



De.mem Limited (ASX:DEM) Akwa-Worx Acquisition

Investor Presentation
September 2017

Transaction Overview

01

Acquisition of Akwa-Worx



Revenue approximately

\$7 million (AUD)

in the 12 months to 30 June 2017

Recurring annualised revenue

\$2.2+ million (AUD)

Based on stable, long term service agreements

Normalised EBITDA approximately

\$800,000 (AUD)

in the 12 months to 30 June 2017

Long-term customer relationships
with leading corporations from the
Australian mining sector

De.mem has acquired the operations of Akwa-Worx for A\$1.5m in cash and A\$460k in shares

Australian based Akwa-Worx is a leading provider of water and waste-water treatment systems

Product lines include Ultra-Filtration (UF) – Reverse Osmosis (RO) based systems, Membrane Bioreactors (MBRs), bioreactors and chemical dosing systems

Systems are delivered as packaged or modular solutions for de-centralised applications

Through Akwa Facility Maintenance, a 100% owned subsidiary of Akwa-Worx, the company provides operations & maintenance services to leading companies from the mining sector based on long-term agreements

The acquisition will strengthen De.mem's position in the Asia Pacific region and provide significant opportunities for growth

Deal structure

Purchase price: A\$1.96 million
(A\$1.5 million in cash / A\$460k in shares)

+

A\$250k

Subject to revenue target
for H2 2017 (125k cash / 125k shares)

+

A\$250k

Subject to revenue target
for CY 2018 (125k cash / 125k shares)

+

A\$250k

Subject to revenue target for the
18 months ended 31 Dec 2018
(125k cash / 125k shares)

**Total consideration,
if all milestones are met:**

A\$2.71 million

A\$1.875 million in cash and A\$835,000 in shares

As part of the transaction,
Mr. Shane Ayre will remain
as the Managing Director
of Akwa-Worx and become
a member of the De.mem group's
management team

Subject to satisfaction of the Conditions
Precedent, completion is expected in
September 2017

De.mem + Akwaworx = Accelerated Growth

De.mem

- Highly innovative, proprietary membrane products
- Strong partnership with Nanyang Technological University (NTU) in Singapore in R&D
- Established presence in Asian markets, i.e. Singapore and Vietnam
- Reference projects with MNCs in industrial waste water treatment in different sectors
- Positive momentum and strong sales pipeline
- Publicly listed on the ASX and Venture Capital backed



Akwa-Worx

- Established and long term customer relationships, i.e. with leading players from the mining & resources sector
- Proven capabilities in system integration, operations & maintenance
- Long term operations & maintenance business allows for stable base revenues
- Packaged solutions allow for fast and simple implementation
- Integrated product offering

Together

- **Creating a market leading de-centralised water treatment company in Asia-Pacific**
- **Highly experienced management team**
- **Integrated product offering**
- **Strong platform for roll out of De.mem membrane technologies**
- **Accelerated growth prospects**
- **Economies of scale**

About
Akwa-Worx

02

About Akwa-Worx



Established

2002

Headquarters
& manufacturing

Caboolture
QLD

Group Structure

Akwa-Worx (equipment)
+
Akwa-Worx Facility
Management (Operations
& Maintenance)

Key product lines

Water treatment
MBRs
Bioreactors
Chemical Dosing

Employees

25

13 Akwa-Worx
12 Akwa-Worx Facility
Maintenance

REVENUE

A\$7m

(FY ended 30 Jun
2017 - unaudited)

NORMALISED
EBITDA

A\$800k

(FY ended 30 Jun
2017 - unaudited)

Areas of expertise

- ✓ Water Treatment
- ✓ Sewage Treatment
- ✓ Filtration
- ✓ Potable water
- ✓ Reverse osmosis
- ✓ Modular sewage systems
- ✓ Modular Potable systems
- ✓ Membrane filtration
- ✓ Chemical injection systems
- ✓ Bore water treatment
- ✓ Water softeners
- ✓ Resin filtration
- ✓ Water Quality Consultancy
- ✓ Commercial Water pumps
- ✓ Sewage pumps
- ✓ Pump Stations
- ✓ HAZCHEM containers
- ✓ Water Treatment Chemicals
- ✓ Automatic Valving
- ✓ Remote monitoring of Sewage plants
- ✓ Mine camp sewage systems
- ✓ Mine camp potable systems
- ✓ Accommodation camp water systems

Sample Projects:

