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

Investor Presentation

5 May 2022: Water and wastewater treatment company **De.mem Limited (ASX:DEM)** (“De.mem” or “the Company”) is pleased to release the attached Investor Presentation with updated information about the business for future investors. This will be presented at the Coffee Microcaps seminar on 5 May 2022.

This announcement has been authorised for release by the Company’s CEO, Mr Andreas Kroell, on behalf of the Board of Directors.

-ENDS-

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De.mem Limited (ASX:DEM) is an Australian-Singaporean decentralised water and wastewater treatment business that designs, builds, owns and operates turnkey water and wastewater treatment systems for some of the world’s largest companies in the mining, electronics, chemical, oil & gas, and food & beverage industries. Its systems also provide municipalities, residential developments and hotels/resorts across the Asia Pacific with a reliable supply of clean drinking water.

De.mem’s technology to treat water and wastewater is among the most advanced globally. The Company is headquartered in Australia and has international locations in Singapore, Germany and Vietnam. It is commercialising an array of innovative proprietary technologies from its research and development partner, Nanyang Technological University (NTU) in Singapore, a world leader in membrane and water research. Technologies uniquely offered by De.mem include a revolutionary low-pressure hollow fibre nanofiltration membrane that uses less electricity and is cheaper to operate than conventional systems, as well as a new Forward Osmosis membrane deployed in de-watering applications or the concentration of liquids.

To learn more, please visit: 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

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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.

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De.mem Limited (ASX:DEM)

Investor Presentation

5 May 2022



De.mem provides innovative products and solutions for decentralised water treatment including hollow fibre membrane water treatment systems & associated specialty chemicals.



Technology Driven Competitive Advantage & Customer Value Proposition

Unique hollow fibre membranes result in simplified installations & operations which enhance water and energy efficiencies which ultimately provides customers with a unique value proposition.



70% Recurring Revenue Base

Expected recurring revenue of \$16.5 – 19m in CY22 reflecting growth of ~20 - 37% on CY21. Revenues are inherently sticky - never lost a material contract to a competitor in the build, own, operate or O&M segments.



12 Successive Quarters of Growth – Break Even in Sight

Total revenue of \$18.1m in CY21 (+28% on pcp) with quarterly EBITDA break even expected by 1HCY23. \$6.7M of available cash/deposits providing ample runway to support future growth prospects.



Blue Chip Customer Base

Multinational customer base provides a foundation for growth via land & expand and cross sell opportunities.

RioTinto          Givaudan 



ESG Drivers are Accelerating

ESG pressures are growing & driving the adoption of wastewater solutions across key target markets making De.mem's products more attractive to potential customers.



Favourable Market Dynamics – Highly Fragmented, Large Addressable Market

Competitors are focused on niche segments with limited technical, financial and organisational capabilities. Domestic TAM of A\$2.3bn with global TAM expected to reach US\$39bn by 2026 (see slide 3).



Opportunistic Acquisition Strategy

Four disciplined acquisitions completed which have expanded the service offering, built a presence in key markets and enabled cross selling opportunities.

LARGE ADDRESSABLE MARKET: STRONG REGULATORY TAILWINDS

ESG pressures are growing & driving the adoption of wastewater solutions and services. De.mem is well positioned to capitalise on these as a provider of water treatment solutions.

Drivers of Adoption

Treated wastewater being embraced as a sustainable alternative to fresh water

Growing cost of compliance, increased regulatory & social governance pressures

Water is a scarce resource which is fundamental to certain industries

Increased recognition of requirement to invest in ESG & regenerative practises



Significant Addressable Market

A\$2.3bn

Total Addressable Market in Australia

Decentralised wastewater systems
A\$300m p.a.¹

Pumps equipment market
>A\$1bn p.a.²

Water treatment chemicals
>A\$1bn p.a.³

US\$39bn

Global market for decentralised water treatment by 2026⁴

Sources:

