

26 September 2023

Tivan Investor Materials

The Board of Tivan Limited (ASX: TVN) ("Tivan" or the "Company") is pleased to provide updated Investor Materials.

The Company's slide deck was first published at the conclusion of the Reset, Review, Renew period (see ASX announcement of 12 April 2023). The materials provided today capture the progress the Company has made since, and will be updated on a six month cycle going forward.

This announcement has been approved by the Board of the Company.

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Ends



Investor Materials

26 September 2023

Empowering grid storage to take the planet green

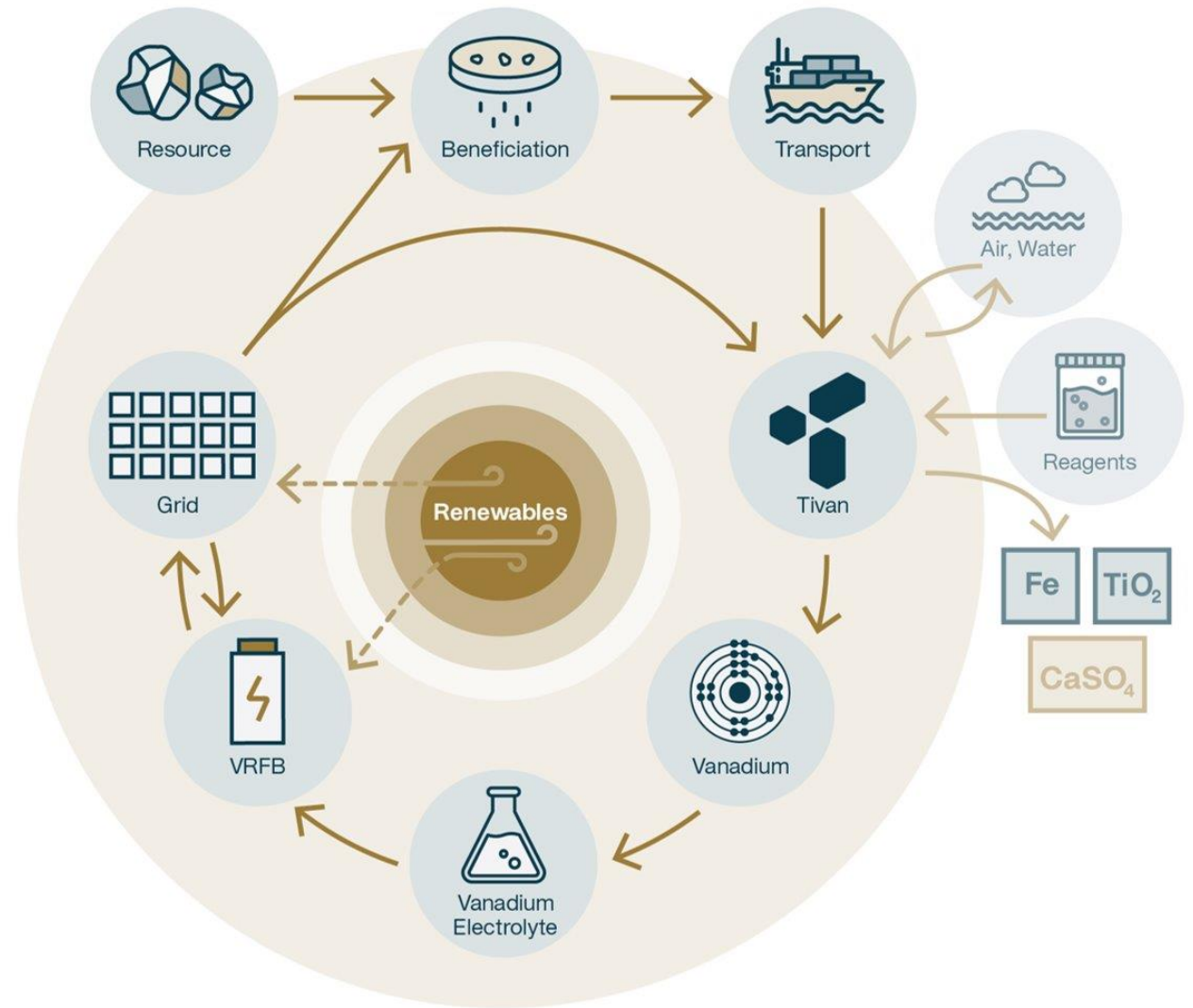


Figure 1: Tivan life cycle – circularity is integral to sustainability

Tivan: High impact decisions, high velocity execution

new era



28.11.22	Annual General Meeting: change of control
21.12.22	Executive Chairman appointed
23.01.23	General Meeting: Change of company name – Tivan Limited
27.01.23	Renegotiation of Sandover Lithium Project
01.02.23	Tivan's submission to Federal Government's refresh of the Critical Minerals Strategy
14.02.23	1st finding: Tivan announces return to the MASDP for Tivan Processing Facility
20.02.23	2nd finding: Tivan signs binding term sheet to acquire the Speewah Vanadium–Titanium–Iron Project in WA
07.03.23	3rd finding: Tivan announces exploration alliance with Earth AI for Sandover Lithium Project
20.03.23	Adoption of New Securities Trading Policy
05.04.23	Letter of Intent with Sun Cable
06.04.23	Christine Charles joins Tivan Board
12.04.23	4th finding: Tivan+ technology pathway with CSIRO
12.04.23	Update: Online Investor briefing
17.04.23	Perth office move
20.04.23	Relocation of corporate headquarters to Darwin
22.05.23	Memorandum of Understanding with Charles Darwin University
26.05.23	Formation of Technical Advisory Group
09.06.23	Update: Statement from the Board on MASDP
22.06.23	Update: Sandover Exploration Alliance with Earth AI
30.06.23	Letter from Executive Chairman
30.06.23	Update: Project Development Strategy
12.07.23	Placement and Share Purchase Plan
13.07.23	Heads of Agreement with Cambridge Gulf Limited
13.07.23	Grant Wilson commits to 3 year extension of term
13.07.23	Update: Half year presentation
19.07.23	Stephen Walsh, Chief Geologist appointed
20.07.23	Commencement of Speewah environmental program
23.08.23	Confirmation of 'FastTrack' Vanadium project at Speewah
24.08.23	Tivan secures MASDP extension
01.09.23	Dr Guy Debelle joins Tivan Board
08.09.23	Tivan joins Future NT Panel
13.09.23	Tivan sponsor and keynote of Darwin Resources Week
22.09.23	Appointment of Hatch for engineering review at Speewah
... stay tuned	

Tivan: Disruptive change creates local and global opportunity



Figure 2: Change in the new era

Tivan: Corporate scoreboard

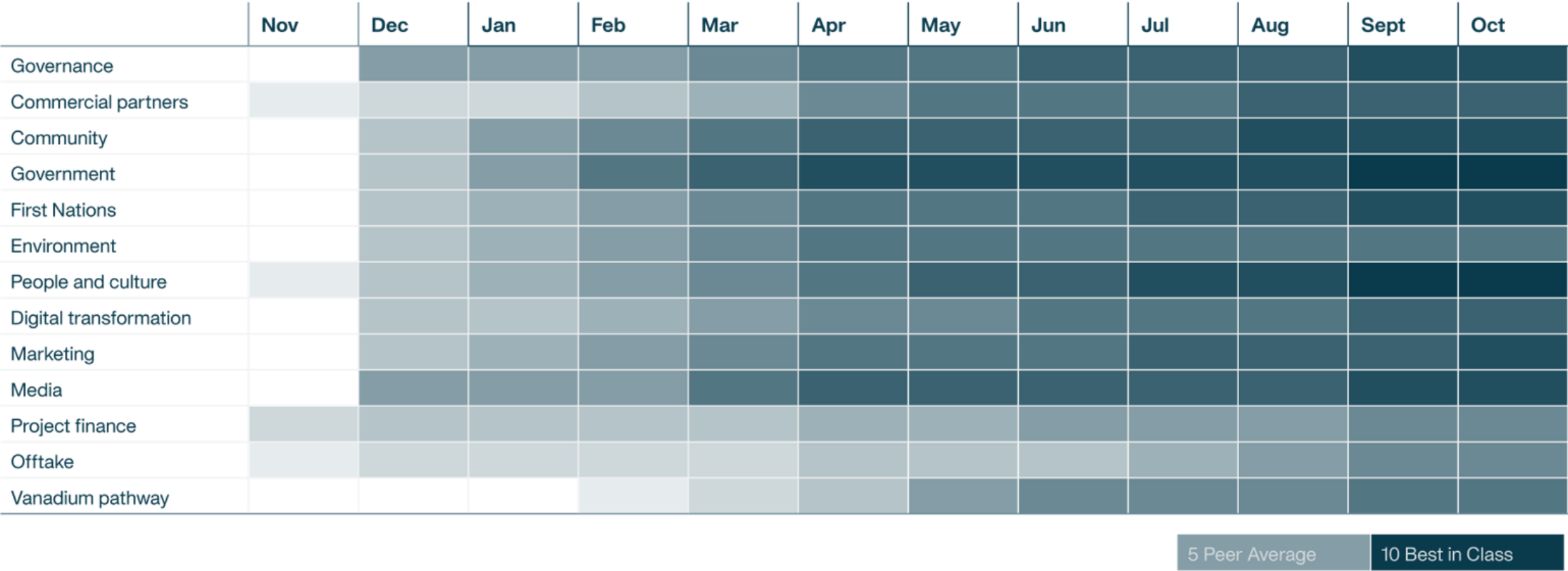


Figure 3: The new era is a comprehensive program of corporate renewal. The heatmap reflects an internal assessment by the Executive team at the conclusion of the Reset, Review, Renew period and six months later at end September

