

## CORPORATE MEMBER NEWS

### From Divers to Robots

*Clean faster, clean smarter, eliminate downtime*

In 2017, Fremantle Commercial Diving (FCD) set out to find robotic tank and reservoir cleaning systems to replace the need for human entry when cleaning water assets. Their management team travelled to Europe, America and the Middle East to evaluate a series of robots by different manufacturers who all claimed to have already invented robots to undertake this type of work.

Five robots were purchased and trialled, of which all five failed to meet the required testing benchmarks set by FCD and their clients, and all were subsequently abandoned.

FCD commenced an intensive Research and Development (R&D) program in 2019 to design and build the world's first truly viable tank and reservoir cleaning machines. Development challenges were numerous and as the program progressed it was easy to see why the initially purchased off-the-shelf robots failed in both capability and reliability.

Expectations from Australian Industry are very high, and the diversity of water assets encountered proved a difficult challenge. The results of building against this high benchmark have ultimately been worth the effort, with the robots being incredibly successful and receiving multiple awards in Australia and overseas.

The R&D program culminated in the formation of two new divisions within FCD, Dredge Robotics (non-potable) and Watertight Robotics (potable) and the production of a world leading fleet of underwater robots.



*Liner-safe robot cleaning a HDPE lined process pond.*

To-date, FCD have designed and built 8 different types of robots including liner-safe potable tank cleaning robots, process tank cleaning robots and large liner-safe robots with weed harvesting capability for ponds.

The fleet includes inspection robots to gather detailed footage of potable tanks post-clean to demonstrate condition. Many clients have transitioned to using remotely controlled robots, as they are a safer more efficient alternative and can clean assets while they remain online and in-use.



[dredgerobotics.com.au](http://dredgerobotics.com.au)



[watertightrobotics.com.au](http://watertightrobotics.com.au)

*Contributed by Rosalie Ritchie from FCD.*



*Potable tank cleaning robot removing sediment while the asset remains online.*