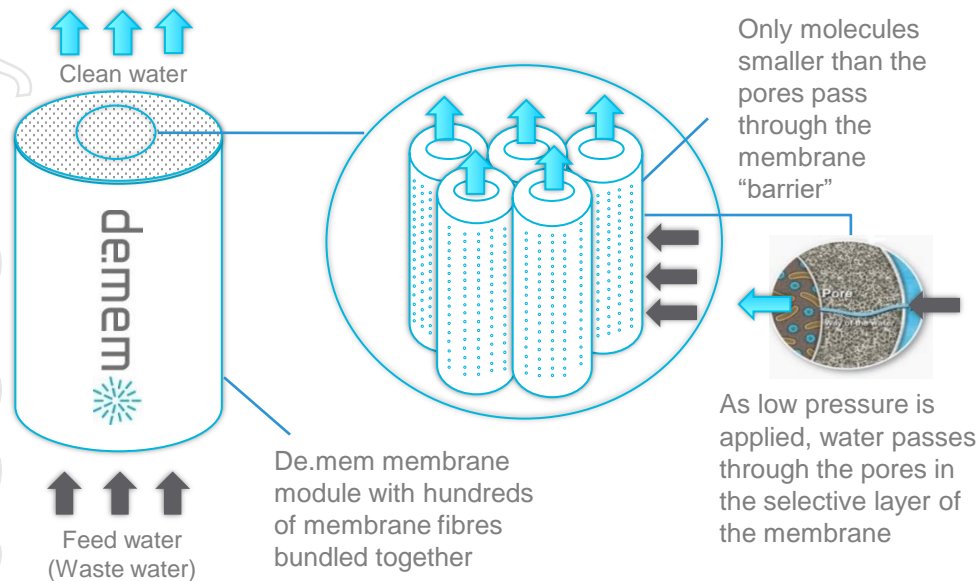
(1) Company estimates

(2) From the Australian Pump Industry Association website, April 2022

(3) RFDTV, Australian Water Treatment Chemicals Market Size in 2018, 29/11/2021

(4) Research & Markets, "Decentralized Water Treatment Market – Global Outlook and Forecast 2021-26", 24/9.2021

Principle of Hollow Fibre Membrane Filtration



- De.mem's membranes are a microporous structure, whereby the pore size within the membrane determines which contaminants can be removed.
- Membrane sizes span across nano, ultra and micro with varying pore sizes. Contaminants that can be removed are in Appendix 1.

Technology results in lower CAPEX & operating costs driven by the following:

- **Less Power Required:** Typically operates under 1-2 bar pressure, which can reduce energy consumption by up to 70% vs. a standard reverse osmosis plant (where applicable)
- **Less Harmful Chemicals Required:** Membrane can be operated in a simple, one-stage process, without additional pre-filtration resulting in less harmful and/or bulk chemicals
- **Ease of Use & Cleaning:** Simple backwash cleaning process results in reduced chemical usage, less maintenance requirements and longer product life due to minimal membrane fouling
- **Lower Footprint:** Less space required for treatment plant due to membranes high throughput capabilities and ability to be containerized

Membrane Bundles



Membrane Modules



De.mem provides clients with a comprehensive water & waste water treatment offering. These divisions and services are highly complimentary and allow for cross selling opportunities.



De.mem has a strong customer value proposition for clients driven by our technology and ability to deliver fully integrated solutions.

Competitive Market Dynamics

- Highly fragmented market with large number of smaller competitors who have limited technical, financial & organizational capabilities
- Competitors typically focused on selling low margin, commodity type products with little differentiation
- Vast array of treatment technologies which are typically focused on niche segments of the market, translating to a smaller market opportunity
- Investment in R&D is rarely undertaken

DEM's Technology Advantage

A portfolio of advanced membrane technology for high value applications / requirements

Clear advantages over established technology: high efficiency, superior contaminant removal, simplified operations, reduced cost and footprint

"Next gen" membrane technology with superior characteristics over existing membrane tech

DEM's Business Model Advantage

"One stop shop" providing an opportunity to gain a larger share of client spend & assisting with winning and retaining customers

Broadly applicable solutions resulting in a larger market opportunity

Advanced technology, providing a "competitive edge", assisting with winning and retaining customers

Unique build own operate model offering which provides customers with a strong value proposition

De.mem has never lost a material* BOO or O&M contract once installed. These services are inherently very sticky.



Contract with Mulpha / IHG Hospitality sector

- Supplied containerised seawater desalination plant for luxury resort in Australia in a \$3m project
- Designed & manufactured the plant utilising a De.mem membrane process
- Provides drinking water to the resort
- Service agreement (O&M) in place since 2020 with revenues of ~\$300k per annum
- 1,500,000 litres per day of water treated



Contract with Givaudan Food & Beverage

- Containerized industrial waste water treatment plant for food and beverage factory in Singapore
- Build, Own, Operate contract with value \$1.7m in revenues over 6 years, contract started 2021
- Deploying De.mem membranes
- Treats the waste water from facility to regulatory discharge standards
- 50,000 litres per day of waste water treated



Contract with Australian corporate Agricultural sector

- Containerized industrial waste water treatment plant for industrial site in South Australia
- Build, Own, Operate, Transfer contract with value of \$2m in revenues over 5 years, starting 2022
- Deploying De.mem membranes and chemicals
- Treats the waste water from facility to regulatory discharge standards
- 200,000 litres per day of waste water treated

*Material is defined as a contract with revenue above \$100k per annum.