Tivan: 1st Finding: Return to Darwin

Decision:

To relocate the Tivan Processing Facility to the Middle Arm Sustainability Development Precinct

Transaction:

Do Not Deal commitment from NT Government Extended for 6 months in August

Financing Mechanism:

N/A

Impact:

- Project facilitation via subsidised common use infrastructure
- Access to large-scale renewable energy sources
- Access to large-scale water resources
- Security of tenure
- Streamline environmental approval
- Proximity to infrastructure
- Proximity to urbanised workforce
- Commercial synergies
- Enhance company profile
- Promote project financing

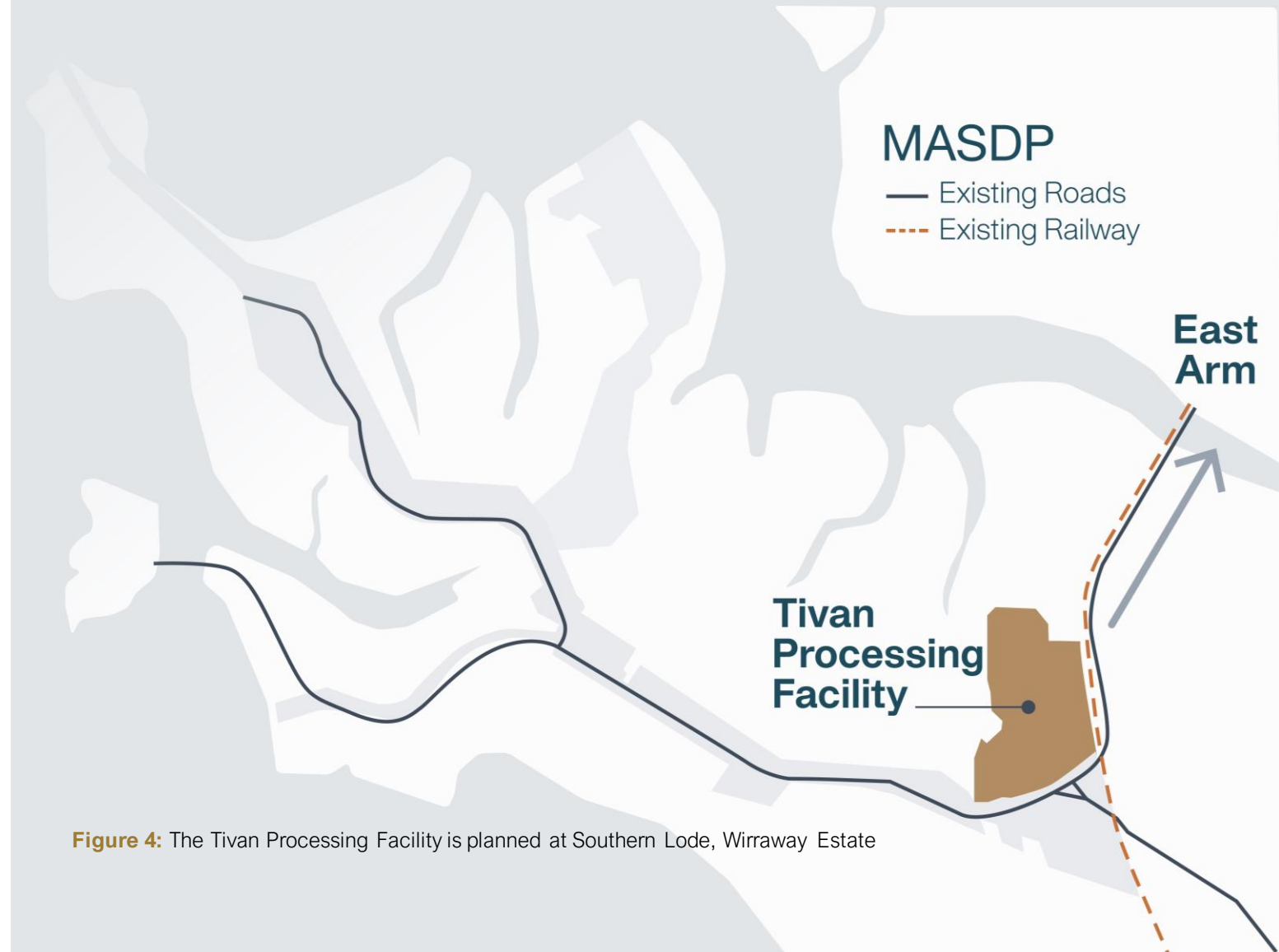


Figure 4: The Tivan Processing Facility is planned at Southern Lode, Wirraway Estate

Tivan: 2nd Finding: Acquisition of Speewah

Decision:

Secure the most strategically important vanadium resource in the world

Transaction:

Acquisition from King River Resources

Financing Mechanism:

Shares and cash

Impact:

- Largest drilled vanadium in titanomagnetite resource globally
- Very high vanadium concentrate grade
- Ultra long-life resource – strategic significance
- Low strip ratio (0.4)
- Proximity to the Port of Wyndham
- Proximity to Darwin
- Proximity to large-scale water and solar resources
- Enables economies of scale
- First Nations pathways and inclusion

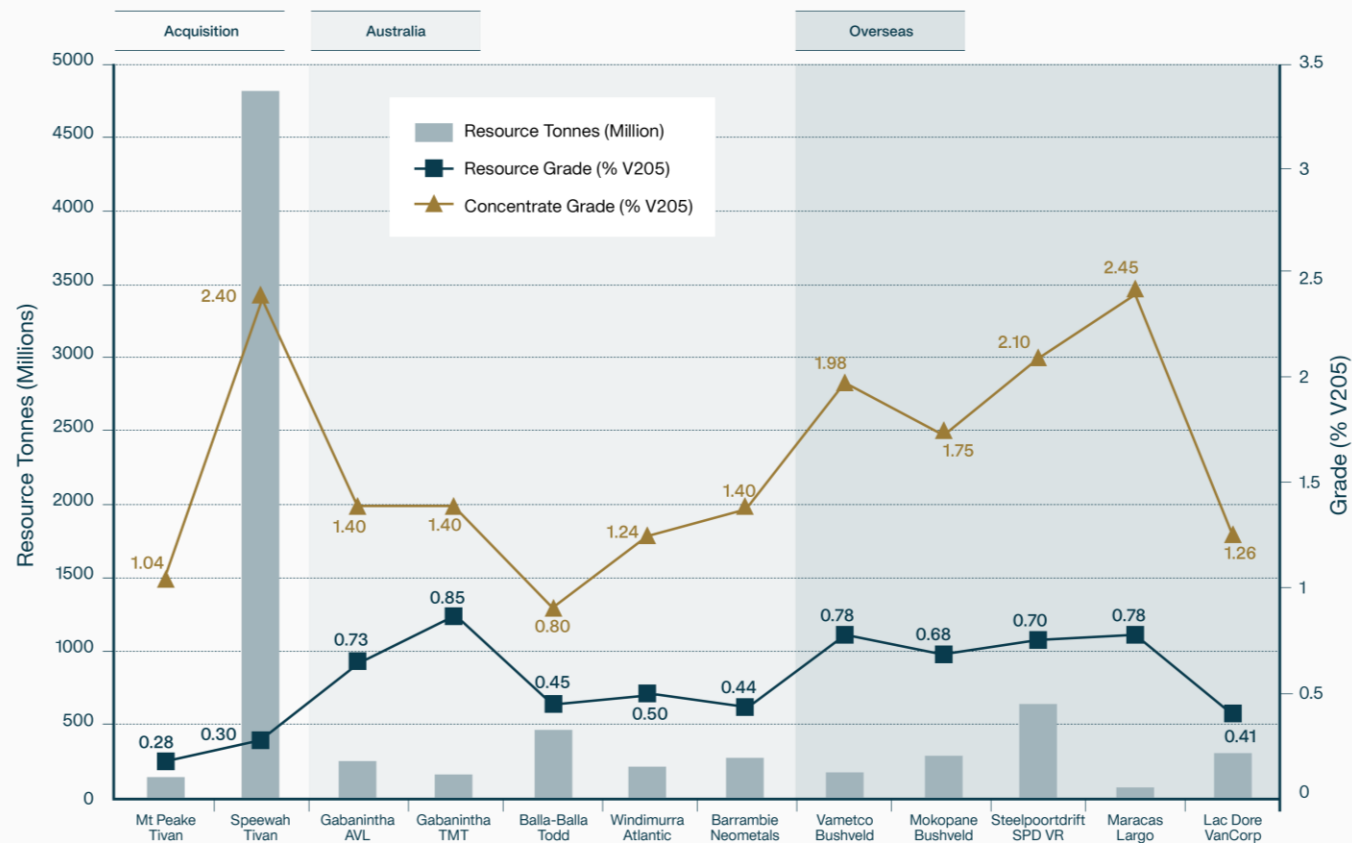


Figure 5: Vanadium in titanomagnetite resources, peer comparison. Prepared in accordance with ASX Compliance Update, 19 September 2018. Update No 08/18, Section 3. [Link](#) is available here. The full dataset with relevant sources and notes is included in Appendix 1.

