

ASX Announcement

29 NOVEMBER 2022

2022 ANNUAL GENERAL MEETING (AGM) GROUP MANAGING DIRECTOR & CEO PRESENTATION

Parkway Corporate Limited (“**Parkway**” or the “**Company**”) (ASX: PWN) is pleased to provide the attached presentation (“**Presentation**”) to be delivered by Group Managing Director & CEO, Bahay Ozcakmak, at the conclusion of the Parkway 2022 Annual General Meeting (“**AGM**”).

PRESENTATION

In addition to a general corporate update, the Presentation includes details about several significant achievements, including recent confirmation that a proprietary flowsheet developed by Parkway (based on the patented iBC® technology platform), i) is a technically viable processing route for CSG derived brines, and ii) can achieve very high product recoveries (>98% on a w/w% basis, in certain applications).

Further details are provided in slides 23 to 26 of the Presentation.

These recent developments, together with the ongoing feasibility study being performed for QGC Shell, present Parkway with a significant opportunity to provide a transformational technology-based solution for treating waste brines, to the Australian coal-seam gas (CSG) industry, particularly in Queensland. Additional details about the implications of these recent breakthroughs, is outlined in the Presentation.

AGM DETAILS

The AGM will be held virtually at 12:00pm (AEDT) today.

Shareholders

Instructions for shareholders to participate in the AGM are outlined on your proxy form.

To participate in the AGM online and watch the webcast, shareholders will need to visit:

<http://www.advancedshare.com.au/virtual-meeting>

And log-in using the "Meeting ID" and your personalised "Shareholder ID".

Non-Shareholders

Non-shareholders of the Company are unable to participate, but can view the AGM at:

<https://www.advancedshare.com.au/Dashboard/Meeting-Casting-Control?meetingid=PWN0010>

The release of this announcement has been approved by Parkway's Group Managing Director & CEO, Bahay Ozcakmak, on behalf of the board of directors of the Company.



1300 PARKWAY
1300 7275929
parkway-corp.com



ADDITIONAL INFORMATION

For further information or investor enquiries, please contact:

Bahay Ozcakmak

Group Managing Director & CEO

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General Enquiries

1300 7275929

[1300 PARKWAY](tel:13007275929)

FORWARD-LOOKING STATEMENTS

This announcement may contain certain “forward-looking statements”. The words “continue”, “expect”, “forecast”, “potential” and other similar expressions are intended to identify “forward-looking statements”. Indications of (and any guidance on) future earnings, financial position, capex requirements and performance are also “forward-looking statements”, as are statements regarding internal management estimates and assessments of market outlook.

Where Parkway expresses or implies an expectation or belief as to future events or results, such expectation or belief is expressed in good faith and believed to have a reasonable basis. However, “forward-looking statements” are not guarantees of future performance and involve known and unknown risks, uncertainties and other factors, many of which are beyond the control of Parkway, its officers, employees, agents and advisors, that may cause actual results to differ materially from those expressed or implied in such statements. There can be no assurance that actual outcomes will not differ materially from these statements. There are usually differences between forecast and actual results, because events and actual circumstances frequently do not occur as forecast and their differences may be material.

Parkway does not undertake any obligation to publicly release any revisions to any “forward-looking statements” to reflect events or circumstances after the date of this announcement, or to reflect the occurrence of unanticipated events, except as may be required under the applicable securities laws.

ABOUT PARKWAY CORPORATE LIMITED

Parkway Corporate Limited is an Australian cleantech company focused on developing and implementing, industrial-scale innovative water treatment solutions. Parkway is listed on the Australian Securities Exchange (ASX: PWN) and is emerging as an innovative player in water related sustainability solutions. With significant inhouse technical expertise and established partnerships, Parkway is well-placed to deliver the next generation of wastewater treatment plants, incorporating the company’s portfolio of world-class technologies.

Parkway operates through three (3) core business units, comprising:

- Parkway Process Solutions (PPS) – Parkway’s primary operating division and an emerging provider of industrial water treatment products, services, solutions and associated technology to customers throughout Australia. PPS has recently established commercial relationships with key water industry participants, including globally recognised OEMs;
- Parkway Process Technologies (PPT) – Parkway’s technology development, acquisition, and commercialisation division. PPT owns a portfolio of industrial wastewater treatment technologies, including the patented aMES® and iBC® process technologies. PPT has global aspirations and is supported by a network of strategic partners, including global engineering company Worley; and
- Parkway Ventures (PV) – holds a portfolio of project equity and royalty interests, including interests relating to Parkway’s Karinga Lakes Potash Project in the Northern Territory of Australia.

Additional information regarding Parkway, including an overview of the corporate structure of Parkway and the companies in its corporate group, can be found at: www.pwnps.com/pages/about-us.

SOCIAL MEDIA & EMAIL ALERTS

Parkway is committed to communicating with the investment community through all available channels. Whilst the ASX announcements platform remains the most appropriate channel for market-sensitive news about Parkway, investors and other interested parties are also encouraged to:

- follow Parkway on LinkedIn, Twitter, Facebook and YouTube; and
- subscribe for our email alert service, Parkway News Alerts, on our website (www.pwnps.com).



Parkway
CORPORATE LIMITED



 Parkway
Process Solutions

2022

Annual General Meeting

29 November 2022

ASX: PWN | pwnps.com

Bahay Ozcakmak

Group Managing Director & CEO

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Completeness and Accuracy of Information

No representation or warranty is made as to the accuracy, completeness or correctness of the information contained in this presentation. To the maximum extent permitted by law, none of Parkway, its directors, employees or agents or any other person, accept any liability for any loss arising from or in connection with this presentation including (without limitation) any liability arising from fault or negligence, or make any representations or warranties regarding, and take no responsibility for, any part of this publication and make no representation or warranty, express or implied, as to the currency, accuracy, reliability, or completeness of information in this announcement.

No Professional Advice

The information in this presentation does not take into account individual investment and financial circumstances and is not intended in any way to influence a person dealing with any securities in Parkway. This presentation does not include any financial, legal or taxation advice. Any person intending to deal in Parkway securities is recommended to obtain professional advice.