De.mem has a high margin, specialty water treatment chemicals division. These products are used in conjunction with membranes, opening up substantial cross-sell opportunities.

- All water treatment plants require some form of chemicals to ensure the system meets discharge requirements

- De.mem's hollow fibre membranes require small amounts of high-value specialty chemicals for cleaning and fouling control during operations

- De.mem manufactures non-commoditized speciality chemicals which are high value add and high margin including:

- Scale and corrosion inhibitors
- Process cleaning agents
- Industrial cooling tower water treatment
- Process aids (biocides, defoamers, viscosity modifiers etc)
- Waste water treatment chemicals (coagulants & flocculants)

- Significant cross selling opportunity combining De.mem's membranes & water treatment products with specialty chemicals as these are all required by the customer at the same time



"NEXT-GEN" GRAPHENE-OXIDE ENHANCED MEMBRANE

De.mem's Graphene-Oxide enhanced membrane allows for substantially increased throughput compared to a standard UF membrane. This is a game changing advancement.

- Standard polymer Ultrafiltration membrane enhanced by the addition of Graphene Oxide nanoparticles.
- Developed in-house during a 24-month R&D process, allows for 20-40% more water flux (throughput of water volume) when compared with standard polymer membranes. Even higher flux can be achieved in certain applications.

The increased flux allows for two key benefits to be attained:

- **Reduced OPEX:** Ability to treat more water for same cost
- **Reduced footprint:** Ability to produce a smaller membrane cartridge which will still treat the same amount of water
- Currently preparing for initial rollout of the technology as part of a domestic water filtration device (point of entry/use filtration)
- Lower operating costs and small footprint are valuable in domestic setting
- NSF certification process for drinking water usage has been initiated and results are expected in H2 2022
- Strong level of interest from potential international partners to assist with rollout in foreign markets



BLUE CHIP CUSTOMER BASE - FOCUS ON THE INDUSTRIAL SEGMENT

Our customers typically have multiple sites and operations that require wastewater treatment & services. We are focused on growing with our customers through a land and expand strategy.