Tivan: 3rd Finding: Exploration Alliance at Sandover

Decision:
Explore for critical minerals in central Australia

Transaction:
Exploration Alliance with Earth AI

Financing Mechanism:
Cash and contingent cash

- Impact:**
- Maximise alignment with critical minerals secular thematic
 - Embrace the digital transformation of exploration
 - Deepen relationships with key stakeholders in central Australia
 - Mitigate the deprioritization of Mount Peake
 - Highly prospective area
 - Maximise success rates, minimise time spend
 - Access NT government funding programs
 - Trusted partner, with Territory experience
 - Retain upside economics and decision making flexibility

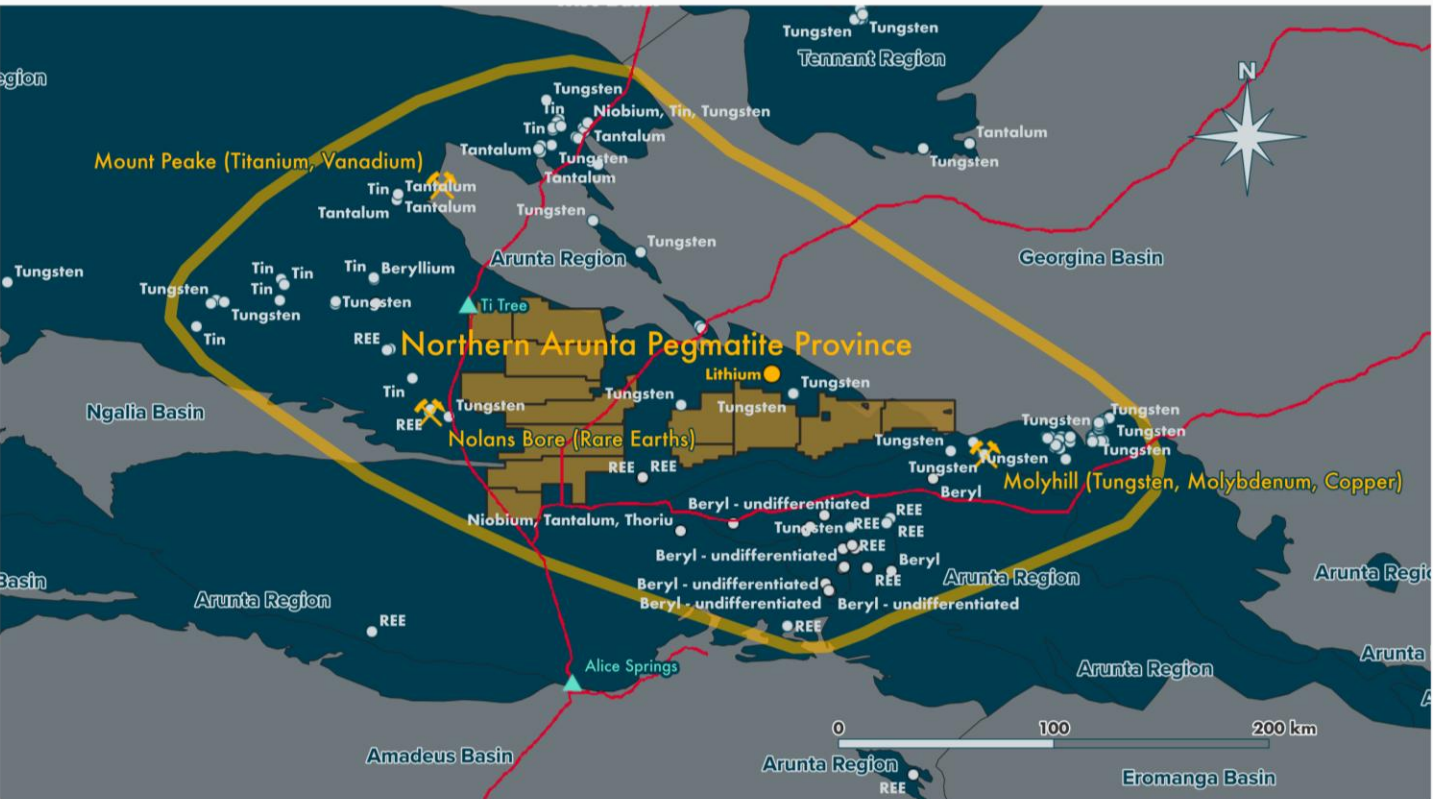


Figure 6: Sandover Lithium Project tenements (yellow) in relation to the northern Arunta Pegmatite Province

Tivan: 4th Finding: Tivan+ technology pathway with CSIRO

Decision:

Develop hybridised Tivan+ technology pathway with CSIRO

Transaction:

Confidential

Financing Mechanism:

Confidential

Impact:

- Optimise vanadium titanomagnetite R&D within Australia
- Re-shore testwork and laboratory capacity
- Simplified flowsheet
- Opportunity to reduce CAPEX, OPEX
- Opportunity for intermediate Titanium sulphate feedstock product
- Enhanced project facilitation

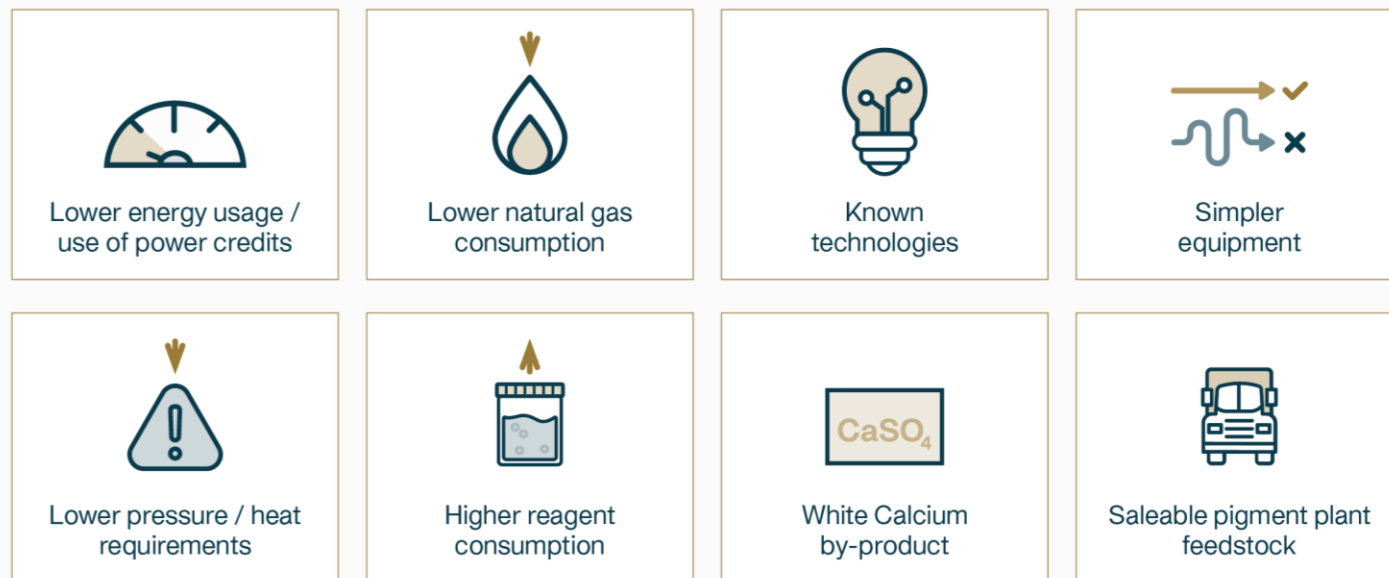


Figure 7: The Tivan+ technology pathway aims to consolidate the above features relative to Tivan®

Tivan: Enhanced firmwide capability

As part of corporate renewal, Tivan has enhanced firmwide capabilities, including through the formation of a Technical Advisory Group and a strengthened Board of Directors.