Membrane-based water treatment plants



Sewage Treatment Plant MBR

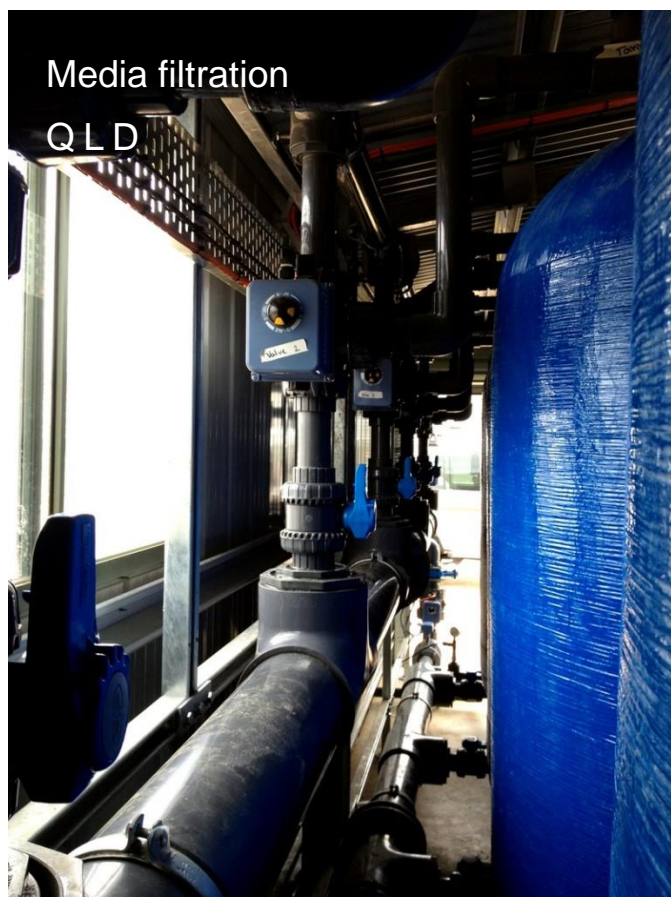
Location	Heron Island, QLD
Description	Submerged Membrane Bioreactor (MBR)
Client	Heron Island Resort
Value	\$AUD 1 million
Year	2015



Sewage Treatment Plant UF membranes

Location	Papua New Guinea
Description	Ultrafiltration membrane based process plus pre treatment via BNR
Client	Wafi Golpu Mine JV
Value	\$AUD 1 million
Year	2013

Sample projects: Long term Operations & Maintenance Contracts



Project experience

Akwa-Worx



Civeo

Coppabella Sewage Treatment Plant

Coppabella, QLD

Capacity: 270kl per day

Total value: Approx 1.5 million A\$

- Membrane Bioreactor (MBR)
- Treats waste water from mining camp
- Operational in April 2015



Monadelphous

East Nogo Water Treatment Plant

Papua New Guinea

Total value: Approx 0.4 million A\$

- Fluoride saturator and powder polymer preparation and dosing plants
- Operational in July 2015



Civeo

Coppabella Water Treatment Plant

Coppabella, QLD

Capacity: Approx 1,500kl per day

Total value: Approx 1.2 million A\$

- Containerised water treatment system including dosing and potable water storage
- Supplies drinking water to mining camp
- Operational in April 2015



Mount Isa City Council

Containerised Re-Chlorination Package

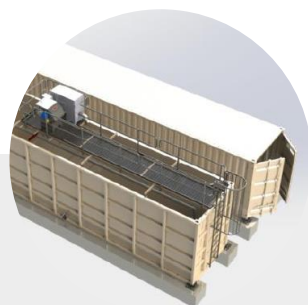
Mount Isa, QLD

Total value: Approx 0.1 million A\$

- Containerised re-chlorination package
- Operational in March 2015

Project experience (Cont.)

Akwa-Worx



Jacobs

Bulwer Island Sewage Treatment Plant

Bulwer Island, QLD

Total value: Approx 0.5 million A\$

- Packaged sewage treatment plant to treat waste water for discharge into Brisbane river
- Operational in July 2016



Ausco Modular

Containerised Water Treatment Plant

Cavel Ridge Mine Moranbah, QLD

Total value: Approx 0.3 million A\$

- Using Ultrafiltration (UF) membranes, packaged in standard industrial 40 feet container, fully automated incl. remote monitoring package
- Operational in 2012



Mining Industry

Sewage and Water Treatment Plants

Papua New Guinea

Total value: Approx 2.0 million A\$

- Capacity: 350 kl per day
- Using multiple bioreactors and Ultrafiltration (UF) membranes
- Operational in 2012



Carwash facility with 20 bays

Carwash

Greater Brisbane, QLD

Total value: Approx 0.1 million A\$

- Integrated system including DAF and multimedia filters, treating car wash water to recycling standards
- Operational in 2014

Strategic
Rationale

03

Business proposition & deal rationale

The transaction creates a **strong and integrated player** focused on de-centralised water and waste water treatment in the Asia-Pacific region.