Additional Information

This presentation has been prepared by Parkway Corporate Limited (“Parkway” or the “Company”)(ASX: PWN) and has been released on the ASX announcement platform and is also available at the Company website:

www.pwnps.com

Additional information regarding the Company can also be found at the Company’s website, or by contacting the Company at:

ir@pwnps.com

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Building an advanced
**industrial water treatment
technology company.**

Presentation Outline

Key Topics

- Corporate Overview
- Key Addressable Markets
- CY2022 – A Year of Growth & Transformation
- Parkway Group Structure
- PPS – Integrated Solution Provider
- Building Capabilities – Generating Traction

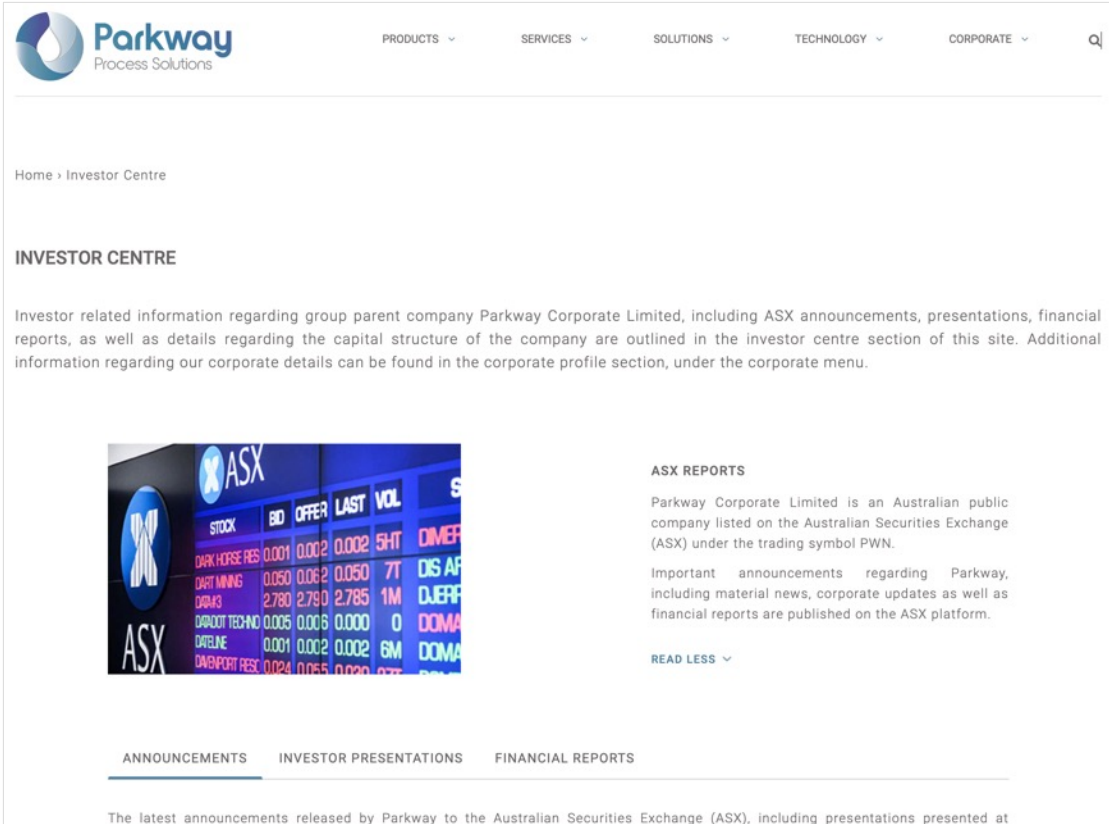
- The Problem – Legacy of Extractive Industries

- PPT – Proprietary Technologies from Parkway
- PPT – Industrial Technology Commercialisation
- PPT – Developing Process Technology Solutions

- CSG Case Study – Technology Application
- CSG Case Study – QGC Feasibility Study Update

- PPT – Typical Business Development Cycle
- Investment Case

Company Website



Home > Investor Centre

INVESTOR CENTRE

Investor related information regarding group parent company Parkway Corporate Limited, including ASX announcements, presentations, financial reports, as well as details regarding the capital structure of the company are outlined in the investor centre section of this site. Additional information regarding our corporate details can be found in the corporate profile section, under the corporate menu.

STOCK	BID	OFFER	LAST	VOL	
PARK HORSE RES	0.001	0.002	0.002	5HT	DIMEP
CART MANNING	0.050	0.062	0.050	7T	DIS AP
OPAKS	2.780	2.790	2.785	1M	DJEFF
CARPOOT TECHNO	0.0005	0.0015	0.000	0	DOMA
CAVELINE	0.001	0.002	0.002	6M	DOMA
CARPORT RES	0.024	0.055	0.020	0TT	

ASX REPORTS

Parkway Corporate Limited is an Australian public company listed on the Australian Securities Exchange (ASX) under the trading symbol PWN.

Important announcements regarding Parkway, including material news, corporate updates as well as financial reports are published on the ASX platform.

[READ LESS](#)

[ANNOUNCEMENTS](#) [INVESTOR PRESENTATIONS](#) [FINANCIAL REPORTS](#)

The latest announcements released by Parkway to the Australian Securities Exchange (ASX), including presentations presented at

Additional information about Parkway, is available from the Investor Centre:

www.pwnps.com/collections/investor-centre

Capital Structure	Current
Ordinary Shares (PWN) on issue	2,213,280,446
12-month Trading Range	\$0.007 - \$0.014
Market Capitalisation (at \$0.008)	\$18 million
Unlisted Options (\$0.020, 16 Dec 2022)	310,166,664
Unlisted Options (\$0.030, 02 Feb 2023)	177,277,773
Unlisted Options (\$0.019, Jul/Dec 2024)	260,931,548

Major Shareholders	%
Holdings associated with Group MD	9.9%
BNP Paribas Nominees / Deutsche Börse	7.9%
Lions Bay Capital (Canadian LIC)	7.6%
BNP Paribas Noms / EU & Institutional	4.3%
Top 20	46.6%

Funding	\$
Debt	nil
Cash (at 30 Sep 2022, excl. grants)	\$3.35 million
Cash (at 30 Sep 2022)	\$3.35 million

All amounts refer to Australian dollars

Experienced Team

- Strong corporate, strategic, M&A, industrial and technology experience.
- Highly focused team **methodically executing corporate strategy**.
- Board, KMP and employees are strongly aligned with shareholders.
- Details about rejuvenated board outlined in [Corporate Profile](#).

Defined Strategy

- To build an **advanced industrial water treatment technology company**.
- Staged approach to **generating revenue** and **commercialising technology**.
- Commercially pragmatic to ensure optimal **value creation & capture**.

Well Resourced

- Access to capital markets underpinned by **robust financial discipline**.
- Accumulation of inventory (PPS) and R&D funds (PPT, grants & rebates).
- Established operations in Melbourne, Perth & Darwin, Australia.

Building Momentum

- Internal technical capabilities delivering **exceptional results for PPT** (tech).
- Established partnerships with key industry players to align interests.
- **Strong relationships with existing clients** and future prospects.