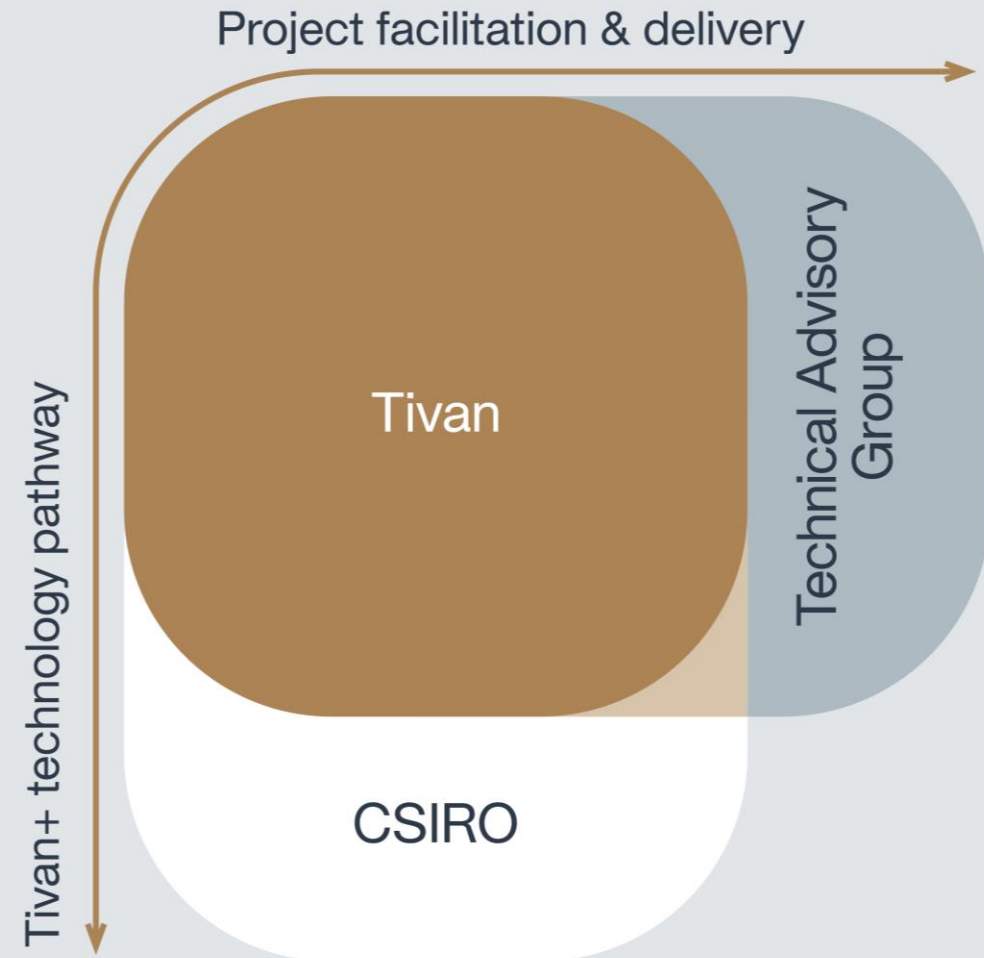


Figure 8: Tivan's technical and project facilitation capabilities

Tivan: Critical paths

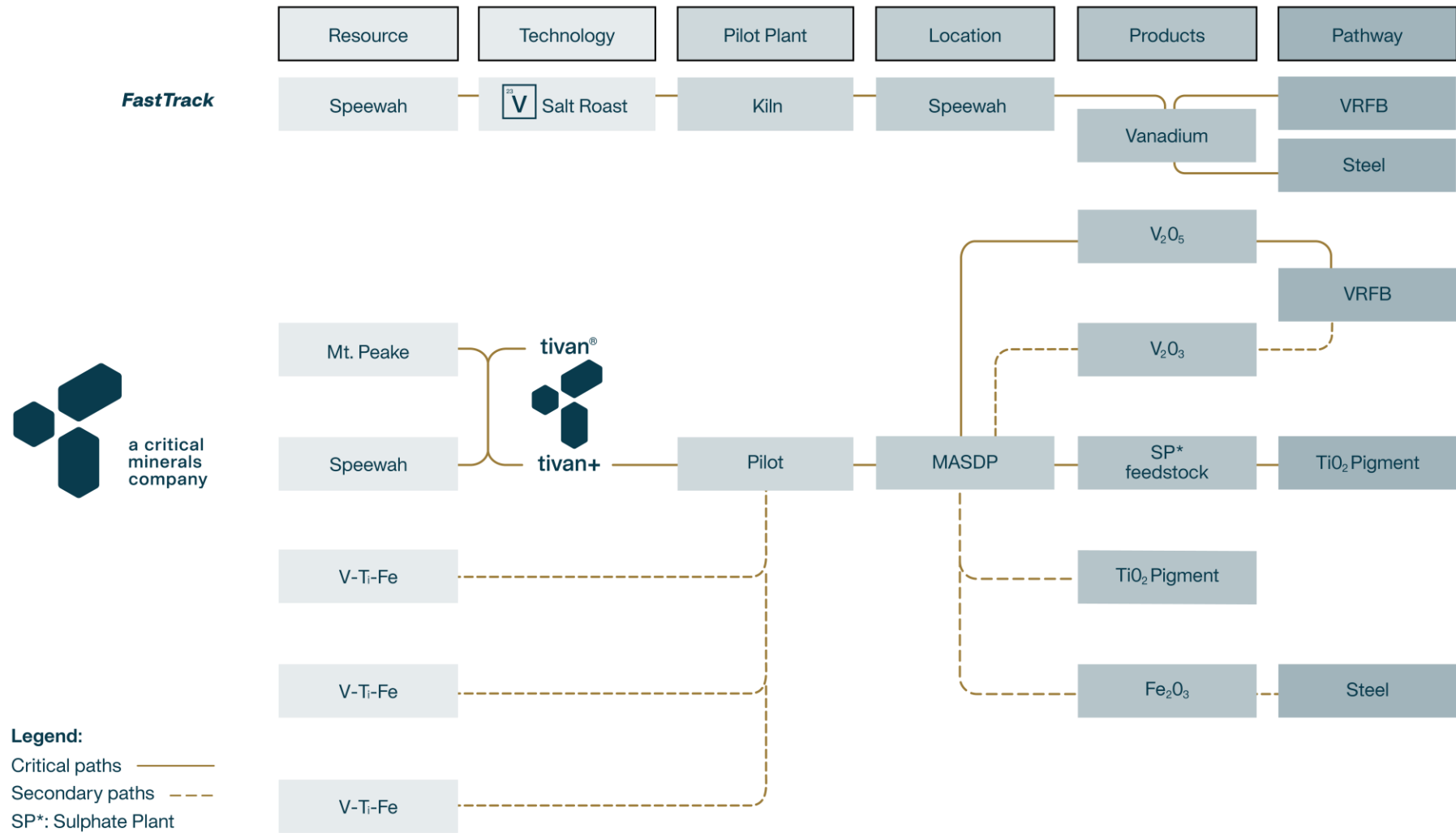


Figure 9: Tivan's critical and secondary paths

Tivan: Speewah Project – FastTrack

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Tivan announced a FastTrack in its Half Year update in July, now referred to as ‘the Speewah Project’. This:

- Offers faster timeframes to project commercialisation and first revenue
- Takes advantage of Speewah’s superior characteristics including proximity to port, low strip ratio, high concentrate grade and large resource size
- Utilises a known technology pathway that has been implemented and operated at an industrial scale
- Achieves synergistic project facilitation steps that are required for a TIVAN+ project development, including mining and beneficiation