The new group aims for accelerated growth through a number of key growth initiatives:

- Fast roll out of De.mem's innovative technologies among Akwa-Worx' customer base
- Competitive advantage for Akwa-Worx through access to such technologies
- Combined, expanded product range enables cross-selling
- Platform for expansion into new geographies including China
- Economies of scale / manufacturing synergies to improve margins
- Expected improvement in the mining and resources sector

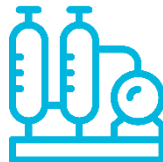
Creating a leading player in de-centralised water treatment

Expanded & integrated product offering:

Both De.mem and Akwa-Worx have a strong focus on de-centralised, packaged water treatment plants; each is focusing on somewhat different, yet highly synergistic segments of the value chain. The acquisition creates a “one stop supplier” for many types of solutions

“Win-win” business model:

Highly flexible business model including operations & maintenance services and BOO (Build, Own, Operate) contracts – attractive business options which customers are seeking and which help with a quick market penetration



Strong team:

Post-acquisition, De.mem group will have over 50 employees and be led by a management team and board with highly experienced industry professionals

Well positioned for growth:

Combined, the group are well positioned for further growth and to become a leading player in the de-centralised water treatment market – for which high growth is forecast

Strong platform for roll-out of De.mem proprietary membrane technologies

Exclusive technology

De.mem has the exclusive rights to highly innovative, proprietary and unique products

Reduced operating costs

Flagship product is the novel and unique low pressure hollow fiber nanofiltration membrane, which allows for a substantial reduction of operating cost and capital expenditure for many applications in water and waste water treatment

Commercial benefits

This unique technology is expected to provide substantial commercial benefits to the combined group:

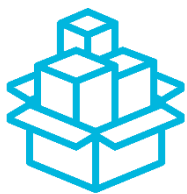
- De.mem's membranes can be used in Akwa-Worx' projects, which provides a strong platform for the quick roll out of these innovations
- Correspondingly, De.mem's product innovations provide Akwa-Worx with a strong competitive advantage over its competitors – i.e. system integrators without any proprietary product offering

Expansion of technology portfolio

De.mem plans to expand the proprietary product range in the near term future which will provide further benefits to the group

Accelerated growth prospects

De.mem expects a substantially faster revenue growth through:



Opportunity for Cross-Selling

- The acquisition creates an integrated provider of different types of water treatment systems
- Water treatment systems often combine different process steps – the combined group can supply its whole product range to the same customer base and address a wide range of complimentary customer (opportunity for “cross selling”)



Geographic expansion

- **Opening of a WA local office is an immediate step for expansion:** targeted customer base and similar product offering to Akwa-Worx’s established business in Queensland
- **Expansion in the Asia/Pacific region:** Malaysia, Papua New Guinea, Pacific Islands
- **China expansion:** Strong basis to expand into China market by leveraging Akwa-Worx’s industrial and mining track record

Economies of scale

The acquisition creates substantial “economies of scale” between the two companies

Cost savings can be achieved through the following initiatives:



Alignment of key manufacturing processes such as process and system design, electronics, controls & monitoring (i.e. via De.mem’s proprietary “de.live” monitoring platform)



Combination of purchasing efforts to achieve better pricing from suppliers and in view of growing volumes



The potential for cost savings is expected to have a significant positive impact on margins.

