TECHNOLOGY APPROVAL GROUP

BACWA - Introduction to Isle
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- Boutique technology & innovation consultancy
- Water, waste, energy and low carbon
- Offices in UK, Australia and US (California)
- ca 25 staff (plus ca 25 Associates)
- $2.5m turnover
- Core product: Technology Approval Group
  - 100 utilities from around the world
  - Water TAG groups in N Europe, S Europe, Singapore (Asia), Australia, and California
  - New TAGs planned for Middle East, Canada, and China
- Company ethos: ‘Give more than we take’
  - 50% of profits donated to:
    - Water/sanitation start-ups (REEF) or
    - The ‘Applied Research’ fund
What is TAG?

TAG brings a new energy and momentum to the water industry

- Innovation forum of the world’s leading water utilities
- Unparalleled track record in bringing new technologies to market
- Industry collaboration
- Strong links to VC investors
How does TAG work?

Market needs

Due diligence

“Step-change” technologies, global search

TAG

Water utilities

Supply chain

Research bodies

Industry orgs

VCs
How does TAG work?

Proposed Technologies list
How does TAG work?

TAG meeting

“Step-change” technologies, global search

Market-ready product

Water utilities

Supply chain
Research bodies
Industry orgs
VCs

Commercialisation activities
Track Record

- 2,000 technologies since 2005
- 35 TAG meetings to date globally
- 130 presented at TAG
- 75% have been taken forward by TAG members
- ~$300m of VC investment secured
Our International TAG Members

Global Water Resources
Our Australian members

City West Water

wannonWATER

WESTERNPORT WATER

CENTRAL HIGHLANDS WATER

goulburn VALLEY WATER

East Gippsland Water

Melbourne Water

southern water

Sydney WATER

LOWER MURRAY WATER

SOUTH EAST WATER

ACTEW CORPORATION

HUNTER WATER

WESTERN WATER

MIDCOAST WATER

Yarra Valley Water

Barwon Water

Gosford City Council

Coliban Water

Shoalhaven Water

Link Water

The Queensland Bulk Water Transport Authority

Gladstone Area Water Board

SA Water

Unitywater

GWM Water

Qld Urban Utilities

PowerWater

Banana Shire
Ostara – Nutrient recovery

- Nutrient removal from centrates following dewatering of sludge
- Recovery and recycling into a high value commercial fertiliser (Crystal Green™)
- Good uptake in North America
- Commercial roll-out in UK following demonstrations with Thames Water and Severn Trent Water
- Now looking at other markets
- Recent round of investment to support the commercial exploitation
SCFI – AquaCritox Supercritical Water Oxidation

- Complete destruction of digested sludge
- Trials in the pipeline with YW and STW, who will be sending sludge samples to their demonstration plant at Cork
- SCFI have secured a partnership with Parsons (for Engineering) and Rockwell (for instrumentation)
- Seeking €9m of investment
- Future plans include a €3m full-scale plant for an industrial client in Cork and also to develop a mobile unit
Emefcy – Passive aeration

- The reactor is based on breathable membranes rolled in a spiral
- Air is blown past the membranes and $O_2$ diffuses through into the biofilm
- Decreases the energy needed for aeration by 95%
- Modular and odourless system
- Ideal for small municipal WWTW (100–3,000 m³/day)
- Alternative applications could be tertiary treatment
Micromidas – Sludge to Plastic

- Process converts wastewater solids into a bio-polyester plastic called PHA (polyhydroxylalkanoate)
- The process consists of modified digestion and aerobic fermentation
- The microbial population converts fatty acids into intracellular polymer
- The plastic is then extracted, polished, and sold as a plastic resin for use in multiple applications
- Plastic could be worth 5-10 times the value of biogas
What we are offering?

- 4 TAG meetings per year
- 2 Innovation workshops per year for TAG members
- Technology Portal - Access to our online portal with over 1000 technologies and feedback from other utilities globally
- Eureka App - Access to our Eureka app to keep you informed about trials taking place globally
The cost?

- We use a range of different pricing models, each structured for the local market. Typically a tiered approach works.

- Running a ‘local’ TAG delivery team typically costs $250k – $350k.

- In California we anticipate TAG forums in San Diego, LA and San Fran; both Water and Wastewater.

- Could deliver BACWA TAG for ca $100k. Suggest capped investment for any individual member.

- **Open Book Policy** – All surplus profits made from TAGs will be reinvested back into trials or used as a discount on next years subscription.
Timescales & Potential Next Steps

- **OCSD TAG Meeting:**
  - Next OCSD TAG meeting on 8th November 2012.
  - BACWA representatives could attend to consider membership

- **New BACWA TAG?**
  - Kick-off meetings to be held from Jan 2013,
  - First BACWA TAG in March 13?
Summary

- TAG accelerates technology development and commercialization
- Closing the loop
  - Sourcing technologies / deal flow
  - Encourages market uptake and shared risk
  - Extended network of investors to drive financial support
  - Engineering through to board level management
  - ‘Eureka App’ to provide real time feedback
Thank you

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