



Building an advanced

# Industrial Water Treatment

technology company

03 October 2022

ASX: PWN | [pwnps.com](http://pwnps.com)

**Bahay Ozcakmak**

Group Managing Director & CEO

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This presentation may contain forward-looking statements. The words “continue”, “expect”, “forecast”, “potential” and other similar expressions are intended to identify forward-looking statements. Indications of, and 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.

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## 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](http://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](mailto:ir@pwnps.com)

# Presentation Outline

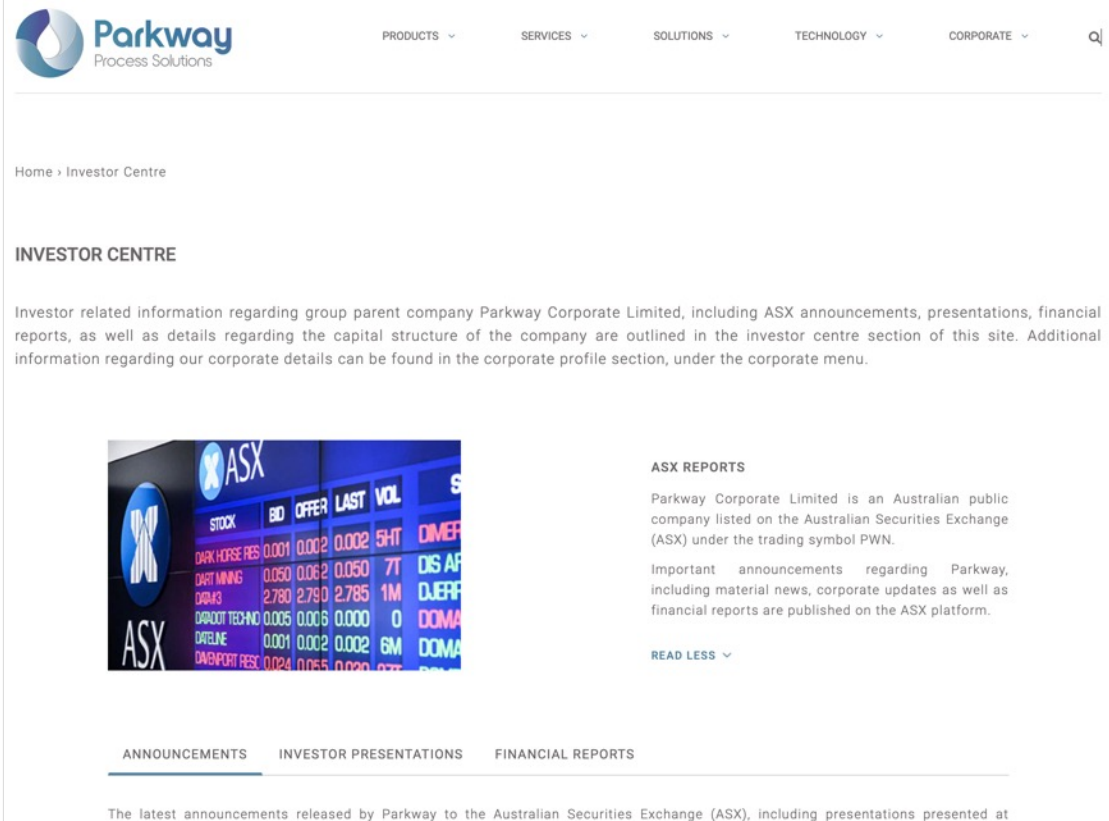
## Overview

This presentation is intended to provide an introduction and general overview of Parkway.

## Key Topics

- Corporate Overview
- The Problem – Extractive Industries Wastewater 
- Sustainability – The Challenge of Our Time
- Growing Water Challenges Facing Industry 
- Key Addressable Markets
- PPT – Proprietary Technologies from Parkway 
- PPT – Industrial Technology Commercialisation
- PPT – Typical Business Development Cycle 
- Technology Application – CSG Case Study
- Parkway Group Structure 
- PPS – Integrated Solution Provider
- Building Capabilities – Generating Traction
- Investment Case 
- Appendices

## Company Website



The screenshot shows the Parkway Corporate Limited Investor Centre website. The header includes the Parkway logo and navigation menus for PRODUCTS, SERVICES, SOLUTIONS, TECHNOLOGY, and CORPORATE. The main content area is titled "INVESTOR CENTRE" and contains the following text:

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.

Below the text is a section for "ASX REPORTS" with a "READ LESS" link. A table of ASX stock data is also visible:

STOCK	BID	OFFER	LAST	VOL	S
PARK HORSE RES	0.001	0.002	0.002	5HT	DIMEP
CART MINING	0.050	0.062	0.050	7T	DIS AF
COMMS	2.780	2.790	2.785	1M	DJEFF
CARROOT TECHNO	0.005	0.005	0.000	0	DOMA
CABLELINE	0.001	0.002	0.002	6M	DOMA
CARROOT RESC	0.024	0.055	0.020	07T	DOMA

At the bottom of the page, there are links for "ANNOUNCEMENTS", "INVESTOR PRESENTATIONS", and "FINANCIAL REPORTS". A footer note states: "The latest announcements released by Parkway to the Australian Securities Exchange (ASX), including presentations presented at [www.pwnps.com/collections/investor-centre](http://www.pwnps.com/collections/investor-centre)".

Additional information about Parkway, is available from the Investor Centre: [www.pwnps.com/collections/investor-centre](http://www.pwnps.com/collections/investor-centre)

Capital Structure	Current
Ordinary Shares (PWN) on issue	2,213,280,416
12-month Trading Range	\$0.008 - \$0.014
<b>Market Capitalisation (at \$0.009)</b>	<b>\$20 million</b>
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%
Lions Bay Capital (Canadian LIC)	7.6%
BNP Paribas Nominees / Deutsche Börse	7.4%
BNP Paribas Noms / EU & Institutional	4.3%
<b>Top 20</b>	<b>46.4%</b>

Funding	\$
Debt	nil
Cash (at 30 June 2022, excl. grants)	\$4.1 million
<b>Cash (at 30 Jun 2022)</b>	<b>\$4.1 million</b>

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 board & management 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 reasonable **value capture**.

## Well Resourced

- Significant financial resources and **demonstrated financial discipline**.
- Accumulation of inventory (PPS) and R&D funds (PPT, grants & rebates).
- Established operations in Melbourne, Perth & Darwin, Australia.

