



**De.mem Limited (ASX:DEM)**



Overview -  
Planned  
Acquisition

01

# Planned Acquisition – Market Entry into Germany and Europe

## Summary - “Target Company”

Location: Germany

Sector: Industrial Waste Water Treatment

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## Complementary Product Offering

Focus on chemical dosing solutions

Pre-treatment to membranes

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Revenues approximately

**\$1.8 million AUD**

in the 12 months to 31 December 2017 (unaudited)

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EBIT approximately

**\$230,000 AUD**

in the 12 months to 31 December 2017 (unaudited)

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Long-term customer relationships  
with 100+ corporates and SMEs in  
Germany

De.mem has signed a non-binding term sheet to acquire 75% of the shares of a company based in Germany supplying services and solutions for industrial waste water treatment (the “Target Company”)

The Target Company has a focus on the plating and metals processing industries – a significant industry in Germany and in many Asian countries i.e. China

Product lines include mainly the supply of advanced chemical dosing systems, solutions and consumables for industrial waste water treatment

Well-established customer base of 100+ large corporates/multinationals and local SMEs

The acquisition enables De.mem’s market entry into Germany and Europe and provides a platform with significant opportunities for growth



# Deal Structure

- De.mem intends to buy 75% of the Target Company's shares for approx. 865,000 A\$ in cash (equivalent to a valuation of approx. 5x EBIT), plus associated legal and transaction costs
- Planned closing date in early 2019
- The owner of the Target Company to remain with De.mem after the acquisition
- Closing and completion are subject to the completion of due diligence, the execution of definitive agreements and the raising of sufficient funds through the entitlement offer



# Transaction Rationale



## Strategic

- Strategic milestone with market entry into Germany and Europe – market size for sales of water treatment systems and components estimated at 1.45 bn EUR in 2010 in Germany alone\*
- Target Company provides an ideal platform for penetration of the fragmented German industrial waste water treatment market and to further accelerate roll out of De.mem's membrane technologies
- “Cross Selling” of Target Company's know how into Asia: Widely applicable for waste water treatment at Asian factories



## Financial

- Target Company with stable revenues (approx. 1.8m A\$ in 2017, unaudited) and positive EBIT (approx. 230k A\$ in 2017, unaudited) over previous years
- Earnings-accretive acquisition which will contribute positively to group profits
- Opening up additional opportunities for top-line growth through regional expansion
- Reasonable valuation with approx. 5x EBIT



## Operational

- Highly complimentary product lines and know how as Target Company's products are often deployed as pre-treatment for and in conjunction with membranes; i.e. for recycling of industrial waste water
- Synergies in the manufacturing of systems and equipment
- Complementary customer base

Overview -  
Entitlement  
Offer

02

# The Offer

- Pro-rata non-renounceable rights offer of 1 new share for 7 shares held by eligible shareholders at an issue price of \$ 0.135 per new share (the “Issue”)
- Issue price represents an approx. 25% discount on the 10 day VWAP and an approx. 20% on the closing price as of 23 November 2018 of \$0.17 per share
- Existing shares on issue: 107,668,974
- Maximum number of new shares to be issued: 15,381,282 shares
- Issue Price: 0.135 A\$
- Maximum number of shares on issue upon completion of the offer: 123,050,256

# Use of Funds

• Planned Acquisition of proposed new project including related legal and other expenses (see Section 1):	950,000 A\$
• Manufacturing and operating	500,000 A\$
• Research & development:	200,000 A\$
• Estimated cost of the Issue:	30,000 A\$
• Working capital:	396,472 A\$
• <b>Total:</b>	<b>2,076,472 A\$</b>



# Indicative Timetable

- Announcement and application for official quotation of new shares: 26 November 2018
- Section 708AA notice given to ASX: 26 November 2018
- Lodgement of offer document with ASX: 26 November 2018
- Notice provided to shareholders and option holders: 27 November 2018
- Existing shares quoted on an 'ex' basis: 28 November 2018
- Record date for determining entitlements under the Issue: 29 November 2018 (5.00pm AWST time)
- Dispatch of offer document and acceptance form: 4 December 2018
- Closing date: 13 December 2018 (5.00pm AWST)
- Shares quoted on a deferred settlement basis: 14 December 2018
- Notification of shortfall: 18 December 2018
- Anticipated date for issue of new shares: 20 December 2018
- Deferred settlement trading end: 20 December 2018
- Commencement of trading of new shares: 21 December 2018

Corporate  
Overview

03

# A Huge Market Opportunity: Decentralised Water Treatment

- The global market for packaged / decentralised water treatment systems was valued at USD 12 billion in 2015 and is projected to reach USD 21.8 billion by 2021 - a compounded growth of 10.4% per annum\*
- Water pollution and scarcity among key issues for many developed and developing countries worldwide
- Outdated and ageing infrastructure in many countries are compounding the matter
- Large centralised plants are often inefficient, require heavy budgets or take too long to deploy
- Decentralised or “packaged” plants as a cost-efficient and easy to deploy solution
- The opportunity is a reality for De.mem – not a pipe dream!



