amounts and offsets the costs by producing biogas from the organic chemicals in the sludge
- Pre-treating sludge before AD releases more organics, enhancing both volume reduction and biogas production
- Lodomat is a novel chemical sludge pre-treatment process using free nitrous acid (FNA) at ppm levels

![Chemical structure of FNA](image)
Market

- All waste water treatment plants
  - Public and privately owned
  - Integrated water management companies
  - Equipment suppliers
- Europe + USA + China: 240 m wet tonnes sludge produced per year
- Farmland and landfill disposal options are reducing, so costs will keep increasing
- Highest disposal costs are in Europe: €30-100/wet tonne
- WWTPs will continue to produce sludge
Stage

- Developed by Prof Zhiguo Yuan’s team in the Advanced Water Management Centre at The University of Queensland
- Multiple laboratory studies completed
- Results repeatedly confirmed
- Field trials of Cloevis, a related FNA technology, are under way in Australia and USA
- Lodomat is ready for field trials
- Talks under way with potential partners
Strategy

• The market for proprietary pre-treatment processes already exists
• Uptake has been limited by cost and complexity
• There is a big opportunity for a low cost, easy-to-operate solution
• Patent applications have been filed in key markets
• We are seeking partners who are well positioned to deliver Lodomat in each of the key markets under exclusive licences
Value Proposition

- 20-30% increase in biogas production
- 5-10% reduction in sludge volume
- Low capital and operating cost
- Easy to install or retrofit
- 2 year payback
- Innovation
  - Highly cost effective solution
  - Simple for operators to manage
  - The key chemical can be recycled from the digester liquor, increasing sustainability
  - Lodomat can also be applied to reduce the cost of nitrogen removal