## Building Momentum

- Internal technical/commercial capabilities expanded substantially.
- Established partnerships with key industry players to align interests.
- **Strong relationships with existing clients** and future prospects.

“

Globally significant  
**water challenges,**  
particularly from  
**extractive industries.**



# Electrification and Net Zero



*The electrification of transportation  
and heavy-industry ...*

*... is key to reducing emissions  
and achieving net-zero.*



# However, Electrification Requires Minerals

## Electrification

- Copper is critical to electrification.
- A dramatic increase in copper supply is required in the next 20 – 25 years, essentially equivalent to all the copper ever mined in human history.

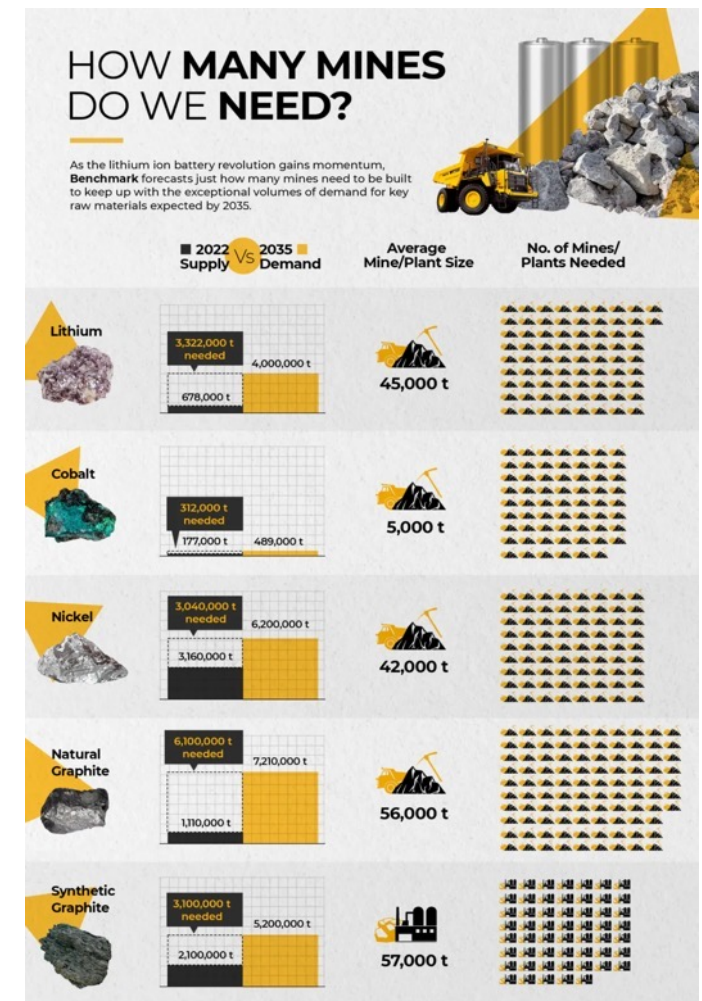
## Lithium Ion Batteries

- Batteries, particularly lithium ion batteries, are a key technology, required for electrification of many mobile but energy intensive applications.

## Critical Minerals

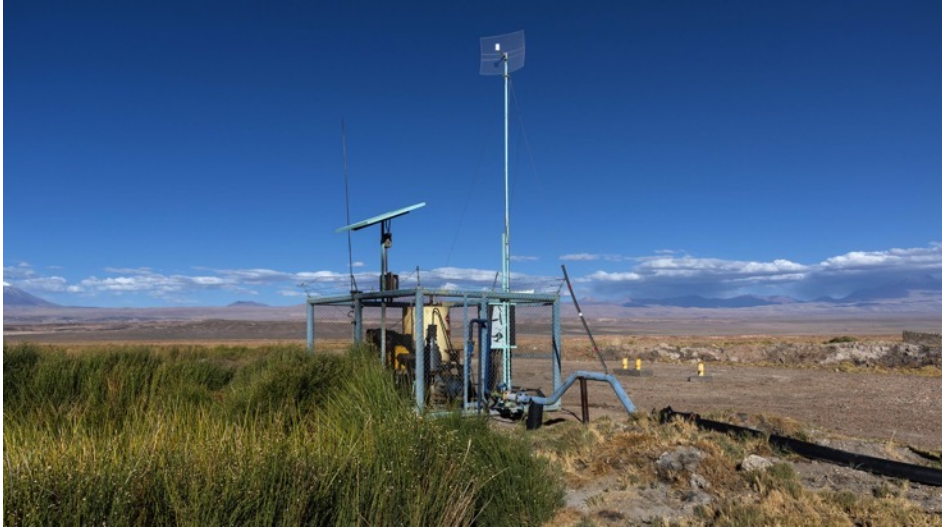
- Electrification, lithium-ion batteries as well as **most clean energy technologies require vast quantities of critical minerals.**
- According to the International Energy Agency (IEA), key critical minerals, include copper, lithium, nickel, cobalt and rare earth elements.

*The green revolution is inextricably dependent on new mine development, as a source of these critical minerals.*



<https://www.benchmarkminerals.com/membership/more-than-300-new-mines-required-to-meet-battery-demand-by-2035/>

# Mining Required for Supply of Critical Minerals



*Mining of critical minerals  
requires vast amounts of water ...*

*... often in regions with limited sources  
of water, with competing uses.*







## 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 gas production in Queensland, Australia.*



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

“

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



## 1) We Need to Improve Sustainability

- In order to improve sustainability,
  - we all understand we need to reduce emissions.
- However, it is less commonly understood that, we also,
  - need to **better manage our valuable water resources**.

## 2) Electrification is a Key Lever to Improve Sustainability

- Electrification underpins economic development, and also
  - provides opportunities to decarbonise the global economy.

## 3) Electrification Requires Mining & Energy

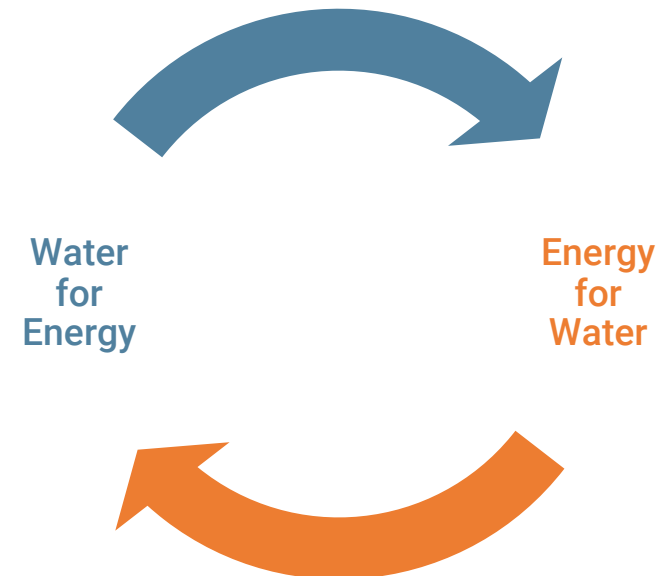
- The **mining and energy industries are large users of water**.