Key Addressable Markets

Key Markets

- Wastewater treatment opportunities
- < 10% of wastewater currently recycled**
- Large and growing global markets

Challenges

- Major challenges impacting industry

PPS Opportunity

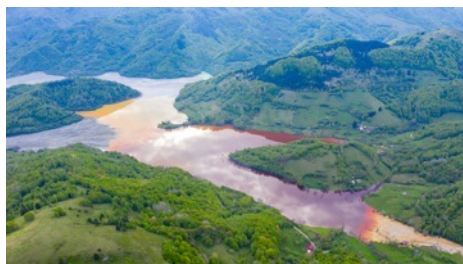
- Parkway Process Solutions (PPS)

PPT Opportunity

- Parkway Process Technologies (PPT)

Global Market Size

Mining & Energy



- Limited access to freshwater is driving need to recycle wastewater
- Wastewater storage is problematic
- Processing of waste is complex

- Projects require range of products and **conventional** solutions
- Solid-liquid separation options including chemistry as well as membrane based approaches

- Projects require range of products and **next-generation** solutions
- Opportunity to recover economic quantities of products & reagents
- Product recovery funds treatment

> \$25 Billion / yr

Industrial Wastewater



- Access to freshwater is becoming more difficult, costly and uncertain
- Wastewater discharge is difficult
- Processing of waste is expensive

- Projects require range of products and **conventional** solutions
- Removal of contaminants and organics to meet wastewater discharge requirements

- Projects require range of products and **next-generation** solutions
- Opportunity to recover (and sell) and/or destroy contaminants, allowing subsequent discharge

> \$100 Billion / yr

Municipal & Desalination



- Wastewater storage and discharge is increasingly being scrutinised
- Conventional treatment can be complex due to salts and organics

- Projects require range of products and **conventional** solutions
- Removal of salts, nutrients and organics to meet wastewater discharge requirements

- Projects require range of products and **next-generation** solutions
- The requirement for zero liquid discharge (ZLD) is increasing with the objective of reducing volumes

> \$25 Billion / yr

Market size estimates, in Australian dollars

CY2022 – A Year of Growth & Transformation

Overview

- CY2022 has been a transformational year for Parkway.

Capability Development

- Achieved triple ISO accreditation (ISO9001, 14001 & 45001).
- Achieved approved vendor status with **several major energy and mining companies**, underpinning future strategic growth opportunities.

Technology Development

- Advanced technology portfolio including with **multiple new pilot plants**.

Technology Commercialisation

- Landmark **feasibility study with QGC Shell, is progressing positively**.

Capital Discipline

- In the last year (Sep 21 – Sep 22), net cash drawdown of ~\$2.5 million.
- Funded operations and acquired significant plant, equipment & inventory.

Refreshed Board

- Bolstered board with **significant domain expertise** in industrial, energy and mining sectors, including in sanctioning major capex projects.

3 Business Divisions <small>PPS, PPT, PV</small>	200+ Commercial Customers <small>Inc global mining & energy companies</small>
3 Geographic Operations <small>Perth, Darwin, Melbourne</small>	\$1.2 m Quarterly Cash Receipts <small>Cash receipts in Sep 22 quarter</small>
20+ Professional Employees <small>Experienced team supporting growth</small>	\$1.6 m Saleable Inventory <small>Acquired at attractive prices</small>
4,000+ Water Related Products <small>In stock from 150+ leading suppliers</small>	\$3.35 m Cash in Hand <small>At 30 September 2022 – exc. grants</small>

Indicative estimates, provided for illustrative purposes only.

Parkway Group Structure

Parkway Process Solutions (PPS)

- PPS –provides water treatment products, services, and when combined, **water treatment solutions**.
- The establishment of PPS is supporting the growth of PPT and is integral to building Parkway into an advanced **industrial water treatment technology company**.

Parkway Process Technologies (PPT)

- PPT – is our innovative technology development and commercialisation division, capable of delivering **next-generation solutions**.

Conventional Solutions: PPS



Next-Generation Solutions: PPS + PPT

Parkway Corporate Limited (PCL) – Group Overview



“

We are developing a range of **integrated water treatment solutions**, as a platform for our **innovative technologies**.

Complex Wastewater Challenges

- Traditionally seen to be “too difficult” because:
 - Water prices were cheap, if not free, why recycle?
 - Disposal requirements were modest, if not non-existent.
 - Stakeholder concerns were rarely relevant, before ESG awareness.
- Post-COVID, the world has changed:
 - Sustainable use and recycling of water matters.
 - The rate of change towards adopting sustainability will accelerate.
- Traditional business models need to adapt to ESG metrics – now.

Solving Complex Wastewater

- By definition, processing of complex wastewater often faces several challenges regarding the composition of the wastewater.
- Treatment often **requires multiple processing steps** to deal with issues relating to biological, chemical and physical treatment constraints.
- Some wastewater issues can be resolved with integration of various conventional water treatment processes into the the processing train:
 - Most service providers are focused on resolving part of the issue.
 - Significant **requirement for integrated solution** providers.
- More challenging wastewaters often **require new technological approaches.**

Building Parkway Process Solutions (PPS)



Conventional Solutions



Next-Generation Solutions

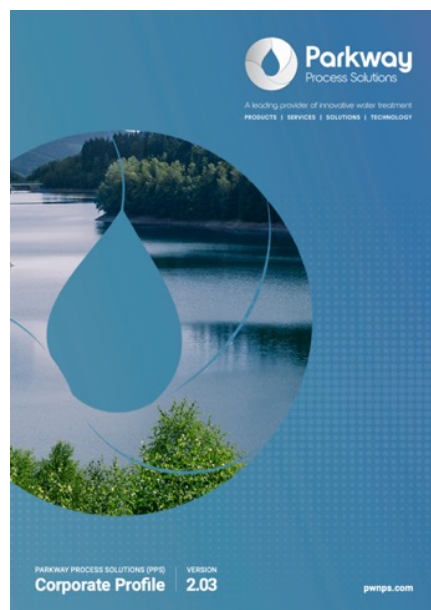
PPS – Delivering Integrated Solutions

PPS Delivering Solutions

- PPS is successfully delivering a range of integrated solutions.

PPS Rapidly Building Capabilities & Offering

- PPS is building additional technical and commercial capabilities to support successful project delivery.
- Developing range of **modular systems for rapid deployment**.



PPS Corporate Profile

- Additional information about PPS, including:
 - Corporate profile
 - Products & services
 - Integrated solutions
 - Project references
- Is outlined in the PPS Corporate Profile brochure available at:
 - [PPS Corporate Brochure](#)

Recent Case-Study

- Client:** Major global mining company.
- Project:** Large operating mine, is a **key global producer** of a commodity categorised as critical mineral.
- Date:** April - July 2022.
- Task:** Supply a water treatment plant to meet specific project requirements, within 3 – 4 months.
- Scope:** Turnkey, design, fabrication, supply, installation and commissioning of **mine pit water treatment plant**.
- Result:** Project successfully delivered on time and budget.