Mining

- Potable/sewage treatment for mining camps
- Waste water
- Mining water supply

RioTinto



Monadelphous



Infrastructure

- Potable
- Sewage treatment
- Water treatment for industrial facilities



Food & Beverage

- Waste water
- Process water
- Ultrapure water
- Recycling

Givaudan

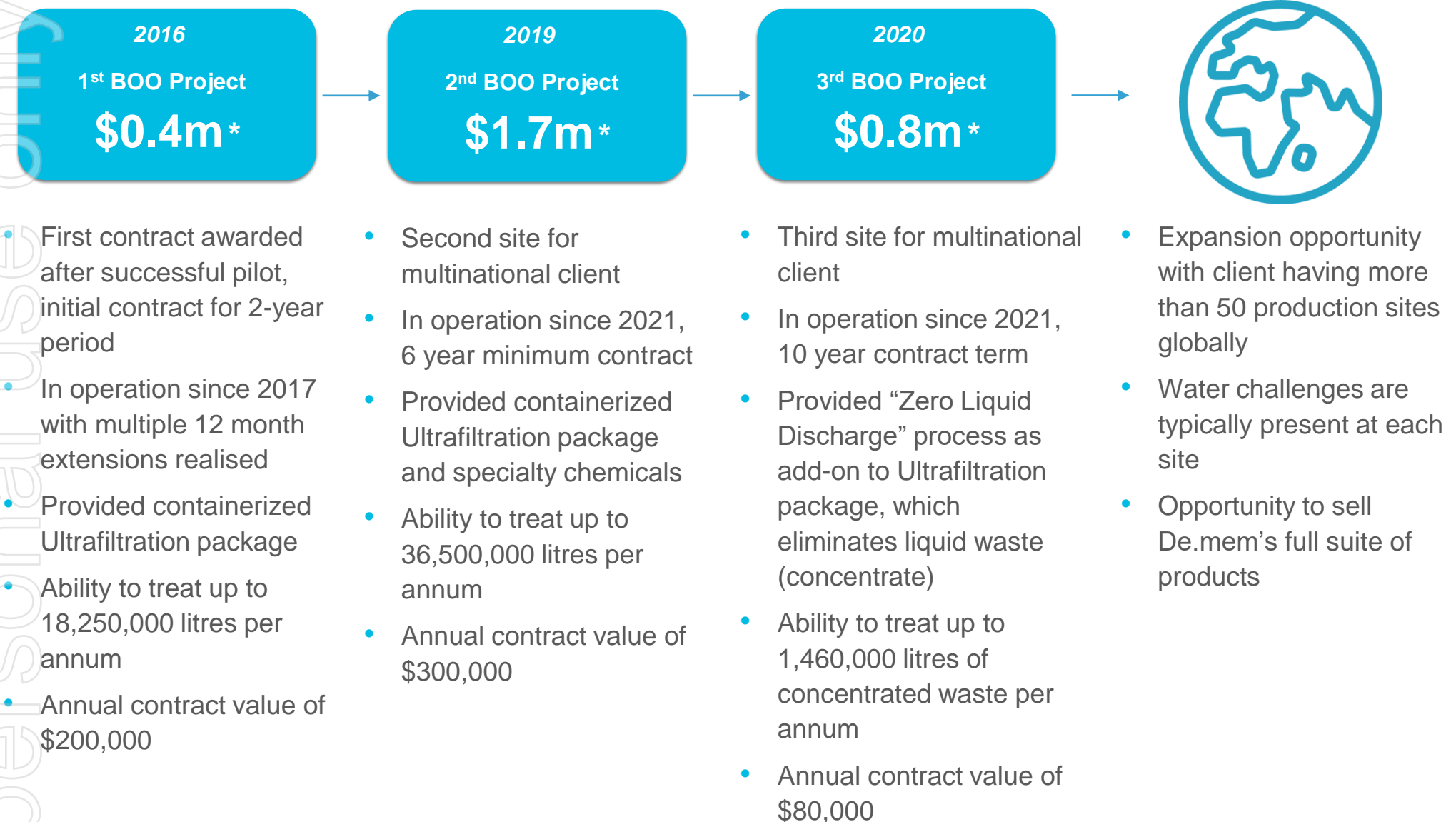


Other Industrial

- Industrial waste water
- Process water
- Ultrapure water
- Recycling

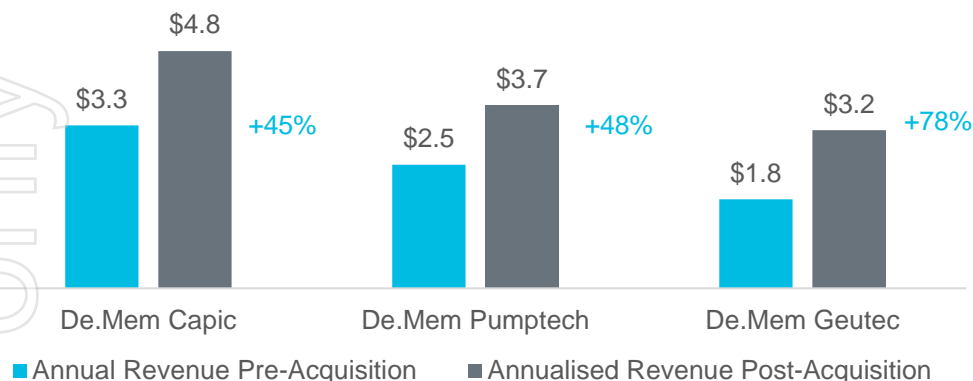


De.mem's growth model foresees expansion together with its multinational customer base “from site to site” – enabling an accelerating growth trajectory.



* DEM revenues over the life of the fixed term contract when initially signed, excludes contract extensions & roll overs

Revenue Performance of DEM Acquisitions



- 4 acquisitions completed since 2019
- Strong acquisition track record of generating shareholder value through cross sell
- All acquisitions have stable, recurring revenues
- Bolt-on acquisitions as an option to further accelerate top line growth
- Recently completed Stevco acquisition expected to have material positive impact on CY22 numbers if integrated successfully like previous acquisitions