## 4) True Sustainability

- Sustainability is about more than emissions reductions.
- True sustainability can only be achieved by:
  - Ensuring the extraction and utilisation of water is sustainable.
  - Wastewater production is eliminated, or minimised, through reuse and **beneficial treatment processes**.

## The Energy-Water Nexus

- Large volumes of water needed for:
  - cooling in thermal power generation.
  - fracture stimulation in oil & gas wells.
- Large amounts of energy are required for:
  - producing water through desalination processes.
  - operation of wastewater treatment plants



# Growing Water Challenges Facing Industry

## Industry Profile: Mining

- The mining industry is a large consumer of water, an issue that is only compounded by the fact that many mines are located in arid environments where water is already scarce.
- The overall demand for water is forecast to rise by as much as 500% for some metals by 2025, driven by increased applications in batteries, renewable energy and other green technologies.
- However growing environmental, social & governance (ESG) constraints on metals production (particularly copper, lithium, nickel) threaten to make many projects unviable in coming years.
- **Water scarcity** identified by Fitch as the **greatest emerging risk to the metals and mining sector**.
- Compounding the water challenges facing the mining industry, is the wastewater storage in tailings dams which are accounting for a growing portion of total operating costs and also present risks.

**Implications:** Society is demanding more sustainable operations, which means the mining industry will increasingly **need to adopt process and wastewater treatment technologies**, to reduce net water use.

## Industry Profile: Desalination

- For every litre of freshwater output, desalination plants produce on average 1.5 litres of waste brine.
- World's ~16,000 desalination plants discharge **142 million m<sup>3</sup>/day of waste brine daily**.
- Brine management can represent up to 33% of a desalination plant's operating cost.

## Industry Profile: Energy

- The oil and gas industry faces similar wastewater treatment challenges as the desalination industry.
- In many cases, these **environmental liabilities will persist for decades after operations have ceased**.

## FitchRatings

NON-RATING ACTION COMMENTARY

### Water Scarcity Is Greatest Risk to Metals and Mining

Wed 08 Jul, 2020 - 5:21 am ET

Related Fitch Ratings Content: Increasing Water Risks in Metals and Mining - Low-Carbon Technology Supply Chains Face Growing Constraints

Fitch Ratings - London-08 July 2020: The 2020 metals and mining survey, 'Emerging ESG Risks in the Metals and Mining Value Chain' - a collaboration between Fitch Ratings and CRU - highlighted water scarcity as the greatest emerging risk to the metals and mining sector, according to investors. Pressures such as localised water shortages and competition for water are likely to increase in the coming decades, causing increasing challenges for battery and low-carbon technology production.

Mining often faces operational risks with regard to water supply, and is one of the most water-intensive industries. Although efforts have been made to increase the efficiency with which the industry uses water, more and worse droughts and greater competition for water resources are posing growing challenges. The industrial utilisation of water is often constrained before the water demands of other sectors, such as agriculture.

Overall demand is forecast to rise by as much as fivefold for some metals by 2025, according to CRU, driven by increased applications in batteries, renewable energy and other green technologies. However, there are growing social and environmental constraints on production that threaten to make many projects unviable in the coming years. These may begin to disrupt dependent supply chains and products - a particular concern given the time and costs required to develop large-scale solutions such as desalination and wastewater recycling.

A major emerging concern for the sector is the management of mine tailings and its storage in tailings dams. A number of high-profile mine disasters from tailings dams highlight the need for the

W I B D BUSINESS CULTURE DEBATE ECONOMY ESCAPE NEWS - SIGN IN - REGISTER

### Desalination Is Booming. But What About All That Toxic Brine?

Desalination plants turn seawater into drinking water, but also pump hypersaline water back into the environment. That's especially troubling because desal has become extremely popular.



### Industrial Wastewater Treatment Market worth US\$ 140 Bn by 2027

© August 20, 2021 # 5 Min Read

Industrial Wastewater Treatment Market: Key Highlights

- The global industrial wastewater treatment market was valued at around US\$ 89 Bn in 2018, and is anticipated to expand at a CAGR of more than 5% during the forecast period.

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

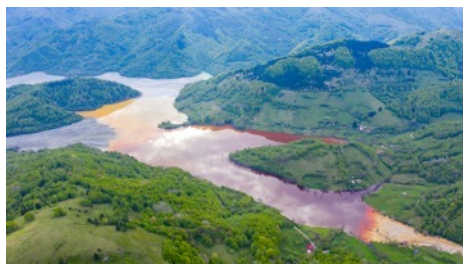


# Key Addressable Markets

## Key Markets

- Wastewater treatment opportunities
- < 5% of wastewater currently recycled
- Large and growing global markets

### Mining & Energy



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

### Industrial Wastewater



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

### Municipal & Desalination



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

## Challenges

- Major challenges impacting industry

## PPS Opportunity

- Parkway Process Solutions (PPS)

- 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 **conventional** solutions
- Removal of contaminants and organics to meet wastewater discharge requirements

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

## PPT Opportunity

- Parkway Process Technologies (PPT)

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

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

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

## Global Market Size

> \$25 Billion / yr

> \$100 Billion / yr

> \$25 Billion / yr

Market size estimates, in Australian dollars

# 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

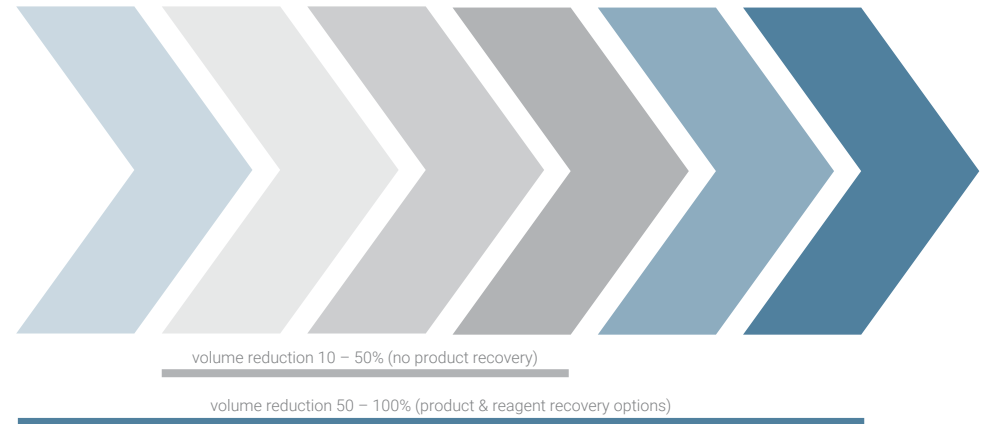
- Innovative process technology that **removes common impurities from brine streams** enabling further processing.
- Core technology in landmark feasibility study with QGC Shell.
- New pilot plant reached mechanical completion in August 2022, and is ready to support larger-scale evaluations.