Group
Strategy

04

Combined strategy

Integrated product offering	Proprietary technologies	Process expertise	Flexible end products for the customer
<p>Wide range of base components, i.e.</p> <ul style="list-style-type: none"> • Bioreactors • Chemical dosing • DAF • Oil removal • MBRs • UF-RO 	<ul style="list-style-type: none"> • Low pressure, hollow fibre nanofiltration membrane • De.live monitoring system • New membrane technologies (planned) 	<ul style="list-style-type: none"> • Engineering • Operations & Maintenance • Process design • System integration 	<ul style="list-style-type: none"> • Specialised products <ul style="list-style-type: none"> - Containerised - Modular - Compact - Customised, high quality, efficient • Operations & Maintenance • Build-Own-Operate (BOO) • Build-Own-Transfer (BOT)

De.mem's business model includes proprietary technology, engineering and system integration as well as ongoing operations & maintenance

Highly scalable revenue model



Build-Own-Operate or Build-Own-Transfer

- De.mem owns the equipment
- Long term contract with the customer
- Stable recurring revenue stream
- High margin



Equipment sales

- Customer driven
- Opportunity for ongoing maintenance revenue



Pricing

- Flexible pricing structure
- De.mem's pricing model allows the company and its customers to share those savings – providing a genuine win-win outcome

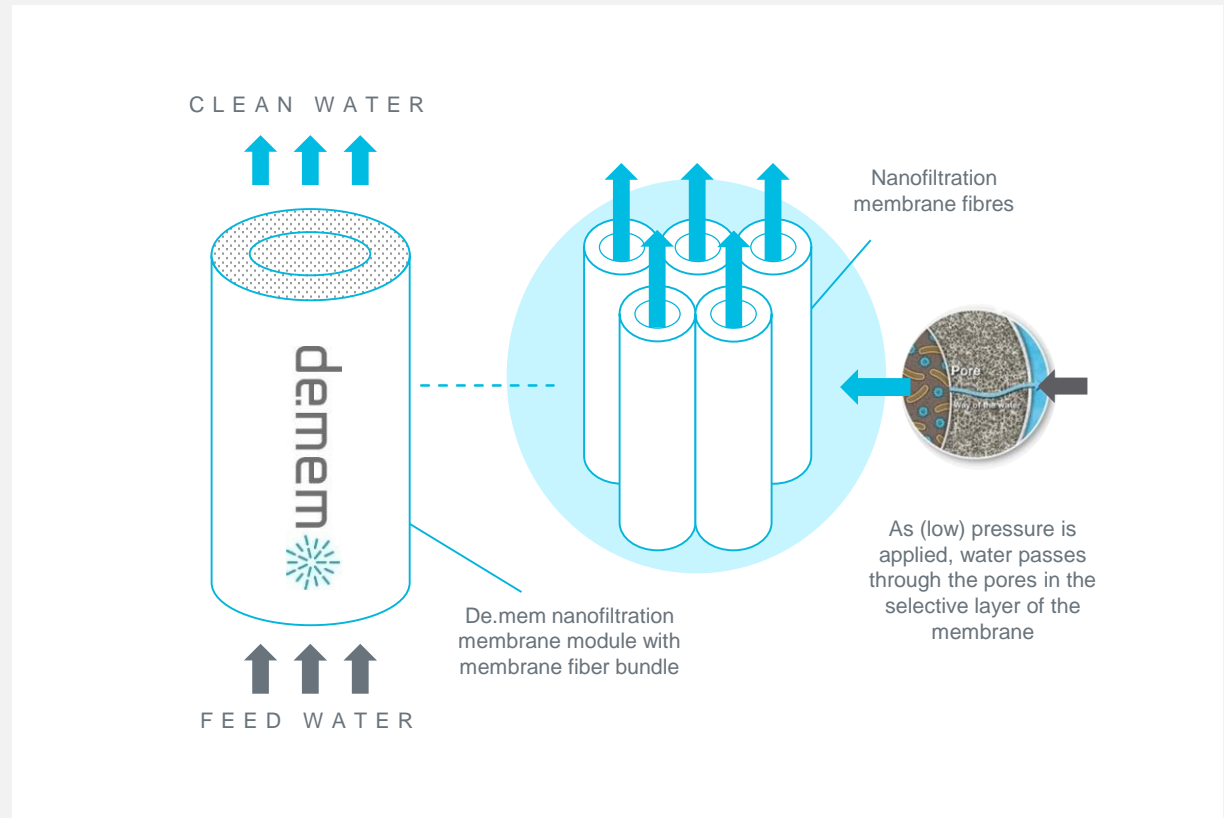


Customer base

- Long-term, repeat customers
- Multi-national corporations from high volume and high growth sectors
- Clients with manufacturing presence in many countries

De.mem technology

- De.mem commercialises a novel **low pressure hollow fibre nanofiltration (NF) membrane** developed at NTU in Singapore
- The membrane can reduce power consumption by up to 80%
- Significant reduction in operating cost and investment relative to traditional technologies
- De.mem plans to expand its portfolio of proprietary technologies in the coming months