Inhouse Design & Fabrication

- Inhouse water treatment plant engineering design to suit specific project requirements.
- Inhouse fabrication & assembly.

Installation & Commissioning

- PPS staff performed onsite installation & commissioning.
- PPS staff collaborated with onsite staff to ensure **successful project execution**.

Building Capabilities – Generating Traction

Generating Traction

- Parkway has developed capabilities to successfully deliver a range of innovative solutions for tier-1 global companies.
- Parkway has **rapidly established a reputable client base.**

ISO Accreditations

- In February 2022, Parkway achieved triple ISO accreditation.



Memberships

- Parkway is a member of the Initiative for Responsible Mining Assurance (IRMA), and has provided early engagement.



Approved Vendor

- Parkway is now an **approved vendor** for major companies.

Energy Clients:

- Leading global energy companies.



Mining Clients:

- Leading global mining companies.



Academic Clients:

- Leading Australian research organisations and universities.



Major Clients

- Additional clients include a range of industrial companies.

“

Globally significant
wastewater challenges,
particularly impacting
extractive industries.



Bloomberg

Green|Hyperdrive

Saving the Planet With Electric Cars Means Strangling This Desert

Mining lithium and copper to supply the battery boom and fight climate change is wrecking a fragile ecosystem in Chile.

Degraded environment including acid & metalliferous drainage (AMD).



Legacy of Extractive Industries – Energy



Degraded environment from oil production in Northern Alberta, Canada.

<https://www.nationalobserver.com/2021/10/18/news/enviro-groups-want-feds-step-after-report-reveals-albertas-tailings-ponds>

Waste brine ponds from coal seam gas production in Queensland, Australia.



<https://www.abc.net.au/news/rural/2022-04-26/queensland-coal-seam-gas-industry-big-salt-problem/100990978>

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True sustainability is not possible, without **sustainable water and wastewater management.**

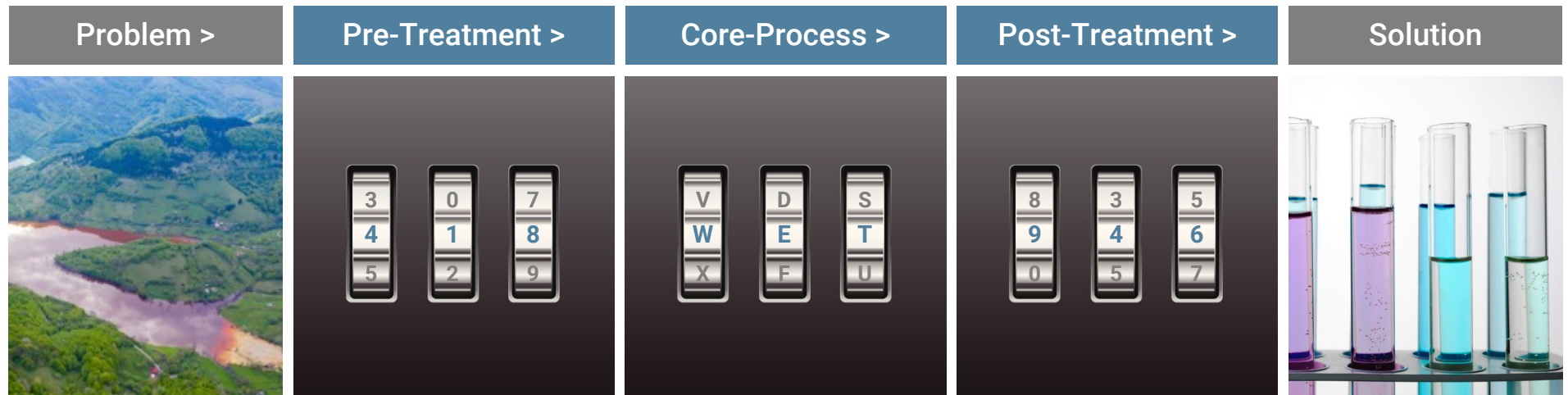
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Next-Generation Technologies
provide an opportunity to
solve these problems,
sustainably.

PPT – Developing Process Technology Solutions

Cracking the Process Technology Code

- We are focused on **developing industry-wide solutions** (large markets) for some of the most difficult (complex and expensive) wastewater related problems facing extractive industries, such as oil & gas, and mining, globally.
- We are developing **proprietary process flowsheets** that are highly effective, in recovering both water as well as saleable products.



- Large scale issues as a result of legacy impacts from extractive industries.
- Large companies have often **exhausted conventional options**.
- Highly complex technical problems, **requiring an innovative approach**.



“There’s a way to do it better – find it.” Thomas A. Edison

- Parkway performs detailed **process simulation & piloting studies** in order to “crack the code”.
- **Several conventional and proprietary technologies are integrated to develop an optimal solution.**
- As the technology solution provider, Parkway is strongly positioned to **capture share of value** creation.

Parkway Process Technologies – Proprietary Technology Portfolio

- Solution often involves the recovery of high-purity water.
- Production of reagents and/or industrial chemical products.
- Substantial reduction and/or **elimination of waste volumes**.
- **Attractive financials.**

PPT – Proprietary Technologies from Parkway

Overview

- Parkway owns a portfolio of **proprietary** (including patented) **wastewater treatment related technologies**.

aMES® Technology

- Innovative process technology that enables the treatment of concentrated aqueous solutions to **recover a range of valuable minerals, reagents and fresh water**.
- Significant progress in developing modularisation approaches to support technology commercialisation.
- PFS study findings supported by state-of-the-art pilot plant.

iBC® Technology

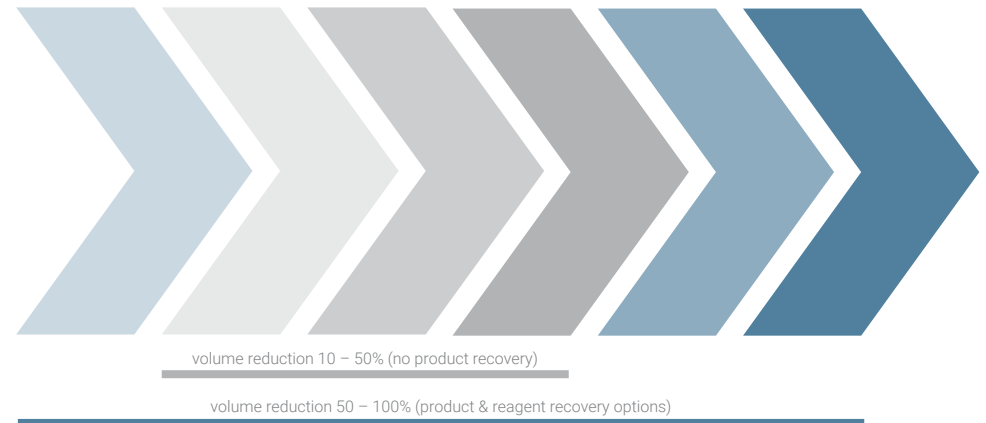
- Innovative process technology that **removes range of impurities from brine streams** enabling further processing.
- Core technology in landmark feasibility study with QGC Shell.
- New pilot plant achieved wet commissioning in late Nov 2022 and is supporting larger-scale process evaluations.