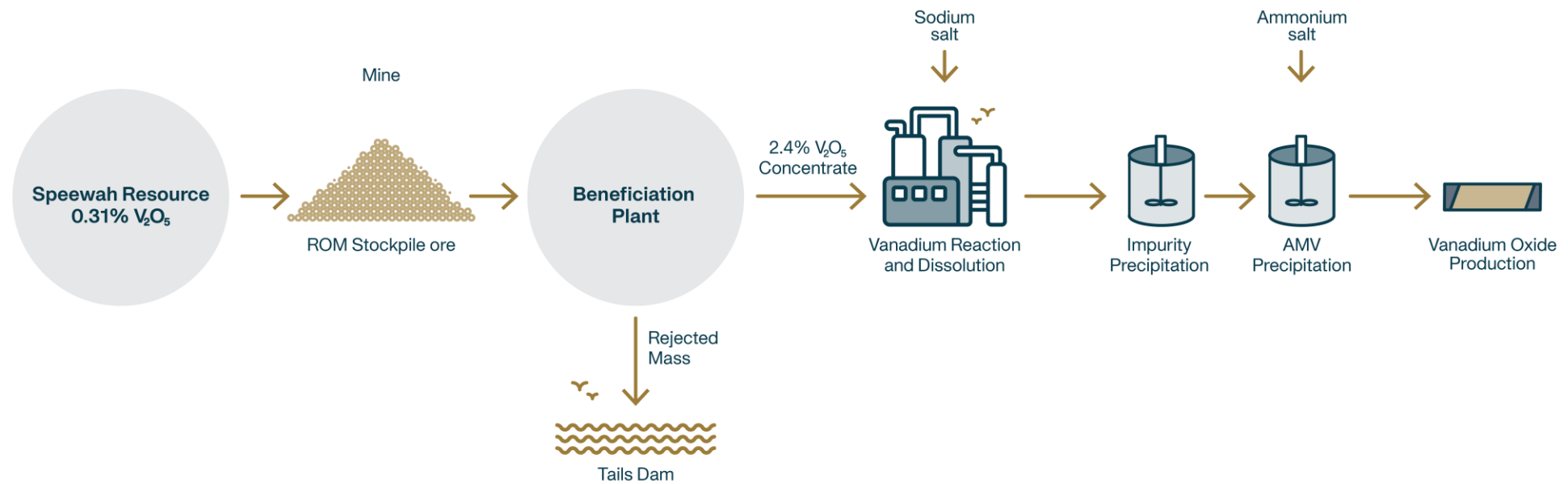


Figure 10: Mining and beneficiation flowsheet for the Speewah Project

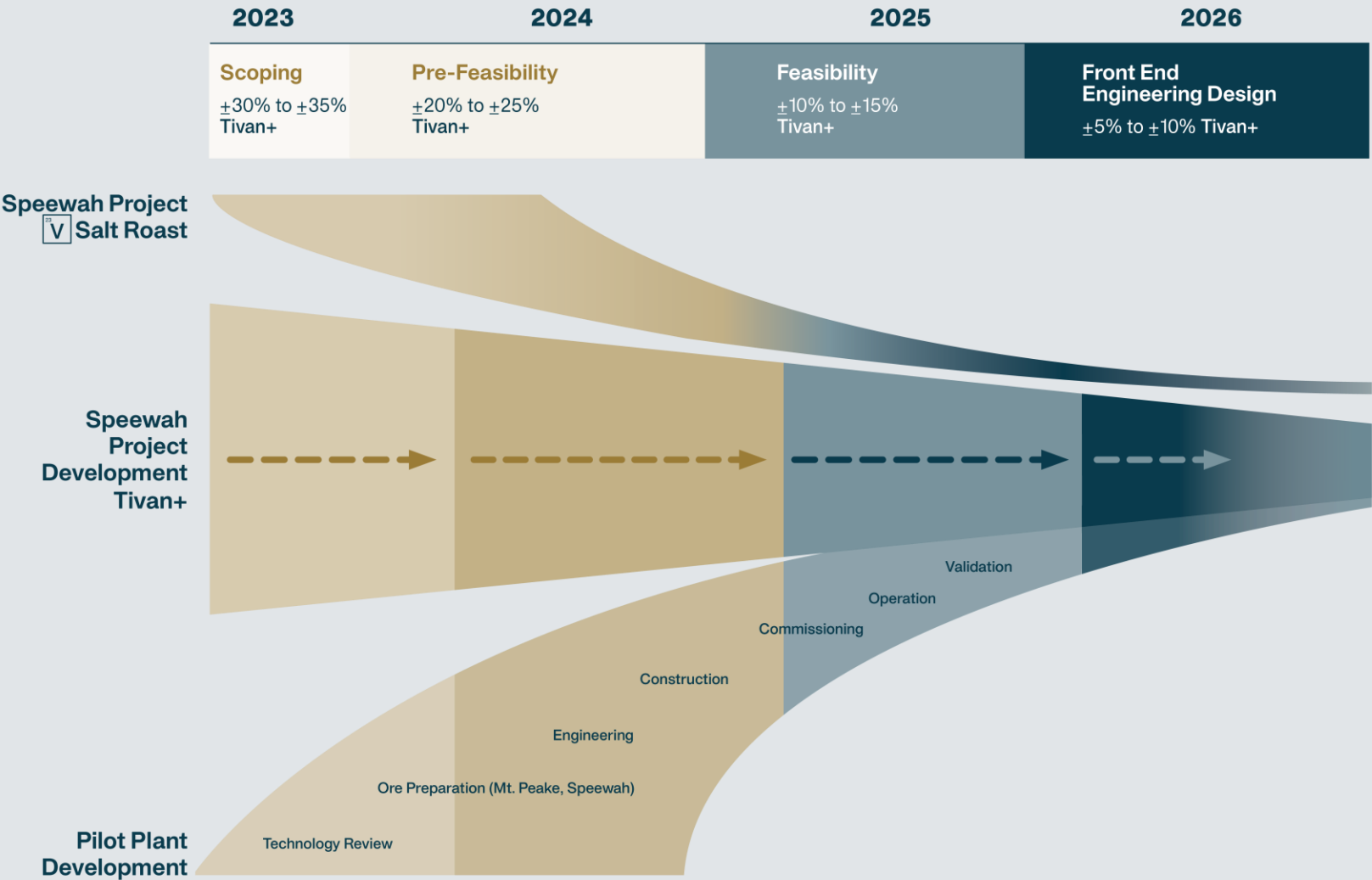


Figure 11: Tivan's timelines

Tivan: Revenue model comparison – Tivan+ pathway

	Mt Peake tpa ¹	% Revenue*	Speewah tpa ²	% Revenue*
Vanadium	6,000	28.4	tbd	75.1
Titanium	100,000	62.2	tbd	16.6
Iron	500,000	9.5	tbd	8.3
		100.0		100.0

*recent reference

Mount Peake ¹	TNG: Optimised Mount Peake Project Delivery Strategy 11 Sep 2019
Speewah ²	Tivan: Pre-scoping study: Jan-Sep 2023

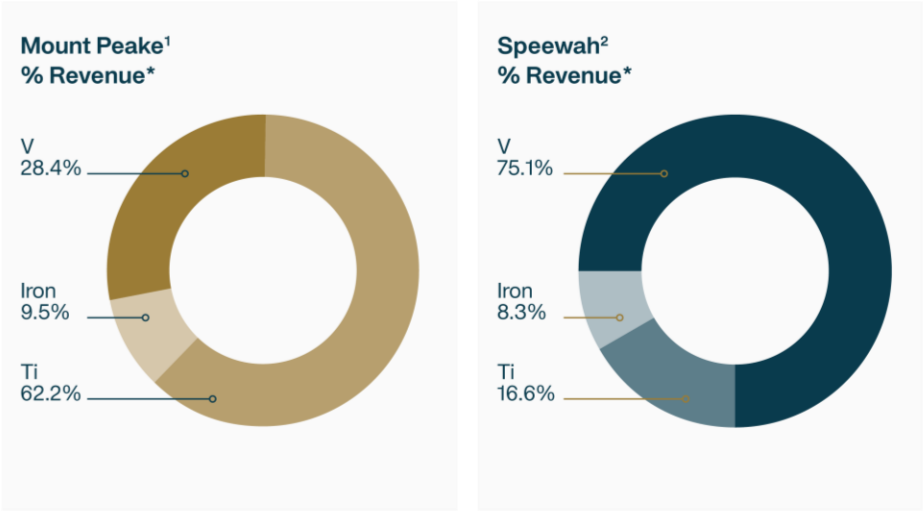


Figure 12: Speewah's revenue mix, independent of throughput, is significantly tilted toward Vanadium.

Supported by due diligence assessment of geological modelling, testwork and geological/engineering studies undertaken for Speewah by the previous project owner; and by an independent geological assessment of the Speewah Project prepared by SRK Consulting (Australasia) Pty Ltd for Tivan Limited

Tivan: Value benefit of Pilot Plant

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For novel mining technologies, a Pilot Plant contributes strongly to Net Present Value

The positive NPV of a Pilot Plant reflects:

- Avoidance of capital costs of a failed technology, **less**;
- Present value of the Pilot Plant, **adjusted for**;
- Deferment of incremental cash flow benefits and costs.

Optimising the scale of a Pilot Plant depends upon technological risk profile, Value of Information (Vol) and access to financing.