Extensive customer base

Historical and existing clients & partners



Target sectors

Industrial

- Food & agriculture
- Oil & gas
- Electronics
- Mining

Municipal & residential

Other

Expanding into growth markets (China & Germany)



Germany

- A\$13 billion market ¹
- Started marketing De.mem products in Germany in Q2

Singapore

- A\$ 2 billion market ²
- Established presence through De.mem in Singapore
- Focus on industrial waste water
- Strong reference for the region

Malaysia & Indonesia

- Short term expansion plans based on expanded product range

China

- A\$20 billion market ¹
- Strong potential for the combined group to expand into China

Vietnam

- A\$1 billion market ³
- Established presence and manufacturing capability through De.mem
- Short term expansion plans based on expanded product range

PNG & Pacific Islands

- Reference projects completed by Akwa-Worx
- Potential to gain significant market share

Australia

- \$5 billion market ⁴
- Strong and well established presence in Queensland through Akwa-Worx
- Short-term expansion plans into other regions – in particular Western Australia

Sources: 1. Global Water Intelligence 2. The Singapore EDB 3. Frost & Sullivan 4. IBIS

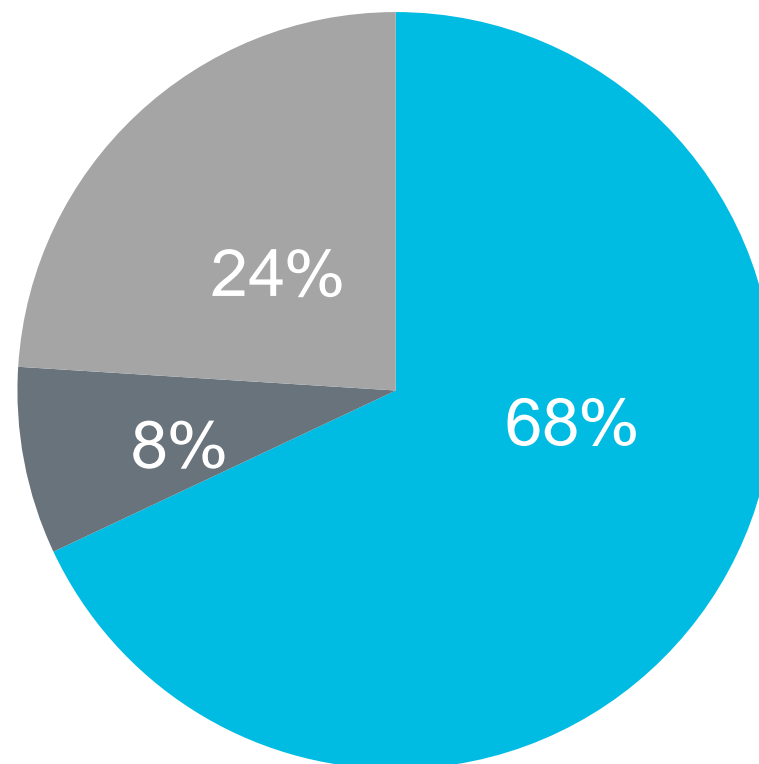
Corporate
Overview

05

De.mem Limited

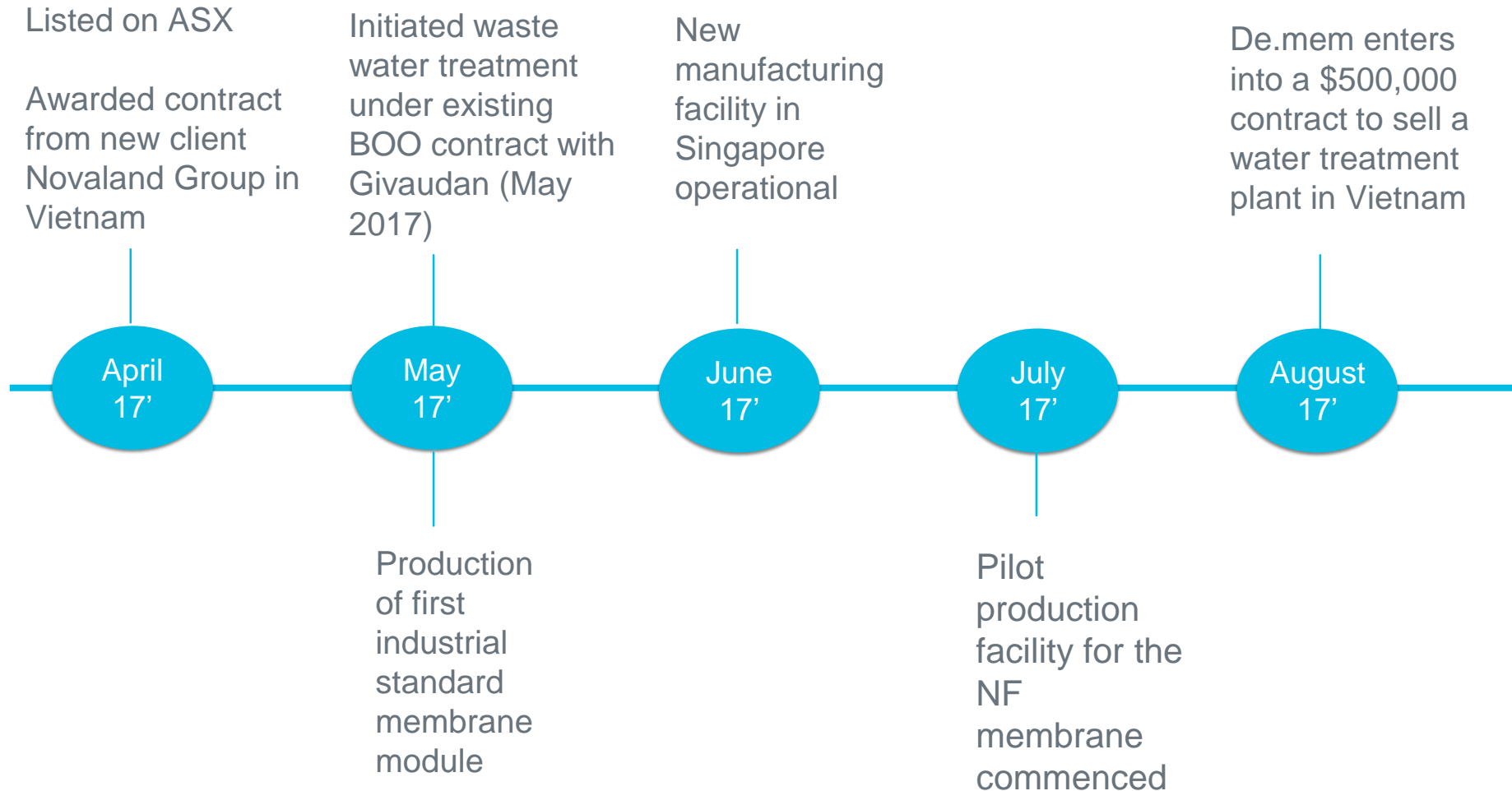
(ASX:DEM)

ASX code	DEM
Ordinary shares	95.8m
Market capitalisation	\$30m
Cash on hand (30.6.17)	\$3.8m
Listed on ASX	7 April 2017
Issue price	\$0.20
Last price (12.09.17)	\$0.31
52 week high	\$0.50