Strategic, Research & Development Pipeline

- Secured **additional rights to synergistic technologies**.
- Significant ongoing investment in R&D and commercialisation to advance range of technologies.

Integrated Solutions

- Parkway offers both industry standard (conventional) and next-generation (PPT) technologies including **integrated offerings**.
- Integration of both conventional (grey) and proprietary (blue) technologies, deliver the most **comprehensive process or wastewater treatment solution** for the client.



Integration of Process Technologies

- Portfolio of both conventional and proprietary technologies, suitable for delivering integrated wastewater treatment solutions.
- Commitment to adopting **best available technology** or best available techniques (BAT) to meet project objectives and satisfy regulatory obligations (as required).

PPT – Industrial Technology Commercialisation

State-of-the-Art Technology Platform

- Technology platform **specifically developed for commercialising** innovative wastewater related **process technologies**, globally.
- Established strategic partnerships with **world-class partners**, underpin the strength of the **innovative technology platform**.

aMES® Pilot Plant



iBC® Pilot Plant



Laboratory Facilities



Creating, Protecting & Extracting Value

Additional information on Parkway website:

- [Innovative Business Model](#)
- [Multi-layered IP Strategy](#)
- [iWPaaS™ Technology Platform](#)

Challenging Wastewater Streams

- Very large addressable markets
- Limited conventional wastewater treatment options available
- Projects require innovative approach
- Clients amenable to new technologies

INDUSTRIAL CLIENTS

Innovative Technology Portfolio

- Portfolio of industrial process technologies includes:
 - aMES®
 - iBC®
 - tech pipeline
- Deep technologies provide clear value proposition



Proprietary Process Solution

- State-of-the-art process simulation and engineering and capabilities
- Process integration to develop flowsheet
- Technoeconomic models support early business case development



Technology Solution Validation

- Large inventory of conventional and next-generation process pilot plants
- Integrated process piloting capability
- Process piloting supports feasibility study development



Project Feasibility & Execution

- Internal project development and execution capabilities
- Strong support from Worley, a leading global engineering company
- Global partnership
- Capacity to deliver large tier-1 projects



Coal Seam Gas (CSG) Brine Challenges in QLD

CSG Related Wastewater Challenges

- Coal seam gas (CSG) operations in Queensland currently produce **55,000,000 litres of associated water, annually**.
- Concentrated brines derived from the treatment of associated water, contain **194,000 tonnes of dissolved salts annually**, rising to 5,500,000 tonnes over the life of existing CSG projects.
- The recovery and disposal of these mixed salts represent a **substantial risk and liability (cost)** to CSG project operations.

\$307 million / year
\$9.2 billion total
Addressable market



Existing CSG Operations

- Waste brine from current operations
- No viable alternative identified to date
- Existing waste brine inventory in QLD

Additional Opportunities

- In addition to the ongoing (annual) brine volumes, there is also a **significant volume of legacy brine** volumes requiring a permanent treatment solution.
- As brownfield projects are expanded, and/or have their field life extended, additional volumes of brines will require treatment.
- Several greenfield projects are also emerging, which would benefit significantly from a sustainable integrated brine treatment solution.



QGC Shell - Kenya Water Treatment Plant, in Queensland, Australia.

Market Opportunity

- Strong regulatory environment relating to environmental authority (EA) to develop and operate CSG projects in Queensland, **requires brine or salt residues to be treated** to create useable products, wherever feasible.
- In excess of \$100 million invested by CSG industry over a decade to identify a long-term solution to treating brine and salts, **no viable pathway has been identified** to date.
- In addition to brine processing costs, CSG operators are required to pay **significant salt disposal costs**, including a regulated **waste levy** in the order of \$125 - \$175* per tonne.
- Additional information about the CSG related market opportunity is outlined in [07 April 2022](#) ASX announcement.

* Increasing \$10/t annually, until 2027-28 when the levy will reach \$175 - \$225/t, and commence at CPI thereafter.

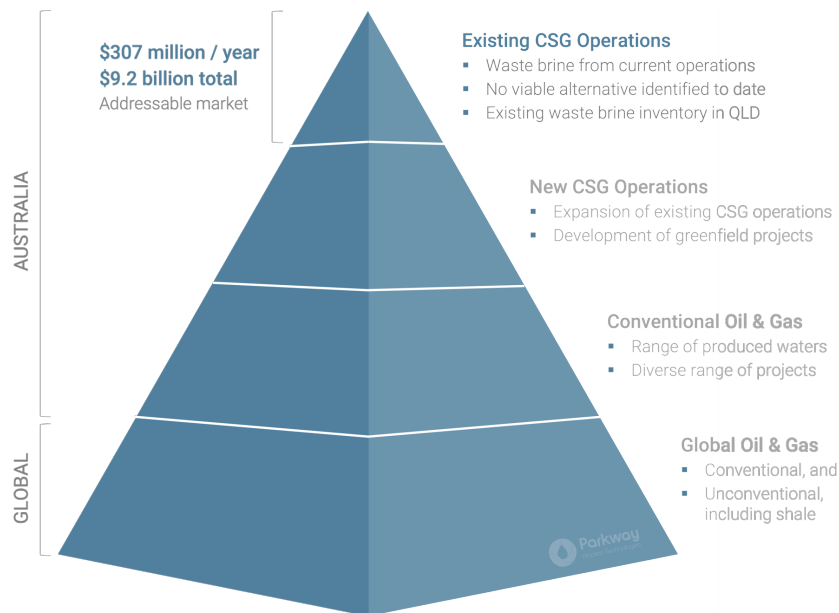
Additional Oil & Gas Related Opportunities

Additional Australian Gas Field Wastewater Challenges

- Outside the portfolio of existing CSG operations in Queensland, there a number of both conventional and unconventional oil and gas projects across Australia facing similarly significant wastewater related challenges.
- In September 2022, Origin Energy withdrew from the **Beetaloo Shale Gas Project**, due to range of challenges, including long-term wastewater treatment related challenges.