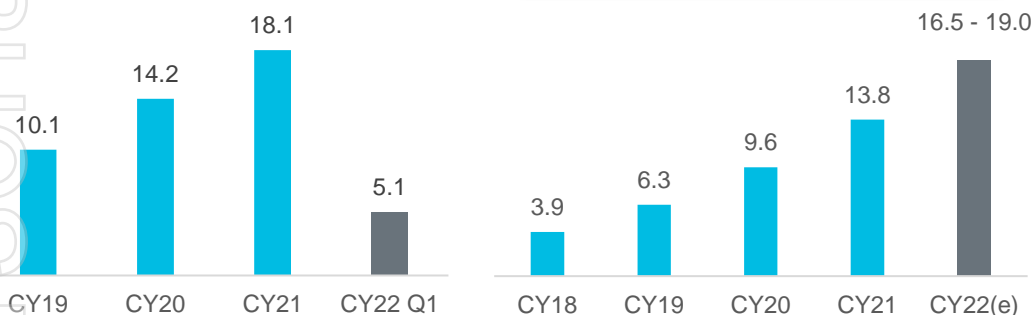
Business Name	Business Focus	Price Paid	Rationale & Cross Selling Opportunities
Capic Perth Based 2021	A supplier of high value add, high margin, speciality chemicals within mining services.	\$3.4m cash \$1.0m scrip	Provided De.mem with increased scale & geographic expansion into the strategically important WA market. Added complementary product range, blue-chip customer base and potential revenue cross-sell synergies.
Pumptech Tasmania Tasmanian Based 2019	Main product lines include membrane-based and other water / waste water treatment systems, as well as mechanical equipment.	\$0.9m cash \$0.15m scrip	Provided geographic expansion into Tasmania, further penetration of target verticals, product portfolio expansion, cross-sell opportunities, cost synergies and earnings accretion.
Geutec German Based 2019	Develops, manufactures and sells innovative chemicals-based products and solutions for waste water treatment to customers across Germany and Europe	\$0.92m cash (75% stake)	Provided platform for expansion into Europe, proprietary chemical range and synergistic membrane products. De.mem's existing customer base, expressed pre-existing demand for products sold by Geutec. Geutecs products were a key input for De.mem's membrane treatments.
Stevco Seals & Pumps Victorian Based 2022	Supplier of pumps, small water treatment equipment & maintenance services in Victoria.	\$1.25m cash \$0.25m scrip	Stevco's long term customer base also requires larger water treatment equipment, services and chemicals. This creates substantial potential for cross-selling of De.mem's advanced membrane-based water treatment solutions and its specialty chemicals range.

Visible path to achieving quarterly EBITDA breakeven by H1 CY2023 with a focus on growing recurring revenue base and increasing margins.

\$ million (Dec year end)	CY19	CY20	% on PCP	CY21	% on PCP
Revenues	10.1	14.1	40%	18.1	28.3%
COGS	7.5	9.8	30%	12.1	23.4%
Gross Profit	2.6	4.3	65%	6.1	41.8%
EBITDA	(-3.2)	(-2.8)	13%	(-2.9)	-3.5%
Underlying EBITDA*	(-3.2)	(-3.1)	3.1%	(-2.2)	29%
Cash Balance	7.8	4.6	-41%	8.5	84%

Strong start to CY22 – Q1 cash receipts up 49% on PCP (A\$ million)

Recurring revenues (A\$ million)



*Operating loss as per P&L adjusted for D&A, interest expense and one-off items such as Covid-19 subsidies and business acquisition cost (see the annual report for CY21)

TRACK RECORD OF REVENUE GROWTH

- Revenue of \$10.1m in CY19 to \$18.1m in CY21
- 49% in cash receipts growth in Q1 2022 vs PCP**
- 12 consecutive quarters of growth in cash receipts

RECURRING REVENUE GROWTH DRIVES MARGINS

- Recurring revenue segments accounted for 70% of total revenues in CY21 up from 38% in CY18
- Expected recurring revenue of \$16.5 – 19m in CY22 reflecting growth of ~20 - 37% on CY21**
- Gross margins up from 19% in CY17 to 34% in CY21, increases expected as higher margin recurring revenue segments drive growth

PROFITABILITY & BREAK EVEN

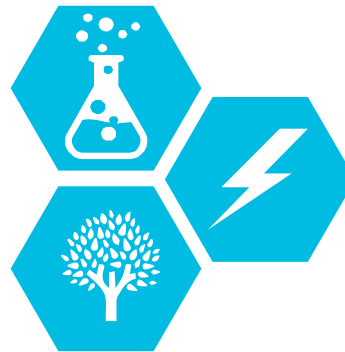
- Visible path to quarterly EBITDA break even, targeting by H1 2023**
- Cash & term deposits of \$6.7m at 31 March 2022**
- Underlying EBITDA of -\$2.2m in CY21:
 - approx. \$1m investment into the Singapore subsidiary, which is predominantly undertaking membrane R&D
 - approx. \$1m investment in the scale up of the sales & marketing organization in Australia and Germany.

De.mem is driven by our impact on society. Our technology is pioneering a revolution in how we can better utilise our environments' limited resources in order to sustainably meet/exceed regulated ESG targets.