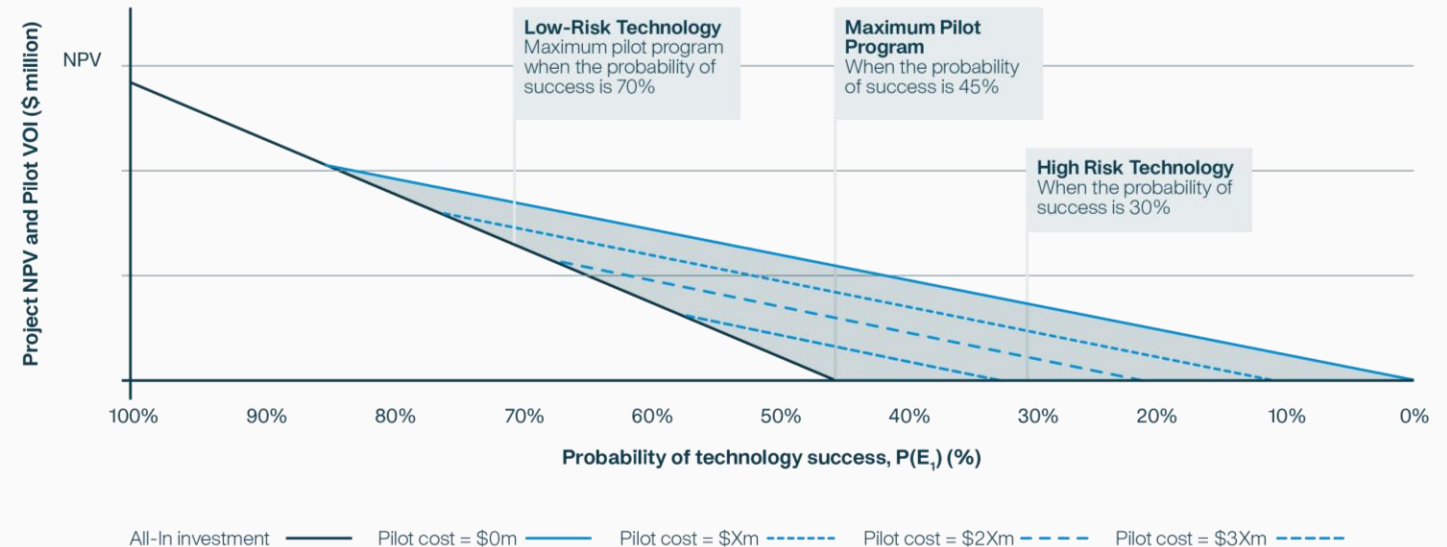
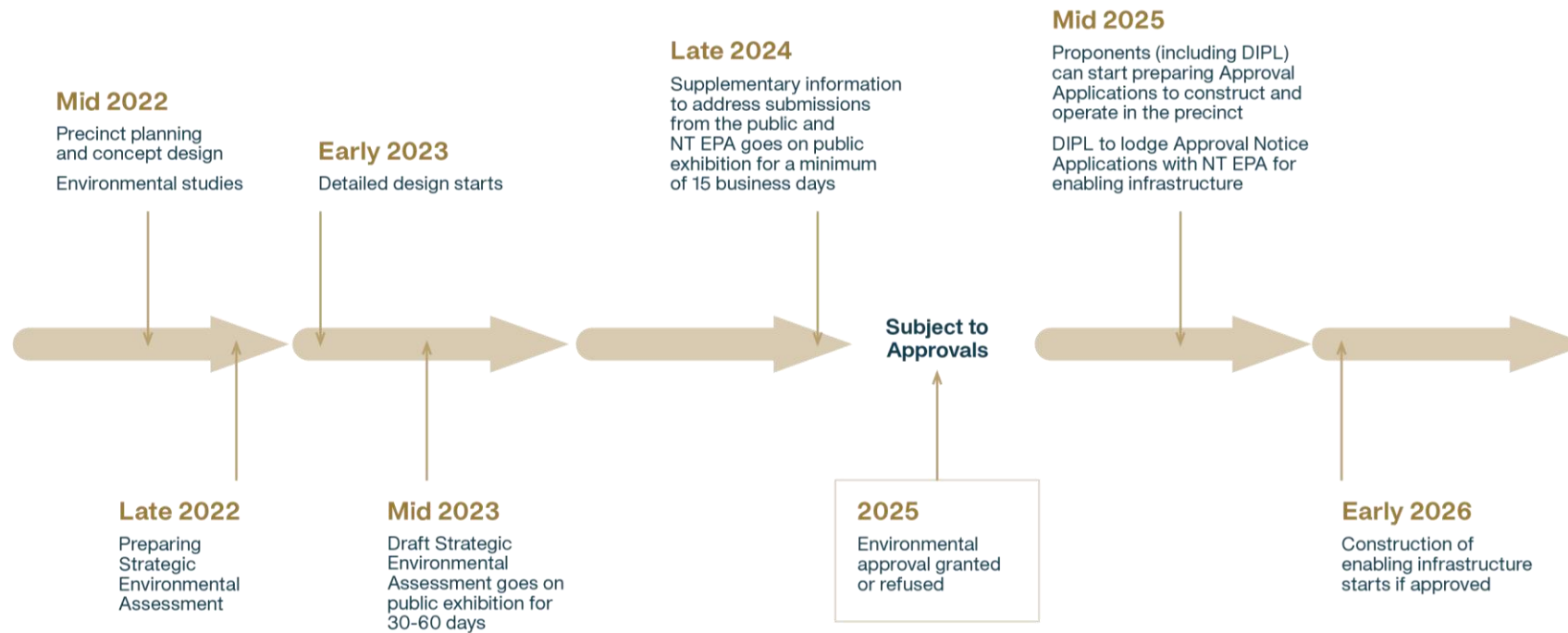


Figure 13: Value of a two year Pilot Program over a range of program costs and technical success probabilities.

Source: Financial evaluation of mining innovation pilot projects and the value of information [Link here](#)

Tivan: Environmental approval process – MASDP



“ Strategic Assessments consider a broad set of development activities over a larger scale and timeframe. By assessing cumulative impacts – rather than individual projects assessments in isolation – there is greater certainty for industry and community and better environmental outcomes. The Strategic Environmental Assessment will consider scenarios of development and their implications. It will determine the potential cumulative impacts, provide a list of approved industry types and conditions, define the acceptable limits of development and outline desired sustainability outcomes. The assessment process will occur over a number of years, to ensure the project reduces, mitigates and offsets potential environmental impacts. ”

Figure 14: Approval timeline for MASDP

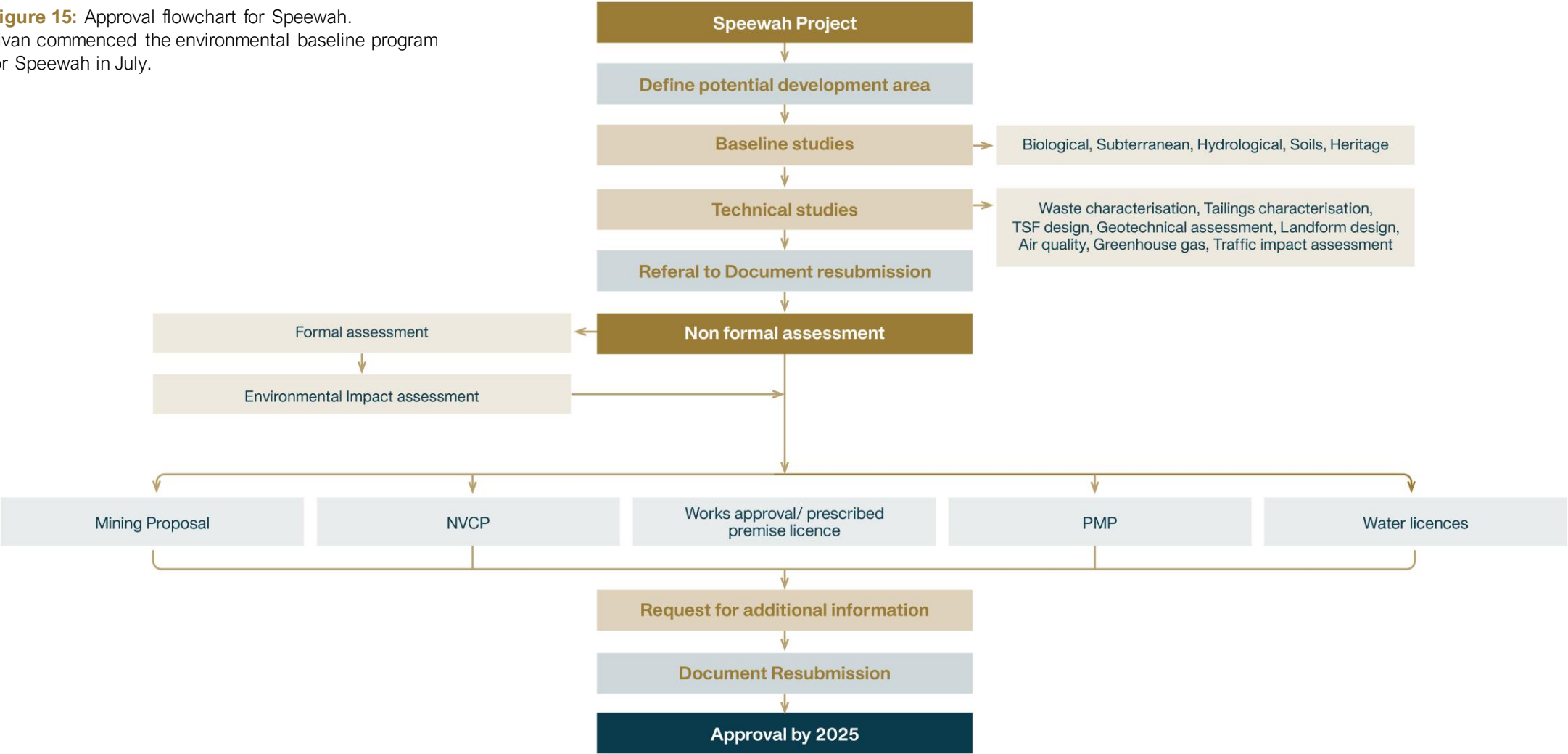
Further information

<https://middleearmprecinct.nt.gov.au/Sustainability>

https://dipl.nt.gov.au/data/assets/pdf_file/0006/1103757/masdp-environmental-assessment-fact-sheet-april-2022.pdf

Tivan: Environmental approval process – Speewah

Figure 15: Approval flowchart for Speewah.
Tivan commenced the environmental baseline program for Speewah in July.



Tivan: Pathway to decarbonisation

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Tivan's Net Zero Pathway is under development, and an important priority for the Board.

- Construction
- Pre-solar deployment
- With solar deployment
- With baseline offset from 2035

Tivan is a 'carbon negative' proposition, when Scope 4 emissions are considered.