Santos – Narrabri CSG Project, in New South Wales, Australia.



Significant Industry Challenges

- The pre-development stage \$3.6 billion **Narrabri CSG Project** in Northern NSW being proposed by Santos, is facing significant challenges associated with lack of acceptable brine and salt disposal strategy. Significant community opposition.

Catalyst to Sustainable Development

- The absence of a suitable brine and salt disposal strategy is increasingly a major challenge to receiving project approvals.






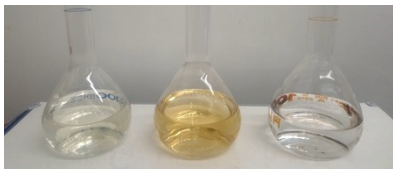
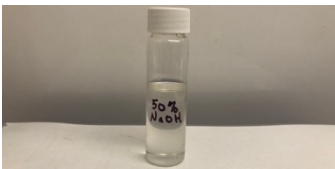
Additional Opportunities

- There are **substantial international opportunities** to treat oil and gas derived produced formation waters, sustainably.

PPT has Successfully Cracked the CSG Brine Code

Parkway has Achieved a Major Industry Breakthrough

- Despite significant investment (>\$100 million) by the CSG industry over many years, supported by leading advanced wastewater solution providers, to identify a long-term solution to treating waste brine and salts, **no viable pathway has been identified to date.**
- As of late Nov 2022, Parkway is pleased to advise it is **technically viable to treat concentrated CSG brines with iBC® tech platform.**

Problem >	Pre-Treatment >	Core-Process >	Post-Treatment >	Solution
				 <ul style="list-style-type: none"> High-purity water Industrial salt Agricultural lime Caustic soda Residual brine
<p>CSG Wastewater - Annual</p> <ul style="list-style-type: none"> 55,000,000,000 litres of associated water produced by QLD CSG industry. 4,800,000,000 litres of brine produced. If concentrated would produce 750,000,000 litres of highly concentrated brine. 	<p>iBC® Brine Pre-Treatment</p> <ul style="list-style-type: none"> Range of proprietary iBC® mediated brine pre-treatment and conditioning related processes. 	<p>iBC® Primary Processing</p> <ul style="list-style-type: none"> Core iBC® mediated brine processing, involving range of technology capabilities including aMES® related. 	<p>iBC® Brine Post-Treatment</p> <ul style="list-style-type: none"> Range of proprietary iBC® mediated brine post-treatment and conditioning related processes. 	<p>Chemical Products</p> <ul style="list-style-type: none"> >98% product recovery. Primary product is an industrial caustic product. Product spec confirmed. 

PPT has Successfully Cracked the CSG Brine Code

Parkway has Achieved a Major Industry Breakthrough

- **Sample 1** Super concentrated (>200g/L TDS) CSG Brine (from WWTP-01), requiring treatment, but no viable treatment identified.
- **Sample 2** Super concentrated (>200g/L TDS) CSG Brine (from WWTP-02), requiring treatment, but no viable treatment identified.

By processing CSG brines (Samples 1 & 2) with a **proprietary iBC® based flowsheet**, Parkway has been able to successfully produce:

- **Sample 3** High-purity (deionised) water, recovered from the dewatering process.
- **Sample 4** Industrial salt product (NaCl).
- **Sample 5** Agricultural lime product (CaCO₃).
- **Sample 6** Caustic soda product (NaOH).

Highly Transformational Results

- Exceptional product recovery (>98%) exceeds all prior approaches.
- Very high-value product mix, as products are within industrial specifications.
- Extremely low waste generation.

Implications

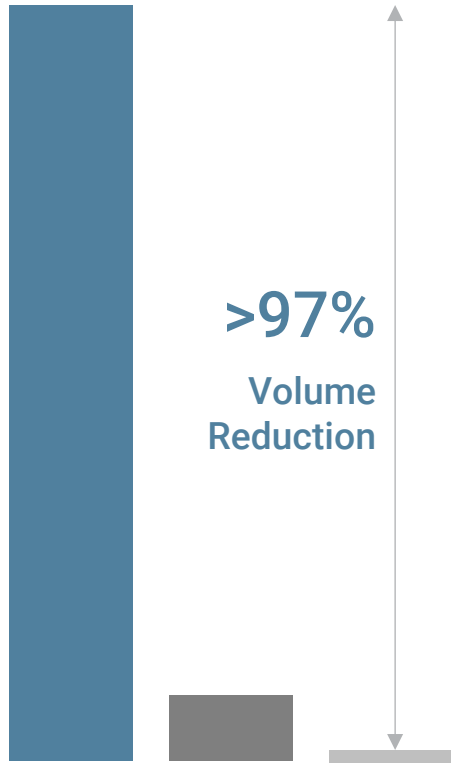
- Provides robust basis for delivering:
 - a technically feasible, and
 - commercially viable,
 - process solution.
- Immediate industry-wide implications.