# Overview

## Introduction

De.mem Group (DEM) is a Singaporean-Australian company which builds de-centralised water treatment systems for customers in the Asia Pacific region

## Key Target Markets

Potable water  
Sewage treatment  
Industrial waste water  
Process water i.e. for F&B

## Key Product Lines

Membrane based water treatment systems  
MBRs  
Bioreactors  
Chemical dosing systems  
Hollow fibre membranes

## Key Investment Proposition

**DEM strives to become the market leader in the highly fragmented de-centralised water treatment segment – based on a range of new and revolutionary membrane technologies**

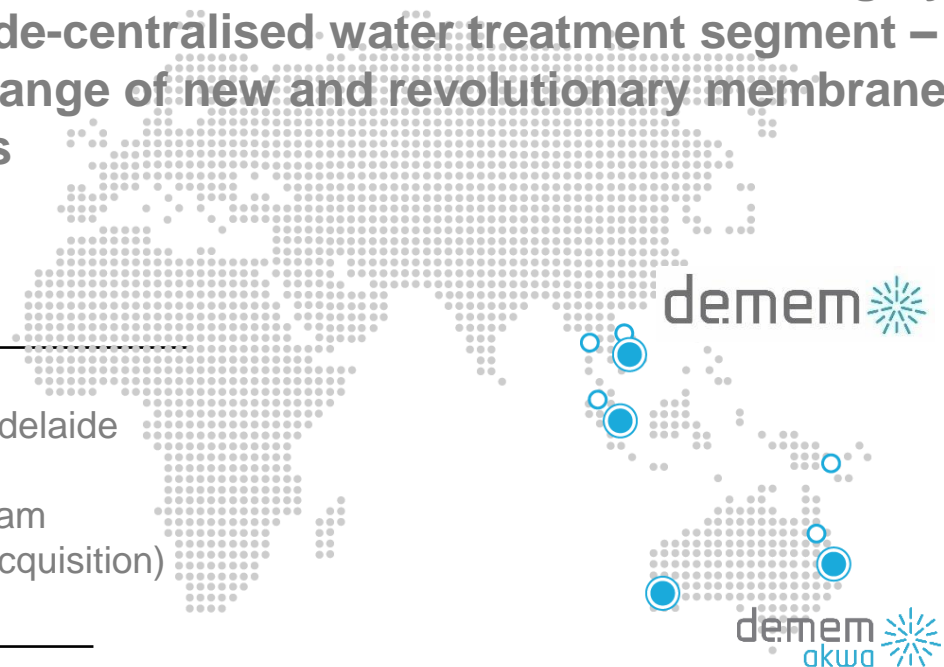
## Locations

Perth (registered office)  
Brisbane, Melbourne, Adelaide  
Singapore  
Ho Chi Minh City, Vietnam  
Germany (planned by acquisition)

## Employees

60

41 Australia  
12 Singapore  
7 Vietnam



# Leading Expertise in Engineering & Design of Water & Wastewater Treatment Systems

- De.mem builds, owns, operates and sells a wide range of decentralised water and waste water treatment systems – “packaged” or containerized and turn-key to the customer
- Systems use membranes as their key component (filter)
- Customers include mining companies, global EPC contractors, municipalities and water utilities

Potable Water



Industrial Waste Water



Sewage



Process Water & Recycling





# Underpinned by the Best Water & Wastewater Treatment Technologies

- Collaboration with Nanyang Technological University, Singapore (“NTU”) – one of the world’s leading institutions for water technology R&D
- NTU ranked no. 2 in membrane research worldwide by Lux Research (2013)
- De.mem owns the exclusive rights to a range of membrane technologies developed by NTU
- Complemented by further self-developed products
- Technology portfolio includes breakthrough innovations in the industry such as
  - low pressure hollow fibre Nanofiltration (NF) membrane and
  - hollow fibre Forward Osmosis (FO) membrane