See further at:



[Read here](#)

Climate Disclosure Standards Board

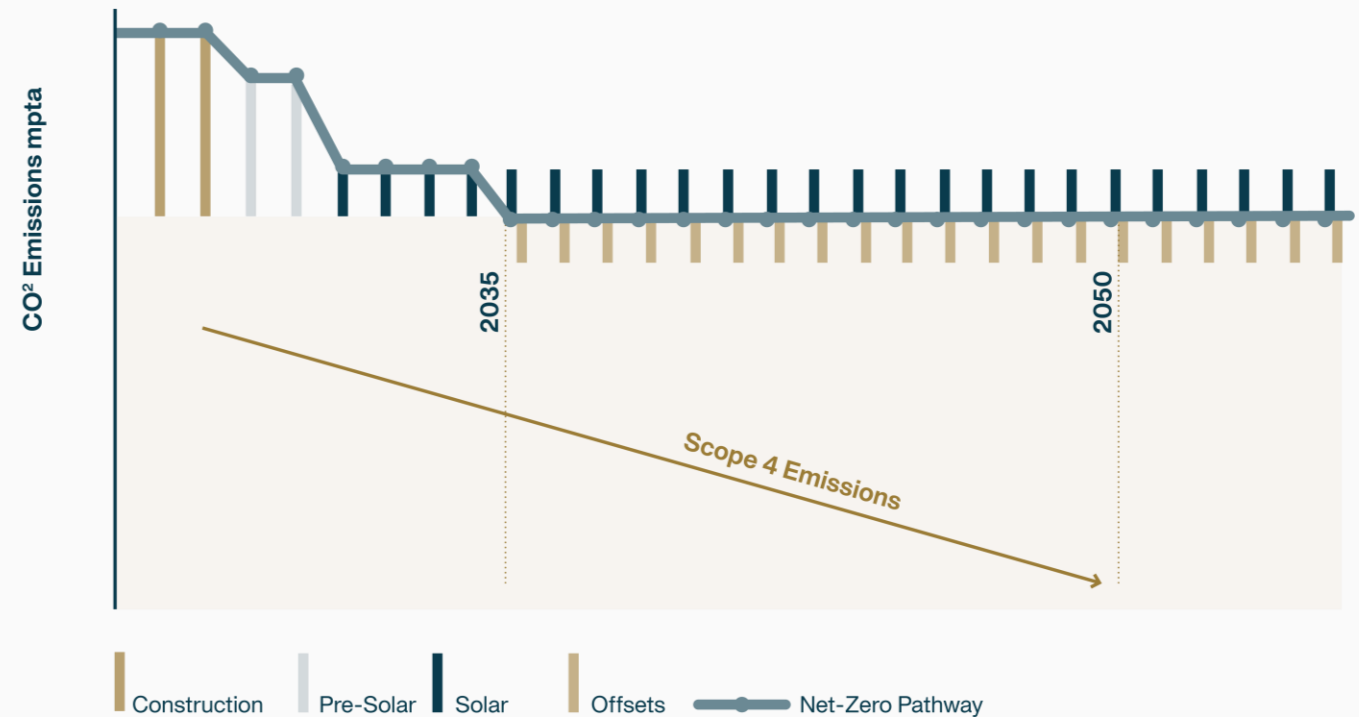


Figure 16: Shows a conceptual basis for the Tivan+ pathway

Tivan: Carbon abatement potential

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Tivan has estimated the carbon abatement potential of Speewah assuming constant throughput for life of resource and switching of power generation from coal, oil and gas to renewables with VRFB as long-duration energy storage. For reference, Australia produced carbon emissions of 464 million tonnes in 2022.



[Read here](#)
DCCEEW

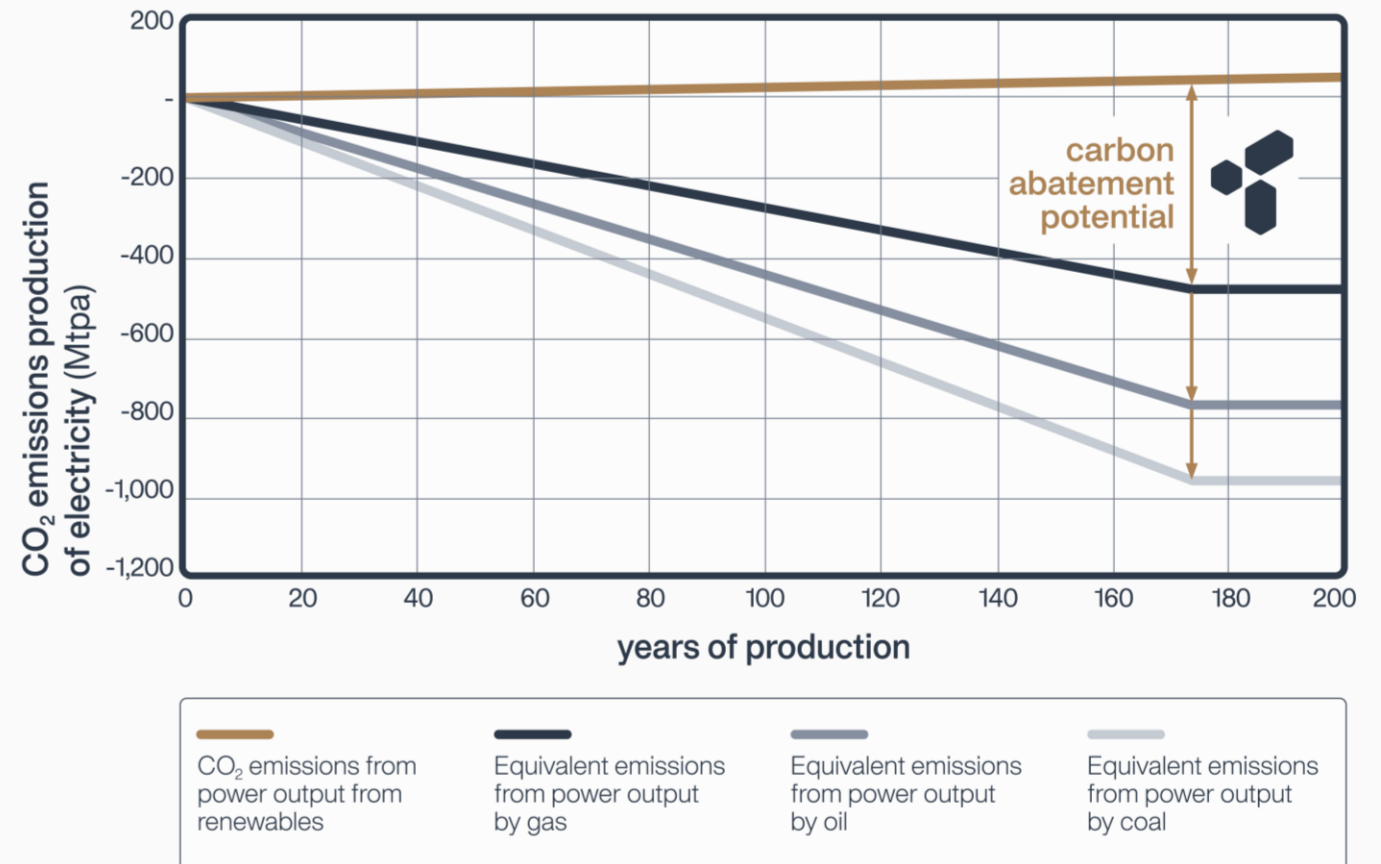


Figure 17: 1) Carbon intensity of Electricity production taken as: 1kg/kWh for Coal, 0.8kg/kWh for Oil, 0.5kg/kWh for Gas and 0.05kg/kWh for Renewables 2) Assuming an annual production of V2O5 at 25ktpa, which is equivalent to 167 MLpa of Vanadium Electrolyte. 3) No lifecycle degradation in VRFB ability to charge/discharge power has been considered

Tivan: First Nations – Locations



Figure 18: Tivan is highly engaged with First Nations peak bodies and traditional owners groups across central and northern Australia.