>98%
Product
Recovery

Transforming CSG Brine Processing – with iBC®

QLD CSG Wastewater Profile

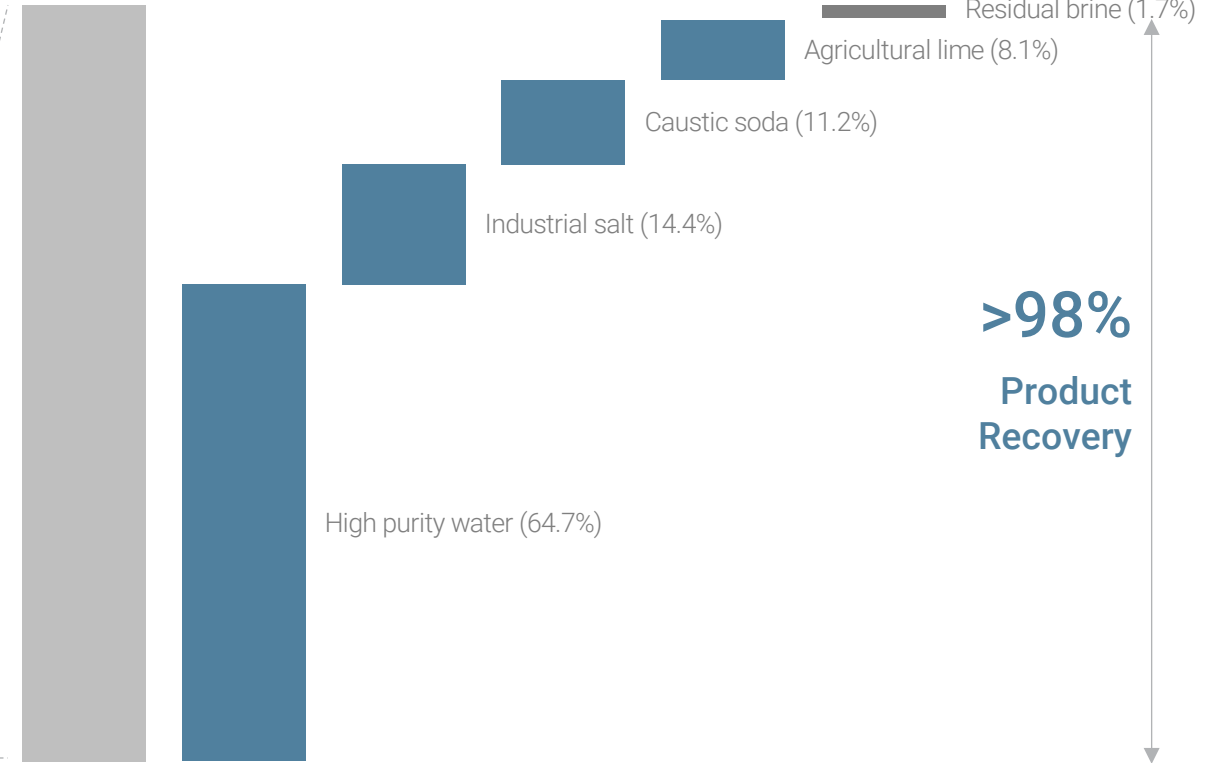


>97%
Volume
Reduction

Annual Brine Production (L/yr)

- 55,000,000,000 litres of associated water.
- 4,800,000,000 litres of brine produced.
- When concentrated the volume is reduced to **750,000,000 litres of concentrated brine**, containing 194,000,000 kg of salt, annually.

iBC® Brine Processing – Potential Product Profile* (approx. w/w% basis)


























>98%
Product
Recovery

Product Recovery – Indicative Yield (w/w% basis)

- Concentrated brine volume (indexed to 100%, to allow for comparison).
- Greater than **98% of concentrated brine (waste) converted to water and products**.
- Less than 2% of brine reports to a residual waste brine stream, with options for further processing, to recover additional valuable chemical products, and reduce volumes to less than 0.5%.

* Indicative estimates, based on a specific scenario involving internal water consumption, not-to-scale, subject to change and provided for illustrative purposes only.

CSG Brine Options – Comparative Analysis

	Alternate Salt Recovery Processes	Salt Encapsulation Approaches	Parkway – iBC® Mediated Processing Route
Overview	Range of historical "selective salt recovery (SSR)" approaches considered, mostly a decade ago	Involves crystallising brine into solid salt form and encapsulating it for long-term storage in purpose built cells	Highly innovative proprietary flowsheet that transforms majority of brine and salt into saleable industrial products
Environmental Metrics		  	  
Solid Waste Profile	Only a fraction of salts are recovered	All of the salts are disposed	>95% of salts are recovered
Liquid Waste Profile	No liquid products are recovered	No liquid products are recovered	>95% of liquid recovered as product
Ongoing Monitoring	Residual waste streams are significant and require monitoring	Waste salt cells require >150 yr design life & require ongoing management	As vast majority of wastes are recovered - residual waste is minimal
Social Metrics		  	  
Social License	Infrastructure investment delivering partial solution is a poor outcome	Creates range of social-license related challenges impacting project viability	The sale of products eliminates the vast majority of long-term liabilities
Freedom to Operate	Sets poor precedent about resource custodianship and utilisation	Long term management & monitoring of waste facilities is highly undesirable	Provides freedom-to-operate by adopting best-available technology
Financial Metrics	  	  	  
Project Revenues	Generates limited revenues from single low-value product – must pay levies	Does not generate any revenues and instead must pay waste levies	Substantial revenues from sale of industrial-grade solid & liquid products
Project Capex	Very high costs	Very high sustaining capex	Capex is productive capital
Life of Project	Prohibitive capex to produce limited revenue is poor investment option	Substantial ongoing disposal and levy costs are highly problematic	Revenues fund waste treatment – thereby saving waste disposal costs

“

The **QGC Shell feasibility study** is a **landmark milestone**, highlighting the transformative potential of our technology.

Feasibility Study for QGC Shell

Overview

- QGC (a Shell Group company) is one of Australia's leading gas producers and has invested **>\$2 billion on water infrastructure**.
- Parkway has been collaborating with QGC for several years.
- On 7 April 2022, **QGC awarded Parkway a material contract** (~\$0.62 million), to perform a landmark feasibility study.

Technology

- The feasibility study involves Parkway performing a range of evaluations and assessing the feasibility of treating waste brine derived from QGC's CSG wastewater treatment plants, using **Parkway's patented iBC® technology platform**.

Feasibility Study

- The feasibility study incorporates iBC® based, i) process simulation & modelling, ii) process piloting, iii) process engineering, and iv) techno-economic analysis, related activities.
- Feasibility study related activities are **supported by strategic partners**, Worley (ASX: WOR) and Victoria University (VU), with whom Parkway has long-standing relationships.
- Additional information about the feasibility study contract awarded by QGC (a Shell Group company), is outlined in [07 April 2022](#) ASX announcement.



QGC Shell - Northern Water Treatment Plant, in Queensland, Australia.

Client

- QGC Pty Limited, a Shell Group company.



Master Contractor

- Parkway Process Solutions Pty Ltd.



Parkway – R&D Partner

- Victoria University.



Parkway – Global Strategic Partner

- Worley.



QGC Shell Feasibility Study Progress

Overview

- Collaborative project team, led by Parkway engineering team.

iBC® Piloting Activities – Bench Scale

- Extensive evaluations performed to date, have now confirmed:
 - key process conditions to operate iBC® process plant.
 - production of key products, including an industrial grade caustic soda product with a specification comparable to other industrial (diaphragm) grade caustic products.

iBC® Piloting Activities – Pilot Scale

- Mechanical installation of New iBC® pilot plant completed in August, with additional process equipment procured.
- **Hot commissioning activities completed in late-November.**
- Piloting will replicate bench scale performance at larger scale.

Feasibility Study

- Preparation of **key engineering deliverables is nearing completion**, underpinned by **successful piloting results**.
- In addition to finalising piloting, the project is transitioning to the techno-economic evaluation phase, to underpin FS report.
- Extensive client engagement supporting development of feasibility study, to ensure **alignment with Shell requirements**.



New iBC® Pilot Plant, installed at Victoria University, in Victoria, Australia.

