



ASX RELEASE | De.mem Limited (ASX:DEM)

## De.mem deploys membrane technology across multiple industry sectors in Asia

- **Market interest in De.mem's technology is growing significantly – recently deployed in Automotive, Electronics Manufacturing, Oil & Gas and Municipal Water Treatment sectors**
- **More deployments expected in the near term**
- **De.mem well placed to deliver revenue guidance of \$10m - \$12m for CY2018**

**4 October 2018: Water and waste water treatment company De.mem (ASX:DEM)** ("De.mem" or "the Company") confirms the deployment of its proprietary membrane technologies in several pilot projects and small scale commercial projects in the Automotive, Electronics Manufacturing, Oil & Gas and Municipal Water Treatment sectors in Asia. These deployments come in addition to the commercial orders which were received by the Company as announced on 3 April 2018.

Membrane technologies in De.mem's portfolio deployed include the low pressure hollow fibre nanofiltration (NF) membrane and the hollow fibre ultrafiltration (UF) membrane. Both are licenced from De.mem's R&D partner, Singapore's Nanyang Technological University (NTU) – which has been ranked as a global leader in membrane research. Furthermore, De.mem licensed a Forward Osmosis (FO) membrane technology originally developed at NTU for de-watering applications in industrial waste water treatment and holds a strategic 32% stake in Aromatec Pte Ltd, a Singapore-based company which aims to promote this FO technology to the food & beverage sector.

Deployments in pilot projects include:

- **A car wash facility wastewater treatment (Singapore):** A process comprising of pre-filter, UF and NF membranes which implements a simple, low pressure process in which DEM has substantially reduced turbidity (i.e. cloudiness and haziness) in wastewater by more than 99%. Chemical Oxygen Demand (COD) also was reduced by more than 96%. Dissolved contaminants as measured by Total Dissolved Solids (TDS) were reduced by more than 60%. The result of this process ensures water quality is in line with Singapore's discharge limits.
- **Treatment of waste water from an electronics factory (Singapore):** Also utilising pre-filter, UF and NF membranes, DEM implemented a simple, low-pressure process to reduce key parameters such as turbidity and COD by approximately 99% and 91% respectively. TDS were reduced by 87%, ensuring the product water quality met the client's requirements for recycling of the treated water back into production.
- **Treatment of river water at a site in the Mekong Delta (Long An province, Vietnam):** De.mem deployed NF membranes over a period of more than eight months which demonstrated that, at a low operating pressure of only 1.5 bar, the membrane was capable of significantly reducing important parameters such as turbidity and bacteria count, which was found superior to treatment by ultrafiltration (UF). At the same time, it was confirmed that the membrane was able to operate stable over this relatively long period of time.

More detailed information on the above case studies, including more technical data, is available at the below link:  
<http://demembranes.com/downloads/>

Small scale commercial projects were completed by or awarded to De.mem as follows:



- **The production of de-ionized water for the rinsing of the vehicles at a car wash facility (Singapore):** De.mem deployed its proprietary UF membranes as the pre-filtration in a UF-Reverse Osmosis (RO) based de-ionization system, to protect the RO membranes from deterioration.
- **Treatment of waste water from a factory within the oil & gas sector (Singapore):** De.mem has been engaged to deploy its proprietary UF membranes within the factory's production process for recycling of the factory's waste water back into production.
- **Sale of a FO membrane based water treatment system to a research institution (Singapore):** De.mem has been engaged to deliver a turn-key FO water treatment system for use in lab research by a research institution in Singapore.

The collective revenue from these small-scale commercial projects is nominal at ~AUD\$90,000. While this is immaterial with respect to the overall revenues of the Company, the successful deployments prove that the technology is widely applicable and has strong technical advantages. Most noteworthy is that the projects are precursors to larger commercial contracts in the Asia-Pacific region, and to the roll out of the products into water treatment plants operated and maintained by De.mem under a Build, Own, Operate ("BOO") or Operations & Maintenance ("O&M") agreements in Singapore and Australia.

De.mem has invested substantially in the performance of these pilot projects in the past, as well as into the development of the technologies to commercial readiness, their validation for numerous applications across different industries and the manufacturing scale-up.

**De.mem CEO Andreas Kroell said:** "De.mem has managed to build up membrane production and establish its proprietary technologies across multiple sectors in the field, and in record time. The technical data delivered from these deployments supports the value proposition of our technology portfolio, and provides De.mem with a unique product offering to multiple industries. The technology portfolio carries a lot of value from an industry perspective, which is expected to have a positive impact on De.mem's future financial results.

"We are aggressively building our technical capabilities and will present further proprietary membrane technologies to the market in coming months. These give us a major strategic advantage in the water and wastewater treatment market, and are helping drive more deployments across multiple industry sectors. These will surely translate into new revenue-generating contracts once the technology benefits are fully recognised.

"We are well placed to meet our previously stated revenue target for CY2018 of between \$10m and \$12m and we have a number of growth initiatives underway to further strengthen our revenue base. Bidding activity is very favourable in Australia and Asia."

-Ends-

**For further information, please contact:**

**De.mem Limited**

**Andreas Kroell**

CEO

De.mem Limited

[investor@demem.com.sg](mailto:investor@demem.com.sg)

**Media & Investor Enquires**

**Six Degrees Investor Relations**

Henry Jordan

+61 (0) 431 271 538



### **About De.mem Limited**

**De.mem Limited (ASX:DEM)** is a Singaporean-Australian decentralised water and waste-water treatment business that designs, builds, owns and operates water and waste water treatment systems for its clients. De.mem operates in the industrial segment providing systems and solutions to customers from the mining, electronics, chemicals, oil & gas and the food & beverage industries and in the municipal and residential segments. De.mem has licensed proprietary technologies from its partner in research & development Singapore's Nanyang Technological University (NTU), including an exclusive worldwide license for a revolutionary low-pressure hollow fibre nanofiltration membrane. Through its wholly owned water and waste water treatment original equipment manufacturing (OEM) subsidiary Akwa-Worx Pty Ltd, De.mem has a strong presence in Australia. Akwa-Worx has a market reputation for building high quality Australian designed and manufactured products and has long-term customers in the Australian mining industry. To learn more please visit: [www.demembranes.com](http://www.demembranes.com)

### **Forward Looking Statements**

Statements contained in this release, particularly those regarding possible or assumed future performance, revenue, costs, dividends, production levels or rates, prices or potential growth of De.mem Limited, are, or may be, forward looking statements. Such statements relate to future events and expectations and, as such, involve known and unknown risks and uncertainties. Actual results and developments may differ materially from those expressed or implied by these forward-looking statements depending on a variety of factors.