Water Treatment & Reuse

- De.mem's membrane technology and treatment plants clean waste water, facilitate water discharge and water reuse/recycling
- Treated a total of 550 million litres of water under our BOO and O&M contracts across 15 sites in Australia and Singapore in Q1CY2022
- Equivalent of ~220 Olympic sized swimming pools of waste water being turned safe for discharge and reuse



Less Power, Land & Chemicals

- De.mem's hollow fibre membrane technology is a sustainable solution. Environmental benefits:
- Up to a 70% reduction in power consumption compared to reverse osmosis
- Systems and plants have smaller foot prints translating to less land requirements
- Less chemicals are required to operate and maintain De.mem systems



Plastic Waste Reduction

- De.mem's domestic water filters are being actively used by customers to replace bottled drinking water
- Anticipated launch of new graphene oxide enhanced membranes lead to further uptake of De.mem's domestic filters
- More than 373 million plastic bottles are used in Australia per annum with only 36% being recycled



Cosimo Trimiglozzi

**Non-Executive
Chairman**

30-year experience in the feed and food ingredients / flavours & fragrances industry

Former COO at Wild Flavors, and was a key member involved in the sale of the Company to ADM Group for approx. US\$2.5 billion

Previously, MD Asia for Givaudan, Switzerland



Andreas Kroell

**CEO & Executive
Director**

Previously Director and Partner of New Asia Investments, a Singapore-based technology investment firm, responsible for numerous investments in the water and industrial sectors

Experience at Nanostart AG, a German publicly listed nanotech-focused VC fund, and holding corporate finance roles with Deutsche Bank and Deloitte in Germany



Bernd Dautel

**Non-Executive
Director**

Director and Partner with New Asia Investments for the past decade

Previously MD of Wieland Asia/Pacific, growing the Asia-Pacific business from a small enterprise to generating more than SGD\$400 million in revenues, for one of the world's leading independent producers of semi-finished copper and copper alloy products



Stuart Carmichael

**Non-Executive
Director**

Principal and Director at Ventnor specialising in corporate and financial advice to small cap ASX listed companies including capital raisings, IPO's, restructures and M&A

A Chartered Accountant with over 20 years' experience in the provision of corporate advisory services both within Australia and internationally



Michael Edwards

**Non-Executive
Director**

A Geologist and Economist with over 20 years of senior management experience in both the private and public sector

Currently Executive Chairman of Auroch Minerals (ASX:AOU) and Non-Executive Chairman of Greenstone Resources (ASX:GSR)

Market Data

ASX Code	DEM.ASX
Ordinary Shares	222.9m
Market capitalisation (4 May 2022)	\$41.23m
Options on Issue	7.11m
Cash plus term deposits (31 March 2022)	\$6.7m
Last price (4 May 2022)	\$0.185
52 week high	\$0.31
52 week low	\$0.18

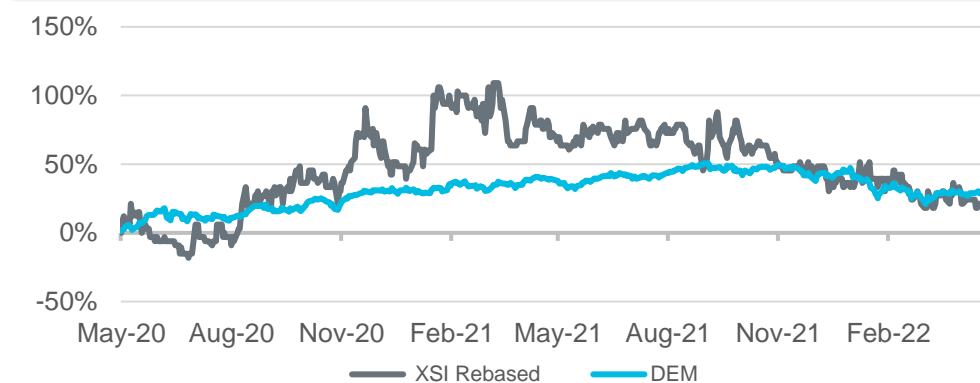
Major Shareholders

NA Singapore Early Stage Venture Fund	20%
Perennial Value Management	14%
New Asia Investments	5%
Pathfinder Asset Management	4%
Other Institutional Shareholders	2%
Board & Management Shareholding	2%