Inventors Prof. Wang Rong and Prof. Anthony Fane awarded with the Alternative Water Resources Prize by UN Secretary-General Ban Ki Moon



# Financials

A\$ million	2016	2017	HY 2018	2018 Forecast
Revenues	0.3	2.9	6.0	10.0 – 12.0
COGS	0.4	2.4	4.5	n/a
Gross Margin	(-0.1)	0.5	1.5	n/a
Gross Margin (% of revenues)	Neg.	18%	24%	n/a
Net Operating Cash Flows	(-1.2)	(-2.4)	(-0.6)	n/a

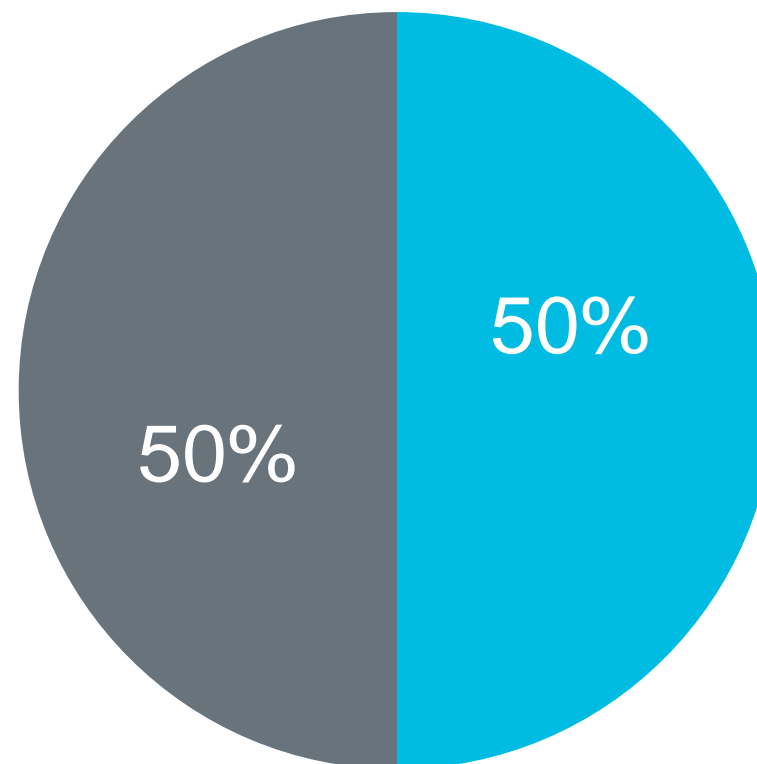
- Revenue growth in CY17 from \$0.3 to \$2.9m
- Cash receipts of \$8.9m in 9 months ended 30 Sep 2018
- Revenue forecast to grow further to \$10m-12m in CY18 based on strong sales pipeline in Australia and Asia
- Strong recurring revenue component of approx. \$3m from BOO & O&M contracts
- Gross margin of approx. 24% in HY18 (18% in CY17)
- Cash balance of \$1.8m as of 30 Sep 2018 – well funded for growth
- Reasonable cost structure: -\$0.6m operating cash outflows in HY18

# Blue Chip Customer Base



# Corporate Snapshot

ASX code	DEM
Ordinary shares	107.7m
Market capitalisation	\$18.3m
Cash on hand (30 September 2018)	\$1.8m
Listed on ASX	7 April 2017
Issue price	\$0.20
Last price (23 November 2018)	\$0.17
52 week high	\$0.29
52 week low	\$0.12
GICS classification	Utilities



# DEM: Excellent Leverage to Growth in Water Infrastructure Spending

Company	HY18 Revenue	Market Capitalisation (23 November 2018)	Technology	Market Focus
Fluence ASX: FLC	<b>A\$44.0m*</b> 6 months to 30/6/18	A\$205m	Aerobic waste water treatment (MABR)	Municipal waste water
Phoslock Water Solutions ASX: PET	<b>A\$9.7m**</b> 6 months to 30/6/18	A\$203m	Chemicals to bind phosphorus	Prevention of algae growth
Purifloh ASX: PO3	<b>A\$0.0m</b> 12 months to 30/6/18	A\$97m	Free Radical Generation (FRG)	Water treatment, air, surface sterilisation
De.mem ASX: DEM	<b>A\$6.0m</b> 6 months to 30/6/18	A\$18m	Membranes	Industrial (across many sectors) & municipal/residential water and sewage

\*US\$ 33 million

\*\*A\$15.7 million reported for the 12 months ended 30 June 2018 less A\$6 million reported for the 6 months ended 31 December 2017

