

TECHNOLOGY TUNNEL

BIG IDEAS

Autonomous Nutrient Detection WATER QUALITY MONITORING

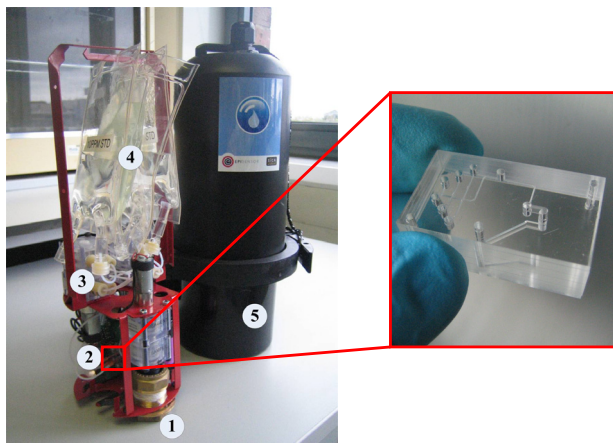
PROBLEM / MARKET NEED

- Growing demand for increased monitoring of water quality
- Global issue with strong legislative and societal drivers
- Global market for environmental monitoring technologies is expected to reach \$13 billion in 2014. In China the water monitoring technology sector is expected to average annual growth rate of 20% (Frost & Sullivan)
- Current monitoring solutions cannot provide the necessary spatial and temporal resolution. Low cost autonomous monitoring solutions are required



TECHNOLOGY SOLUTION

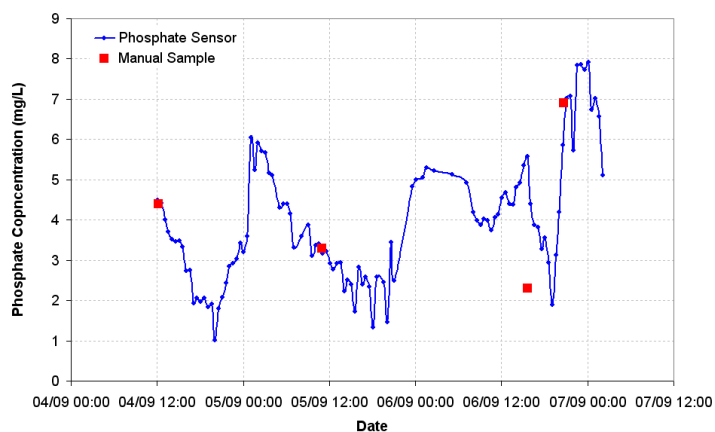
- The autonomous nutrient analyser is a compact and portable device capable of performing reagent based chemistry in remote locations
- Compared to existing solutions, the system has
 - Lower manpower/maintenance requirements
 - Lower cost of ownership
 - Longer deployable lifetime
 - Small footprint - compact and portable
- Current work is focusing on the development of commercial versions of the analyser platform and also expanding the range of target nutrients



Nutrient analyser design: (1) Sample inlet; (2) Control board and microfluidic chip (insert); (3) Peristaltic pumps; (4) Reagent bags; (5) IP68 enclosure

PREFERRED ROUTE TO COMMERCIALISATION

- Technology transfer programs with industry partners
- 12 – 24 month timeline to commercialisation
- Focus on reducing manufacturing costs and increasing performance
- Field validation and promotion of the finished commercial systems



IP POSITION

- Significant know-how associated with the systems which cannot be easily reproduced – microfluidic design, optics, sample delivery, minimising fouling
- Future systems will benefit from our patented technologies, allowing for the development of analysers with IP protected core components (US Patent: 7008795, US Patent Application No. 12/026,275)