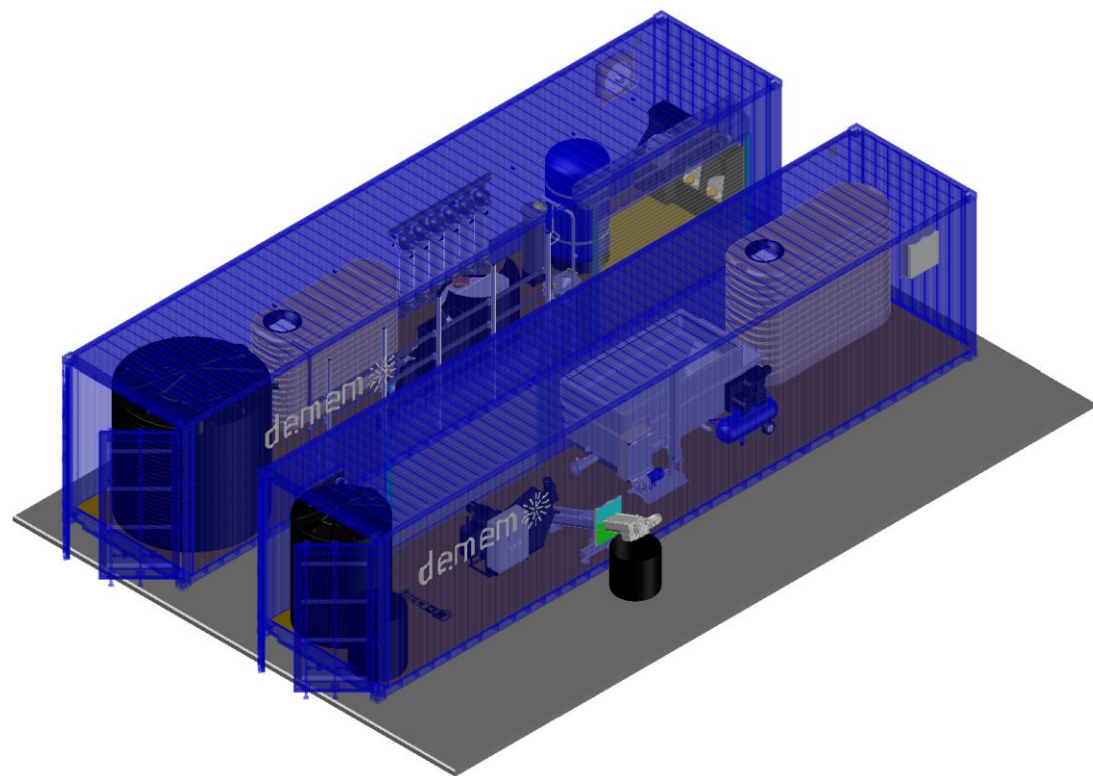
Share Price Performance



DEM Relative to ASX Small Industrials Index



demem 



Andreas Kroell

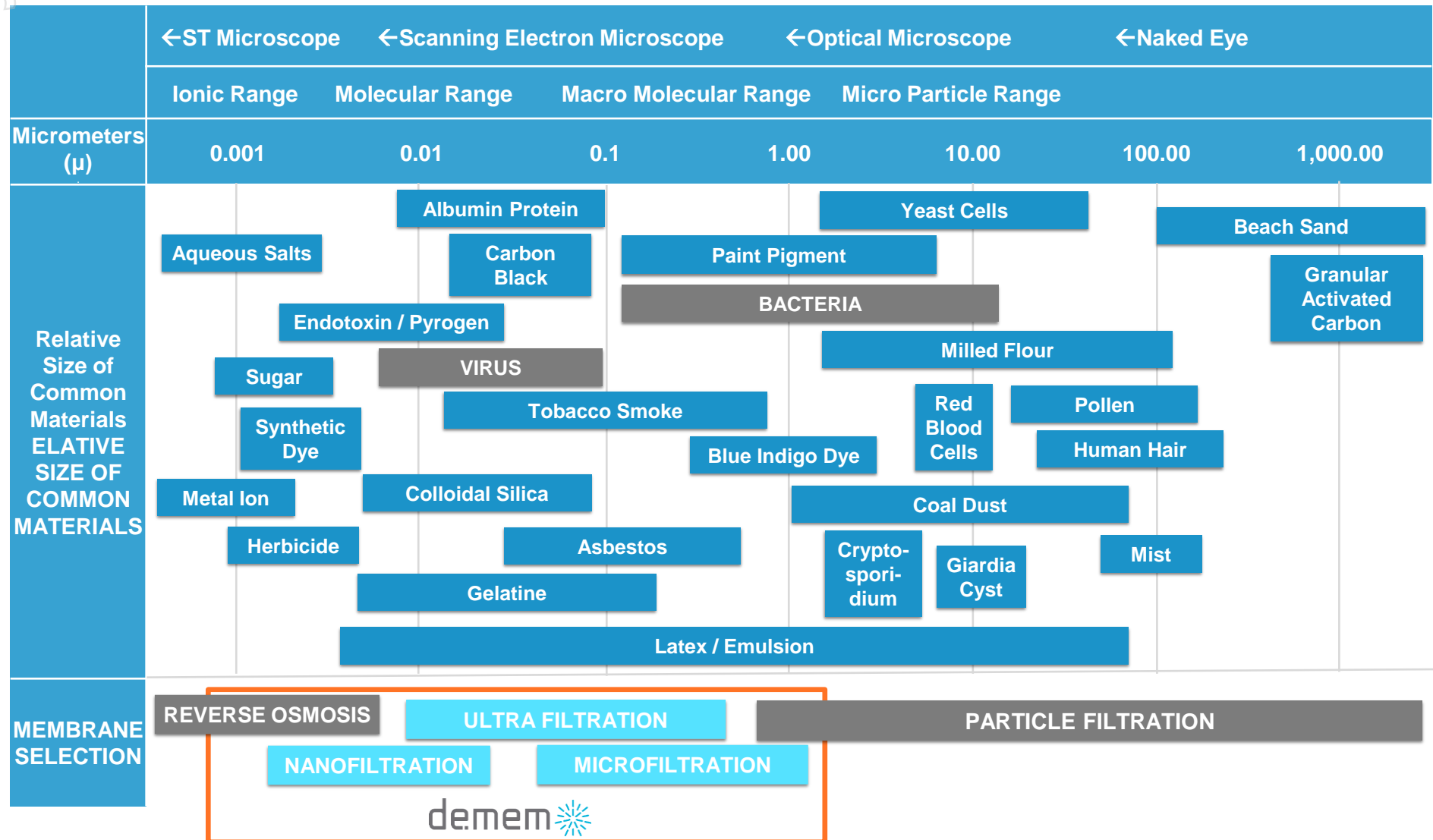
Chief Executive Officer

De.mem Limited

investor@demem.com.sg

APPENDIX 1: DE.MEM TECH: BROAD APPLICATION RANGE

De.mem's hollow fibre membrane technology comes with a variety of pore sizes which can remove tiny contaminants including dyes, pesticides/herbicides, microplastics, solids, viruses, bacteria etc. in a simple process



APPENDIX 2: TECHNOLOGY VALUE PROPOSITION SUMMARY

De.mem Technology	Ultrafiltration		Nanofiltration	Graphene-Oxide Enhanced
Key Features	PES based hollow fibre Ultrafiltration membrane with Molecular Weight Cutoff (MWCO) of 100,000 Dalton (Da)	PVDF based hollow fibre Ultrafiltration membrane with MWCO of 300,000 – 500,000 Da	PES based hollow fibre Nanofiltration membrane with MWCO of 500-1,000 Da	Graphene-Oxide enhanced hollow fibre PES Ultrafiltration membrane
Technical Advantages	vs. conventional filtration: <ul style="list-style-type: none"> Good flux Low fouling Operates under 1-2 bar pressure High rejection of virus & bacteria Narrow pore size distribution - higher purity for value-added products 	vs. conventional filtration: <ul style="list-style-type: none"> High flux Chlorine resistant Operates under 1-3 bar pressure Basis for further development (Membrane Bioreactor/MBR and oil resistant membrane tech) 	vs. conventional filtration: <ul style="list-style-type: none"> High rejection of small molecules No or only limited use of commodity type chemicals vs. Reverse Osmosis / flat sheet nanofiltration: <ul style="list-style-type: none"> Operates under low pressure of ~2bar Low fouling Simple flush procedure for cleaning No spacers needed No or only simple pre-treatment (depends on application) 	vs. conventional filtration: <ul style="list-style-type: none"> Significantly higher flux / throughput Low fouling Potentially, higher rejection of certain contaminants i.e. bacteria (currently being verified)
Commercial Advantages	vs. conventional applications: <ul style="list-style-type: none"> Well proven and cost effective Ultrafiltration membrane Applications in drinking water production, waste water treatment, food & beverages, RO pre treatment 	vs. conventional applications: <ul style="list-style-type: none"> High stability Extended use for applications in biological & oily waste water treatment upcoming 	vs. conventional filtration: <ul style="list-style-type: none"> High quality filtration vs. Reverse Osmosis / flat sheet nanofiltration: <ul style="list-style-type: none"> Reduces energy consumption Easy to clean and maintain Easy to operate Small footprint Low Capex Environmentally friendly 	vs. conventional applications: <ul style="list-style-type: none"> Reduced operating cost Reduced cartridge size / footprint

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