Commercial

- Preliminary discussions with industrial customer/s capable of off-taking caustic soda production, are very encouraging.
- Existing QGC site for commercial-scale iBC® plant identified, and has been incorporated into project engineering design.
 - Proposed iBC® plant layout has been reconfigured at request of client, to allow for potential second train.
- Range of **commercial options to deliver** project being explored, pending finalisation of feasibility study.
- Genuine **opportunity for iBC® technology platform** to become best available technology (BAT) and for the QGC project to potentially provide **industry-wide solution**.
- Feasibility study is an important step in technology validation.

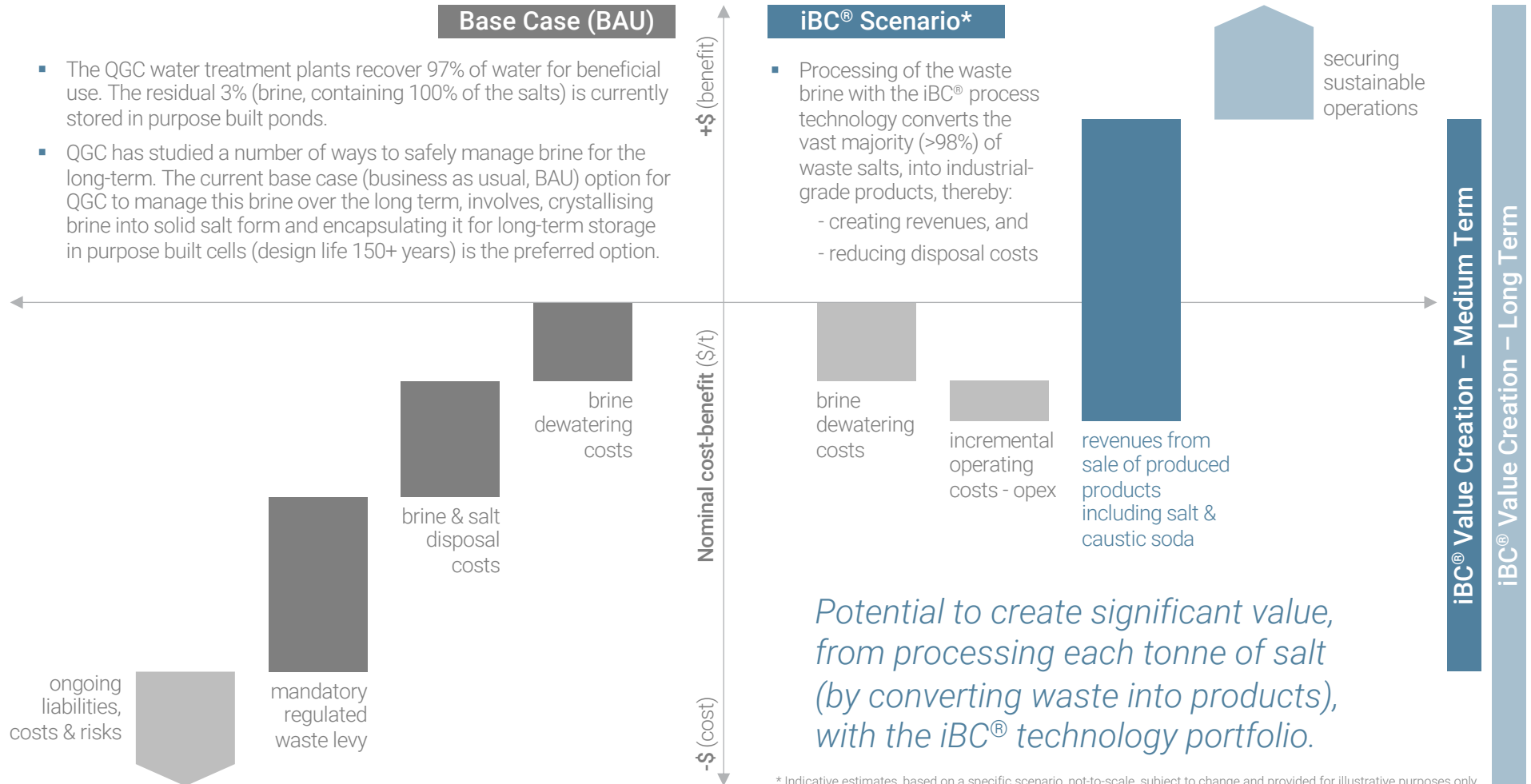
Substantial Value Creation Opportunity

Base Case (BAU)

- The QGC water treatment plants recover 97% of water for beneficial use. The residual 3% (brine, containing 100% of the salts) is currently stored in purpose built ponds.
- QGC has studied a number of ways to safely manage brine for the long-term. The current base case (business as usual, BAU) option for QGC to manage this brine over the long term, involves, crystallising brine into solid salt form and encapsulating it for long-term storage in purpose built cells (design life 150+ years) is the preferred option.

iBC® Scenario*

- Processing of the waste brine with the iBC® process technology converts the vast majority (>98%) of waste salts, into industrial-grade products, thereby:
 - creating revenues, and
 - reducing disposal costs



* Indicative estimates, based on a specific scenario, not-to-scale, subject to change and provided for illustrative purposes only.

PPT – Typical Business Development Cycle

Overview

- Given the nature of target projects (**large, complex and long-life operations**), the business development cycle is similarly sophisticated with many stakeholders.
- Parkway is currently advancing a pipeline of projects through key business development stages, with a specific **focus on high value and strategic applications**.
- Indicative timelines associated with the business development cycle are outlined below. The trajectory of each project varies depending on specific factors.



Additional Strategic Opportunities

- Shortlisted by state-owned enterprise, in relation to potentially performing feasibility study, to evaluate downstream processing options for major salt works project.
- Several other strategic opportunities being advanced with emphasis on applications that have the potential for large-scale / industry-wide adoption.

Very Large Addressable Markets

- The water and wastewater treatment opportunities in the global energy & mining, municipal & desalination and industrial applications, all represent **multi billion dollar opportunities**.

Strong Industry Drivers

- Strong economic, regulatory and **ESG drivers supporting change**.

Market Requires Integrated Solutions

- Parkway Process Solutions is capable of delivering increasingly complex **integrated wastewater treatment solutions**.

Purpose Built Platform to Address Growing Thematic

- Attractive business model to create and **capture share of value creation**.
- Partnering with major industry players to deliver fit-for-purpose solutions.
- Highly motivated team making progress in **building client & revenue base**.

New Technologies for Next-Generation Solutions

- Parkway is commercialising a portfolio of highly **innovative and patented technologies** (aMES[®], iBC[®] and others) to address particularly complex process and wastewater related challenges.
- New technologies will enable delivery of **highly differentiated solutions**.