## 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.



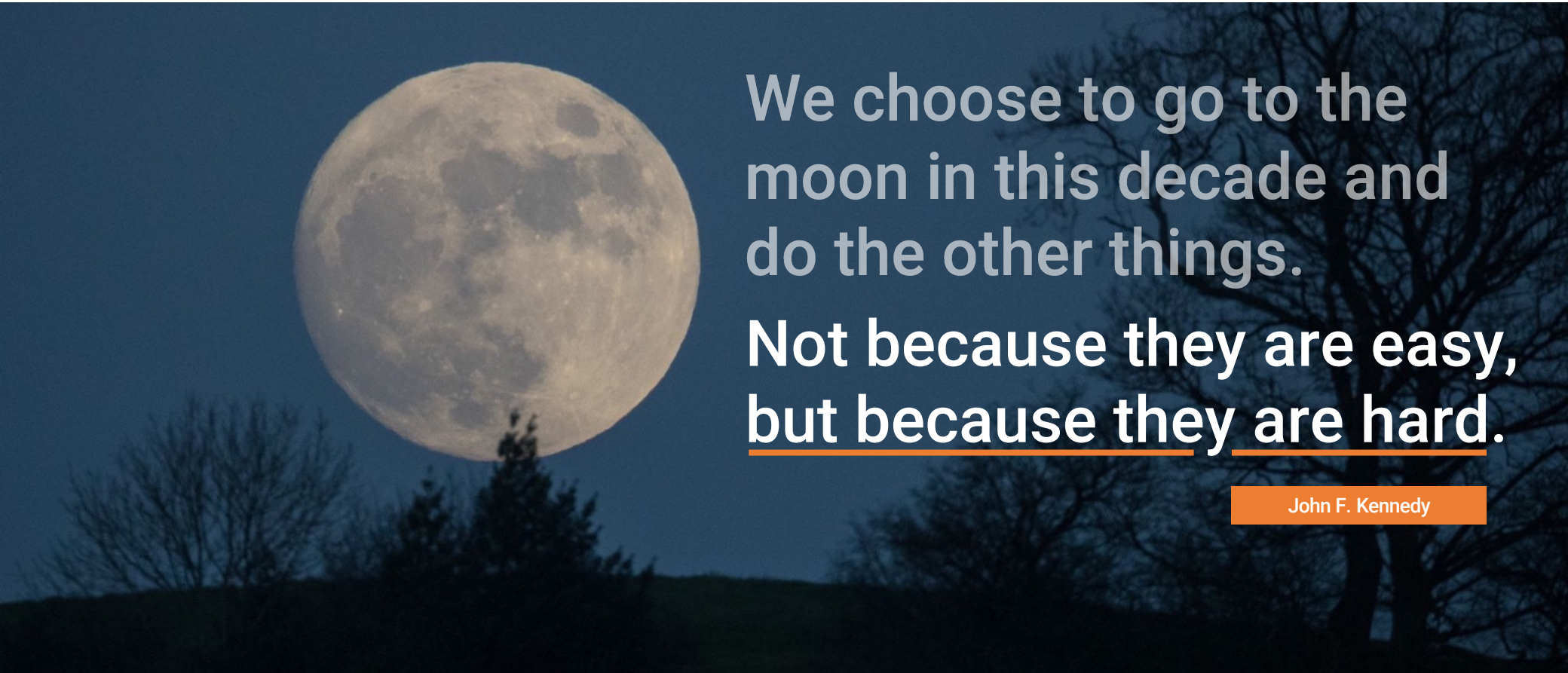
## Integration of Process Technologies

- 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).



## Technology Commercialisation

- New industrial technologies take time to develop, however, when commercialised successfully, can **disrupt entire industries**, rapidly.



We choose to go to the moon in this decade and do the other things.

Not because they are easy, but because they are hard.

John F. Kennedy

For details regarding Rates of Technology Adoption, refer to the Strategic Water Treatment Opportunities (Slide 33) in the Appendices.

# 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, Extracting & Protecting 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



# 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.



## Strategic Opportunities

- In parallel with existing technologies, Parkway has secured certain rights to a range of **innovative OEM related technologies** (key details remain commercial-in-confidence) and is exploring similar **synergistic opportunities**, which have been assessed to have the **potential to be highly disruptive and transformative**.

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



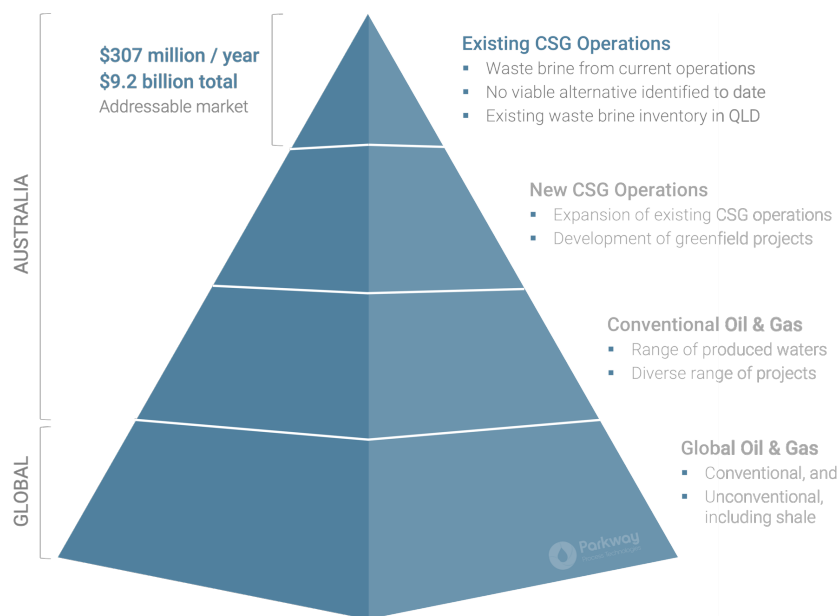
# Addressable Market – Coal Seam Gas Case Study

## 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.



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.