52 week low	\$0.31
Average daily volume	198,000
GICS classification	Utilities



■ NA Singapore Fund/ New Asia Inv/Vendor/Other ■ Pre-IPO ■ IPO

Milestones since ASX IPO



Significant leverage play

Company	FY17 Revenue	Market Capitalisation (13.9.17)	Technology	Market Focus
Fluence (formerly Emefcy) ASX: FLC	A\$0.4 m 6 months to 30/06/17 (Emefcy only)	A\$252m	Aeration	Municipal waste water
CleanTeQ ASX:CLQ	A\$28.9 m 12 months to 30/6/17	A\$662m	Ion exchange	Industrial waste water (mining)
Phoslock Water Solutions ASX: PHK	A\$3.8 m 12 months to 30/06/17	A\$85m	Chemicals that bind dissolved phosphate	Prevention of algae growth
De.mem ASX:DEM	A\$0.1 m 6 months to 30/06/17	A\$30m	Membranes	Industrial (across many sectors) & Municipal/ Residential Water and Waste Water

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 Corporate Finance
- 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

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

Experienced management team



Shane Ayre
General Manager,
Akwa-Worx

- Founder of Akwa-Worx
- 20 years industry experience



Kian Lip Teo
Chief Operating Officer

- Lien Aid (a Singapore NGO focused on water)
- Bachelor/Master, Nanyang Technological University, Singapore, and National University of Singapore



David Chua
Director, Membrane
Manufacturing

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



Nicanor Suarin
Chief Engineer

- 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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