Growth  
Plan

04

# Regional and International Expansion

## Germany / Europe

- Strong demand for decentralised / packaged solutions – in particular in industrial waste water treatment
- Market size for sales of water treatment systems and components in Germany alone estimated at 1.45 bn EUR in 2010\*
- Immediate growth opportunity through planned acquisition – see section 1

## Singapore / SE Asia

- Singapore as the water technology hub in South East Asia and worldwide
- De.mem as leading supplier for industrial waste water treatment in Singapore
- Huge need for decentralised water treatment in SE Asian countries due to lack of modern water treatment infrastructure
- De.mem with existing presence in Vietnam
- Expansion into further SE Asian countries based on partnerships

## China

- Tightening regulatory environment drives demand for municipal and industrial water and waste water treatment
- Capex on industrial water and waste water treatment forecasted to hit US\$ 6.8 bn p.a. by 2020\*\*
- China as key target market for De.mem – expansion strategy based on partnerships

## Australia & Pacific

- Australia as a strong home market
- Generating cash in HY 2018
- De.mem as a market leader in Queensland
- Australian-wide coverage through offices in Melbourne, Adelaide and Perth
- Strong pipeline for 2019 driven by mining and infrastructure sectors

\* Source: Statista

\*\* Source: Global Water Intelligence



# Growing Intellectual Property Portfolio

- **Nanofiltration membrane**  
Superior filtration performance due to minimum pore size at low pressure / energy consumption  
Developed at and licensed from NTU
- **Ultrafiltration membrane**  
Large applicable market, i.e. pre-filtration for Reverse Osmosis and potable water treatment  
Developed at and licensed from NTU
- **Forward Osmosis membrane**  
De-watering of industrial waste water and liquid concentration in F&B (via Aromatec Pte Ltd)  
Developed at and licensed from NTU
- **Domestic “point of use” filter system**
- **Ultrafiltration membrane**  
Maximizes rejection, flux and stability; in-house development
- **Microfiltration membrane**  
Large applicable market, including process water applications in F&B; in-house development
- **Membrane Bioreactor (MBR)**  
Treatment of high organic load waste water

Completed (2017-18)

Planned (2018-19)



# Near Term Growth Drivers

- Award of new customer contracts and further strengthening of order book
- Access to new technology / expansion of intellectual property portfolio
- Expansion into Germany and later to other European countries through planned acquisition
- Well placed to meet CY 2018 revenue forecast of \$10-12 million
- Continued growth in CY 2019

# Appendix

# Board with Strong Industrial Background



**Cosimo Trimigliozzi**  
Chairman

- COO of Wild Flavors International
- Managing Director Givaudan Asia
- MBA, University of Basel, Switzerland



**Andreas Kroell**  
CEO and Director

- Director New Asia Investments
- Deutsche Bank Corporate Finance
- Deloitte Audit & Advisory
- MBA, University of Frankfurt, Germany



**Bernd Dautel**  
Non-Executive Director

- Director New Asia Investments
- Managing Director Wieland Metals Asia Pacific
- Master of Chemical Engineering, Karlsruhe University of Technology, Germany



**Stuart Carmichael**  
Non-Executive Director

- Partner & Director Ventnor Capital
- Executive Vice President UGL Limited (ASX:UGL) KPMG Corporate Finance
- Bcom, CA



**Michael Edwards**  
Non-Executive Director

- Non-Executive Director Norwood Systems Limited (ASX:NOR) & Dawine Limited (ASX:DW8)
- BBus (Economics / Finance), BSc (Geology), Grad Dip (Oen)

# Experienced Senior Management Team



**Shane Ayre**  
General Manager,  
Australia

- Founder of Akwa-Worx
- 20+ years industry experience in the Australian water sector



**Kian Lip Teo**  
Chief Operating Officer,  
Singapore

- Lien Aid
- Bachelor/Master, Nanyang Technological University, Singapore



**David Chua**  
Director, Membrane  
Manufacturing, Singapore

- Mann+Hummel
- Hyflux
- 10+ years experience in membrane production
- Bachelor/Master, Nanyang Technological University, Singapore



**Nicanor Suarin**  
Chief Engineer,  
Singapore

- Hyflux
- Doosan Hydro
- 30+ years experience in process and system design
- Bachelor of Engineering, MBA, Philippines

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All figures included in this presentation are in AUD\$ unless otherwise stated. Assumed exchange rate of AUD\$1:USD\$0.75





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