# CSG Case Study – 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**, 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 water treatment plants, using **Parkway's patented iBC® technology**.

## Feasibility Study

- The feasibility study incorporates iBC® based, i) process simulation & modelling, ii) process piloting, iii) process engineering, and iv) technoeconomic 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 partnership 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.



## PPS – R&D Partner

- Victoria University.



## PPS – Global Strategic Partner

- Worley.



# CSG Case Study – QGC Feasibility Study Progress

## Overview

- Collaborative project team, led by Parkway engineering team.

## Piloting Activities

- Bench Scale – extensive evaluations performed, **confirming** key process conditions, and the **production of key products**.
- Pilot Scale – mechanical **installation of New iBC<sup>®</sup> pilot plant completed in August**, ready to support larger-scale evaluations.



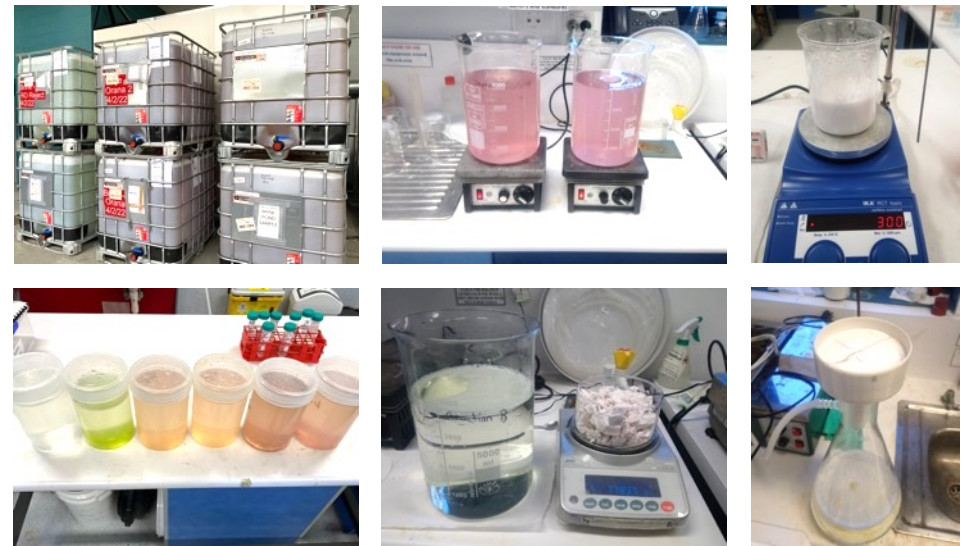
New iBC<sup>®</sup> Pilot Plant, installed at Victoria University, in Victoria, Australia.

## Feasibility Study

- Existing QGC **site for commercial-scale iBC<sup>®</sup> plant identified**, and is being incorporated into project engineering design.
- Engineering phase has commenced, supported by pilot results.

## Commercial

- Key product produced by iBC<sup>®</sup> technology is caustic soda (50% NaOH). **Price of caustic soda has doubled** in the last year.
- Preliminary discussions with industrial customer/s capable of taking all caustic soda production, are very encouraging.
- Genuine **opportunity for iBC<sup>®</sup> technology** to become best available technology (BAT) and for the QGC project to potentially provide **industry-wide solution**.
- Range of **commercial options to deliver** project being explored.



Range of brines being processed with iBC<sup>®</sup> based flowsheets, as part of feasibility study related activities.

# CSG Case Study – Value Creation Opportunity

## Base Case (BAU)

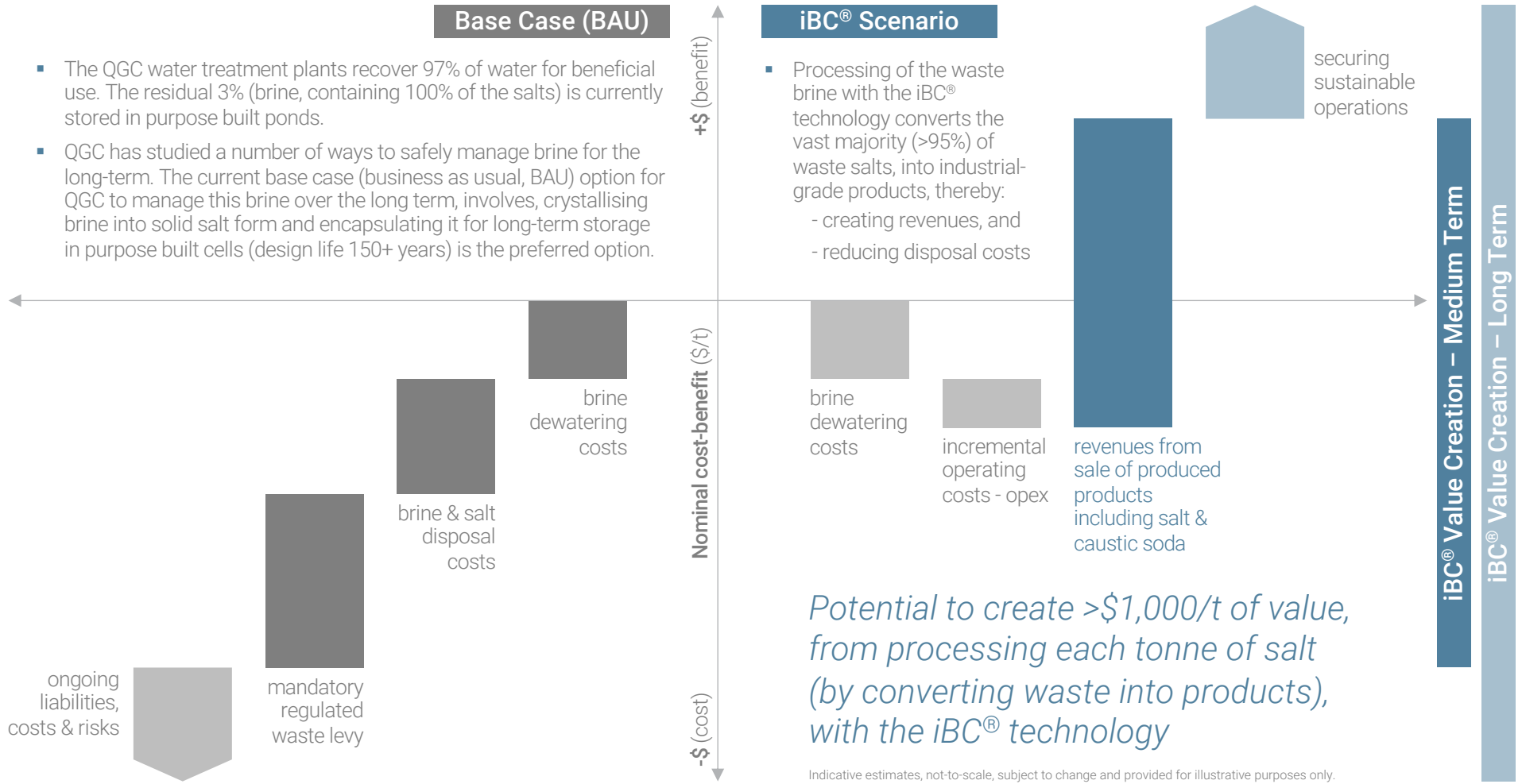
- The QGC water treatment plants recover 97% of water for beneficial use. The residual 3% (brine, containing 100% of the salts) is currently stored in purpose built ponds.
- QGC has studied a number of ways to safely manage brine for the long-term. The current base case (business as usual, BAU) option 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® technology converts the vast majority (>95%) of waste salts, into industrial-grade products, thereby:
  - creating revenues, and
  - reducing disposal costs



securing sustainable operations





“

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



# 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



# PPS – Building an Integrated Solution Provider

## 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.
- In 2022, 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.
- Processing 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 – Offering Integrated Solutions

## Why PPS?

- Q: Why Parkway Process Solutions?
- A: Because process problems, require **process solutions**.

## Delivering Integrated Solutions

- Whilst PPS provides stand-alone products and services, the focus is on delivering combined value-added offerings, in the form of integrated solutions.
- The integrated solutions provide opportunities to deliver **projects that are worth more than the sum of the parts**, and for Parkway to capture a fair **share of the value creation**.
- Parkway has the capacity to manage projects from the very beginning, the problem evaluation phases, through to the concept development, process and project engineering, and ultimately project delivery phases.
- Parkway has **assembled an impressive team** of experienced technicians and engineers that are capable of managing each project through the entire project lifecycle.
- Extensive strategic partner support available, when required.

## Differentiated Integrated Solutions

- Opportunity to **integrate PPT's proprietary technologies**.

<b>3</b> Business Divisions <small>PPS, PPT, PV</small>	<b>150+</b> Commercial Customers <small>Inc global mining &amp; energy companies</small>
<b>3</b> Geographic Operations <small>Perth, Darwin, Melbourne</small>	<b>\$1.2 m</b> Quarterly Sales <small>Sales achieved in June 22 quarter</small>
<b>24+</b> Professional Employees <small>Growing team providing capabilities</small>	<b>\$1.6 m</b> Saleable Inventory <small>Acquired at attractive prices</small>
<b>3,500+</b> Water Related Products <small>In stock from 120+ leading suppliers</small>	<b>\$4.1 m</b> Cash in Hand <small>At 30 June 2022 – exc. grants</small>

Indicative estimates, provided for illustrative purposes only.

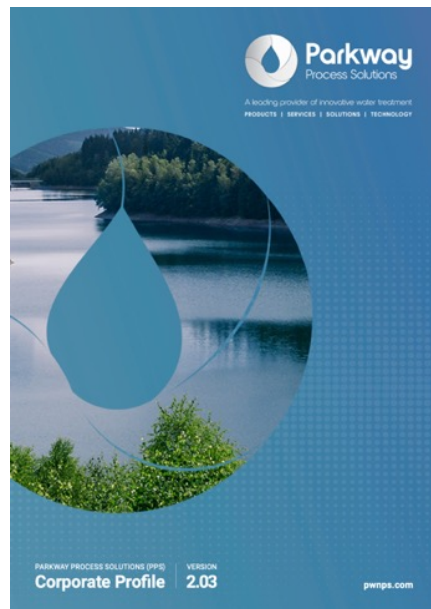
# PPS – Delivering Integrated Solutions

## 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:** Recent project (photos taken in June-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.

## 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

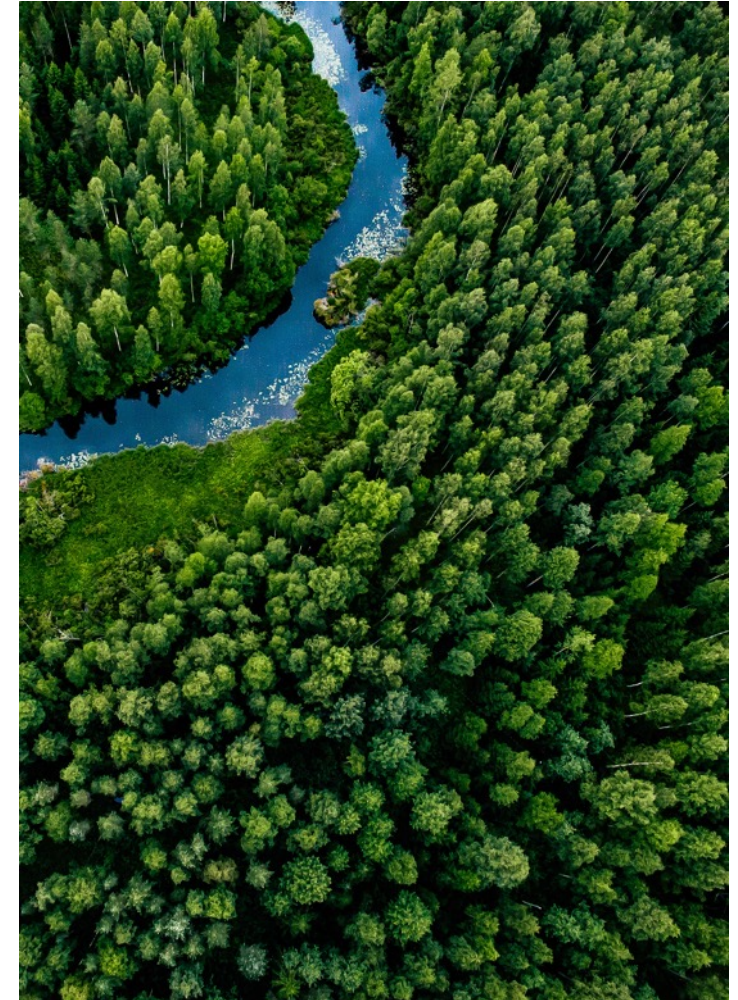
- Parkway Process Solutions is capable of delivering increasingly complex **integrated wastewater treatment solutions**.

## 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<sup>®</sup>, iBC<sup>®</sup> and others) to address particularly complex process and wastewater related challenges.
- New technologies will enable delivery of **highly differentiated solutions**.



## Overview

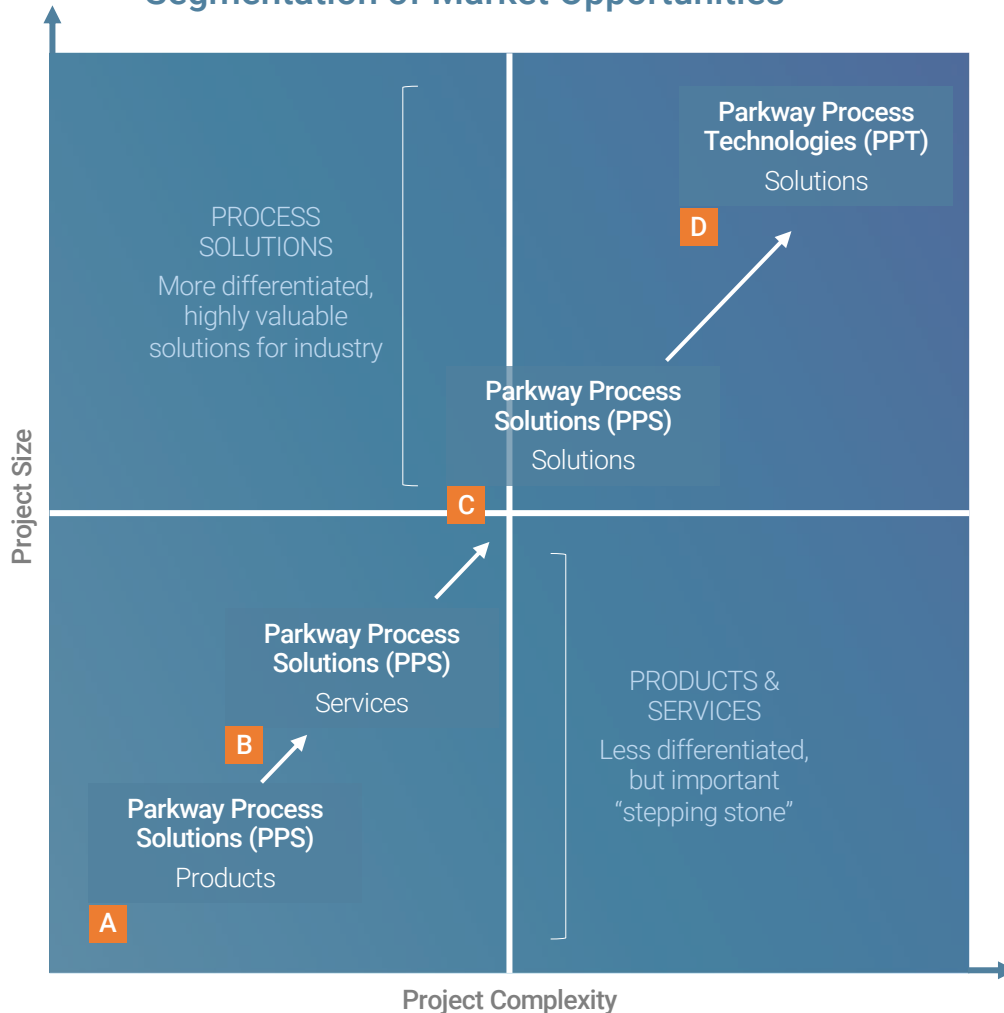
- Strategic Water Treatment Opportunities
- Leveraged to Cleantech Thematic
- Karinga Lakes Potash Project





# Strategic Water Treatment Opportunities

## Segmentation of Market Opportunities

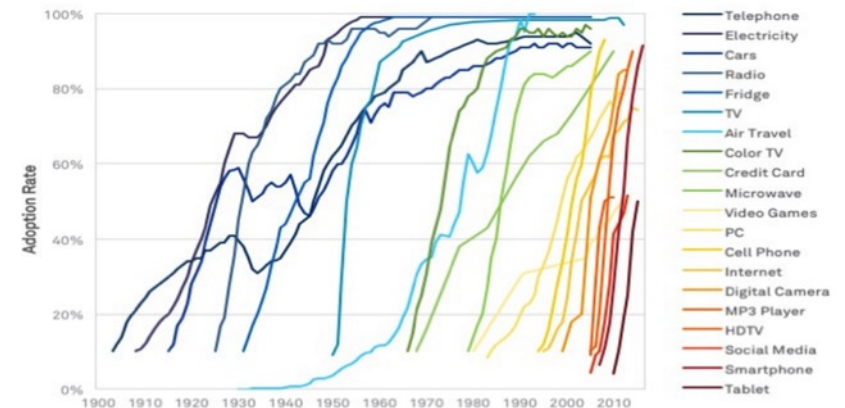


## Go-to-Market Strategy

- A. Products segment is typically lower value and with lower complexity, as a result generating lower margins.
- B. Services segment involves greater complexity, and can support the delivery of more complex process solutions.
- C. PPS Solutions segment involves more complex, and typically larger and higher margin opportunities.**
- D. PPT Solutions segment is based on proprietary solutions which are typically large and complex, but highly valuable.

## Rates of Technology Adoption

- Disruptive technologies, including in industrial settings are being adopted at increasingly rapid rates.



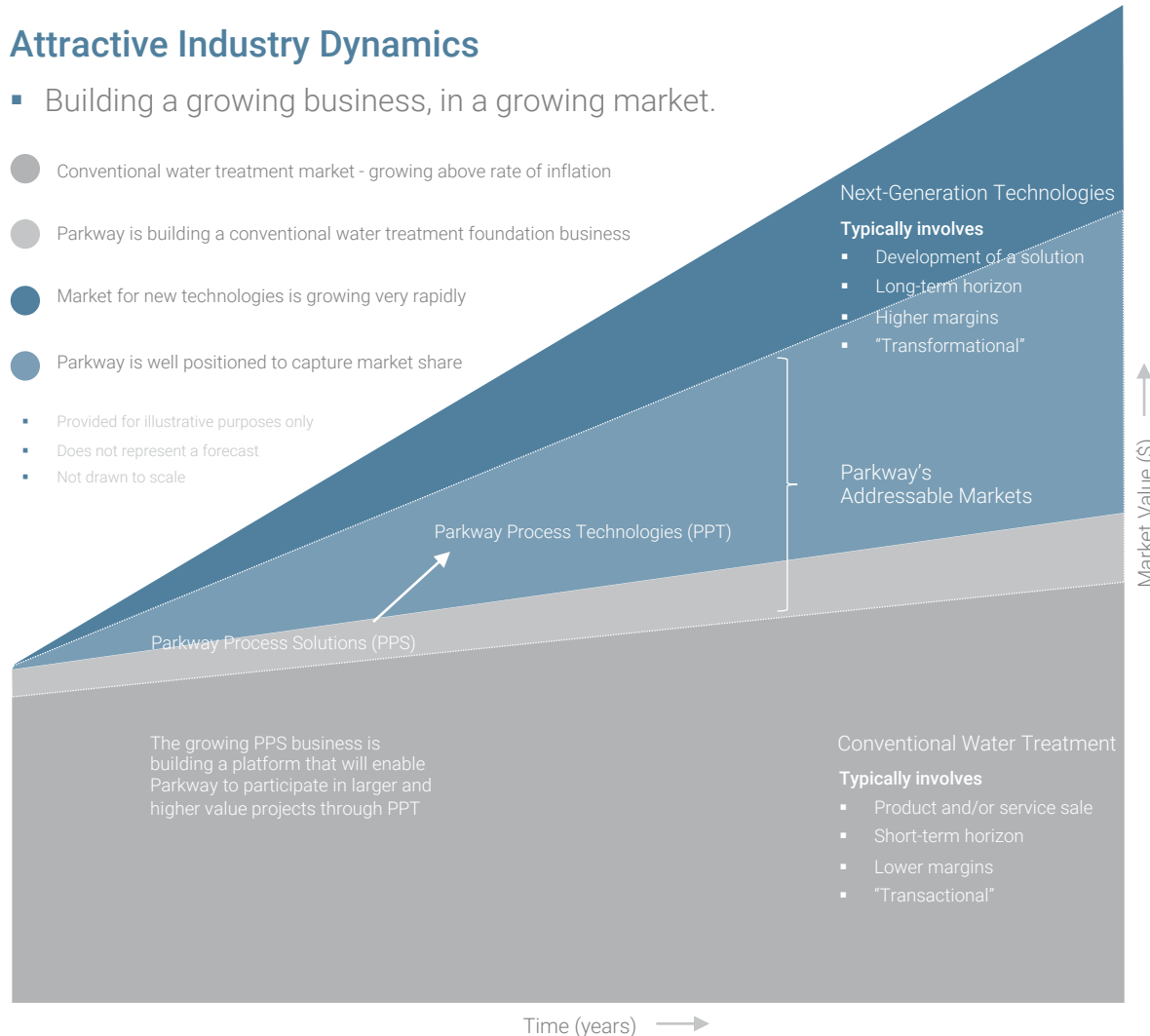
# Leveraged to Cleantech Thematic

## Attractive Industry Dynamics

- Building a growing business, in a growing market.

- Conventional water treatment market - growing above rate of inflation
- Parkway is building a conventional water treatment foundation business
- Market for new technologies is growing very rapidly
- Parkway is well positioned to capture market share

- Provided for illustrative purposes only
- Does not represent a forecast
- Not drawn to scale



Strong economic, regulatory and ESG drivers, underpin the requirement for

## Next Generation Water Treatment Technologies

In order to capture this market opportunity, Parkway is building an advanced

## Industrial Water Treatment Technology Company

## Overview

- The Karinga Lakes Potash Project (KLPP) covers a chain of dry salt lakes, within the Central Australian Groundwater Discharge Zone in the Northern Territory, Australia.
- The KLPP has undergone extensive exploration, and as a result a potash Mineral Resource estimate has been defined.
- The KLPP is a joint venture between Parkway and the project operator, Verdant Minerals Limited, a formerly ASX listed company acquired and taken private by CD Capital and Washington H Soul Pattinson (ASX:SOL) in 2019.
- On 13 Dec 2021, Parkway announced that the NT Government granted the KLPP-JV, 3 new Exploration Licenses covering 1,109 km<sup>2</sup>, encompassing the mineral resource.
- On 24 Jun 2022, Parkway announced it had increased its working interest in the KLPP from 15% to 40%.
- A recent Pre-Feasibility Study (KLPP-PFS) demonstrated the **significant advantages of developing** the sulphate of potash (SOP) brine project, **with the aMES<sup>®</sup> technology**.
- Strong SOP prices provide **potential monetisation options**.

The Mineral Resource estimate underpinning the production targets referenced in this announcement were prepared by a competent person in accordance with the requirements of the JORC Code 2012.

### COMPETENT PERSONS STATEMENT

Parkway reported the Mineral Resource estimate for the Karinga Lakes Potash Project in accordance with Listing Rules 5.8 and 5.16 in its ASX announcement dated 5 November 2020. Parkway confirms that it is not aware of any new information or data that materially affects the information included in the announcement of 5 November 2020 and that all material assumptions and technical parameters underpinning the estimates in the announcement of 5 November 2020 continue to apply and have not materially changed.

## KLPP Pre-Feasibility Study

- On 5 Nov 2020, Parkway finalised the KLPP Pre-Feasibility Study (KLPP-PFS), which confirmed the KLPP as a potentially attractive producer of high-quality sulphate of potash (SOP).
- Innovative aMES<sup>®</sup> based flow sheet demonstrates potential, for a relatively small-scale operation targeting annual SOP production of 40,000 t, over an initial mine life of 20 years.
- **aMES<sup>®</sup> based development concept also demonstrated the highly efficient use of water.**

## KEY FINANCIAL METRICS

- Initial capital cost (CAPEX) of \$80.0 million, inclusive of all non-process infrastructure and indirect costs.
- Production cost (OPEX) of \$293/t of SOP, ex-mine gate.
- Strong cash generation potential, with estimated EBITDA margin of 54.4%, resulting in annual EBITDA of \$18.6 million.
- Ungearing development of the KLPP would result in:
  - Project payback in ~5.5 years from first SOP production.
  - Post-Tax NPV<sub>8%</sub> of \$80.15 million with an IRR of 20.4%.



Building an advanced

# Industrial Water Treatment

technology company

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