Tivan: First Nations – Framework

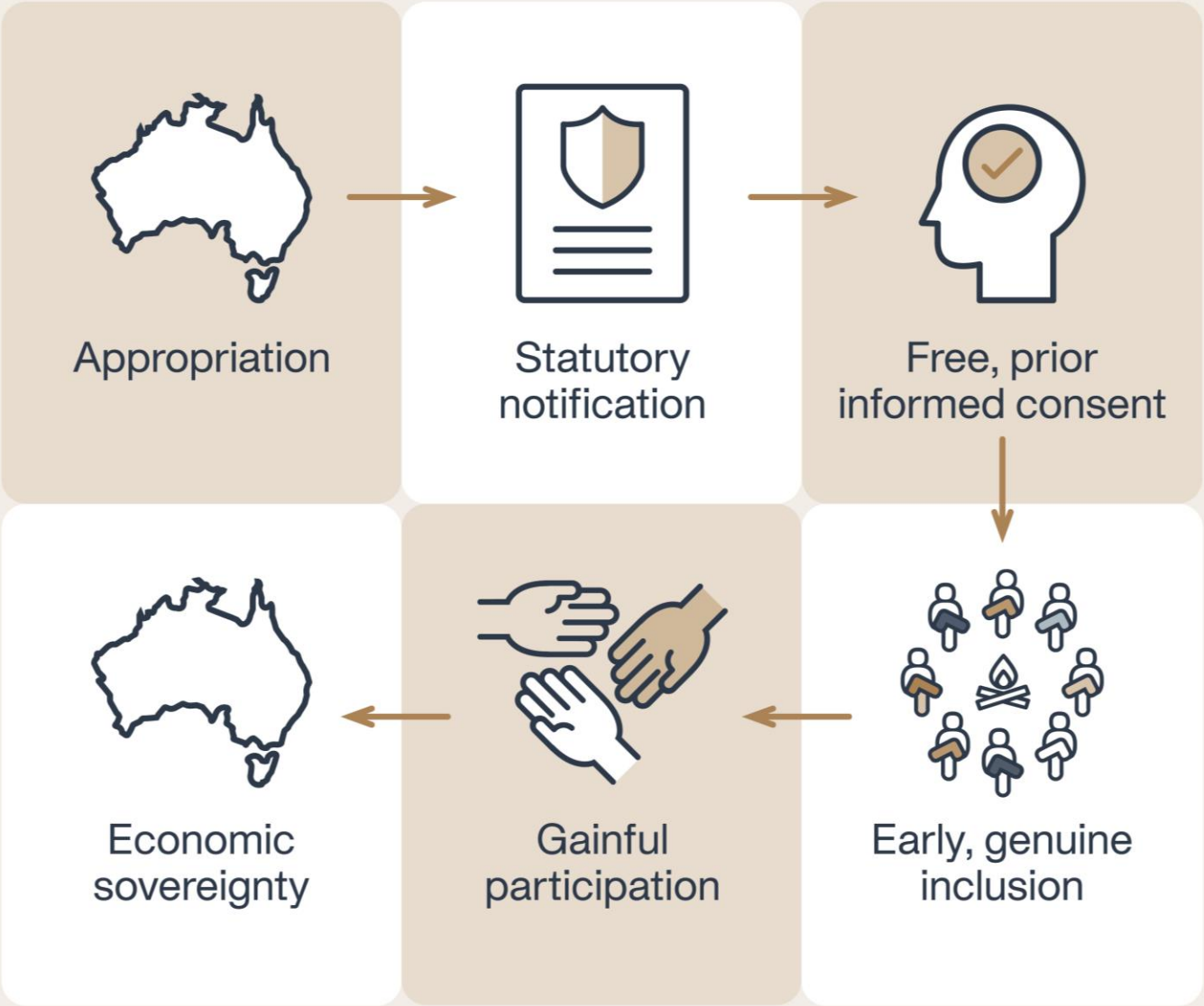


Figure 19: Tivan is committed to developing innovative pathways that facilitate genuine inclusion and participation of Traditional Owners.

Tivan: Consolidated efforts

Tivan believes the consolidated efforts of government, research, industry and community are required for the critical minerals sector to reach its potential in Australia.



[Read here](#)

Making the most of Australia’s endowment of critical minerals



[Read here](#)

Tivan's Submission to the Federal Government's Refresh of the Critical Minerals Strategy

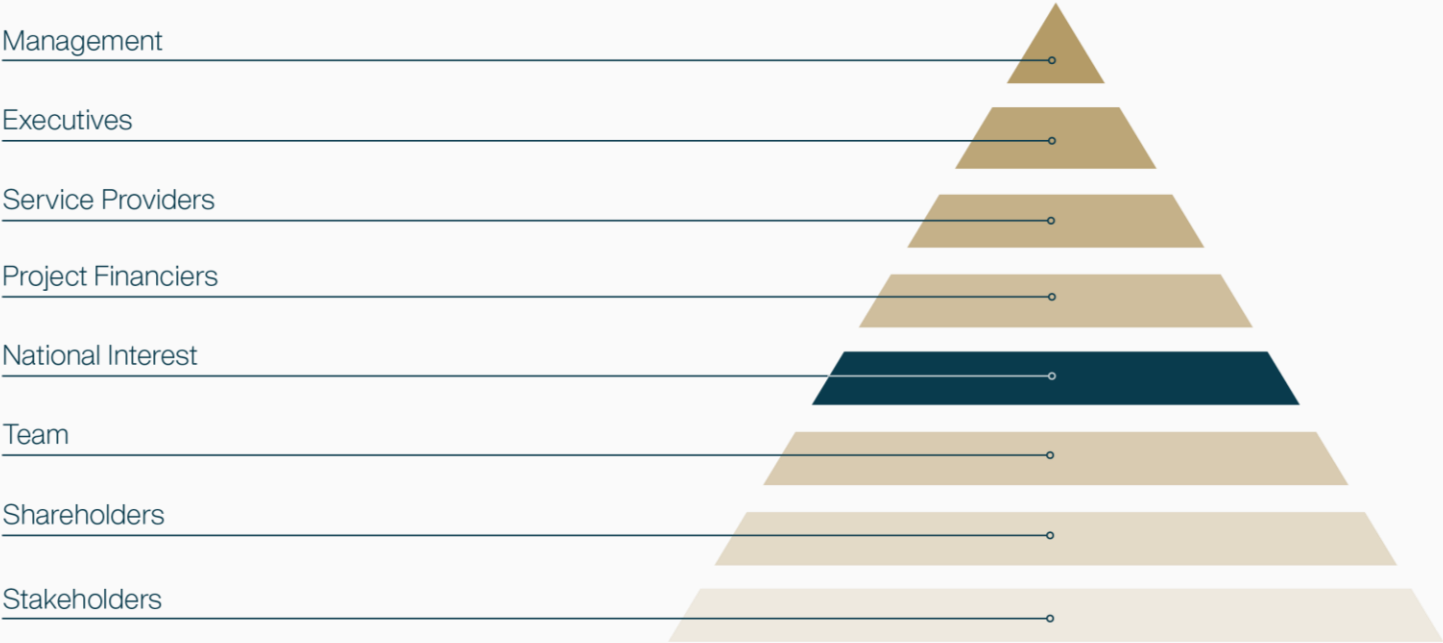


Figure 20: In January Tivan defined a 'hierarchy of interests' to illustrate a prototype critical minerals processing company in Australia.

Tivan: Addressing Australia's hardest problem

Australia has a legislated target for Net Zero Emissions by 2050, but does not have a credible plan.

CSIRO* found in March 2023 that a 10 – 14x increase in storage for renewable energy is required by 2050: equivalent to adding Snowy 2.0 to the grid each and every year.

Commencing with Speewah, Tivan is building a durable pathway for long duration energy storage, based on resource, technology and community, and a scaleable sovereign capability.

Speewah / MASDP offers sufficient scale to dominate the global vanadium market, and to develop a pathway for financialisation of the commodity.

A stable, secure market in Vanadium has been the key impediment to Western adoption of VRFB.

*Source: [CSIRO Renewable Energy Storage Roadmap](#)
Refer to page 14 for context on shortfall charts shown on the right hand side.

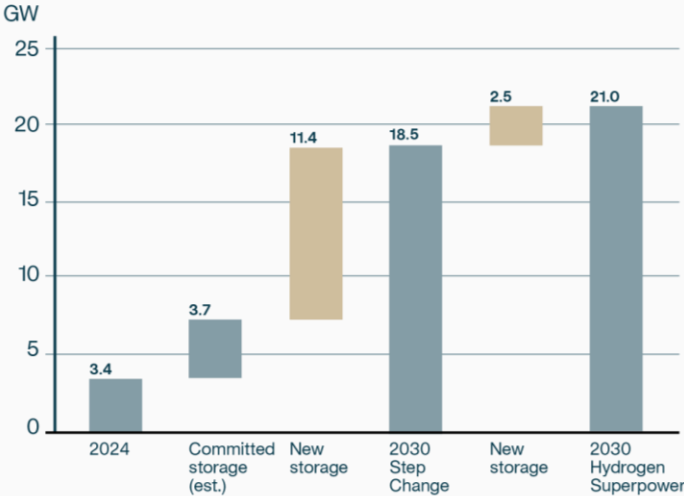


Figure 21: NEM electricity, power capacity: 2024 versus 2030

Notes: Electricity storage capacity estimates for 2024 are sourced from AEMO's 2022 ISP. Terminology: NEM, national electricity market.

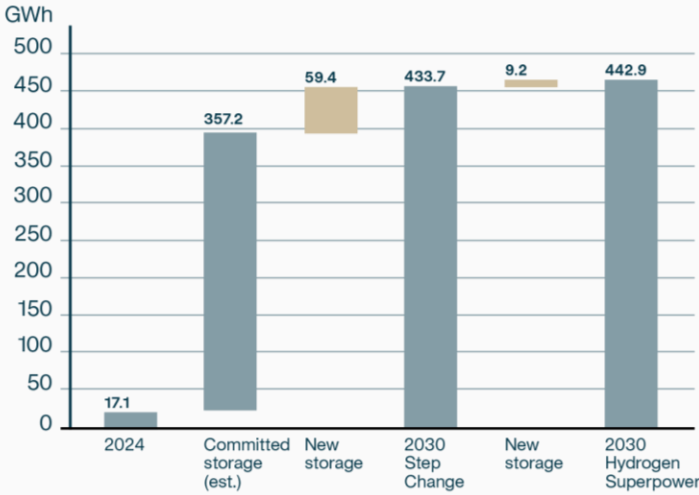


Figure 22: NEM electricity storage, energy capacity: 2024 versus 2030

Tivan: VRFB commercial readiness

CSIRO's Renewable Energy Storage Roadmap reviews competing technologies for energy storage.

Lithium-ion batteries are a short duration energy storage technology, with environmental drawbacks and sovereign dependencies.

Pumped hydro faces technical challenges and a problematic use case in Snowy 2.0.

VRFB is the technology of choice for long duration energy storage.

**Source: CSIRO Renewable Energy Storage Roadmap*
Refer to page 21 for context charts shown on the right hand side

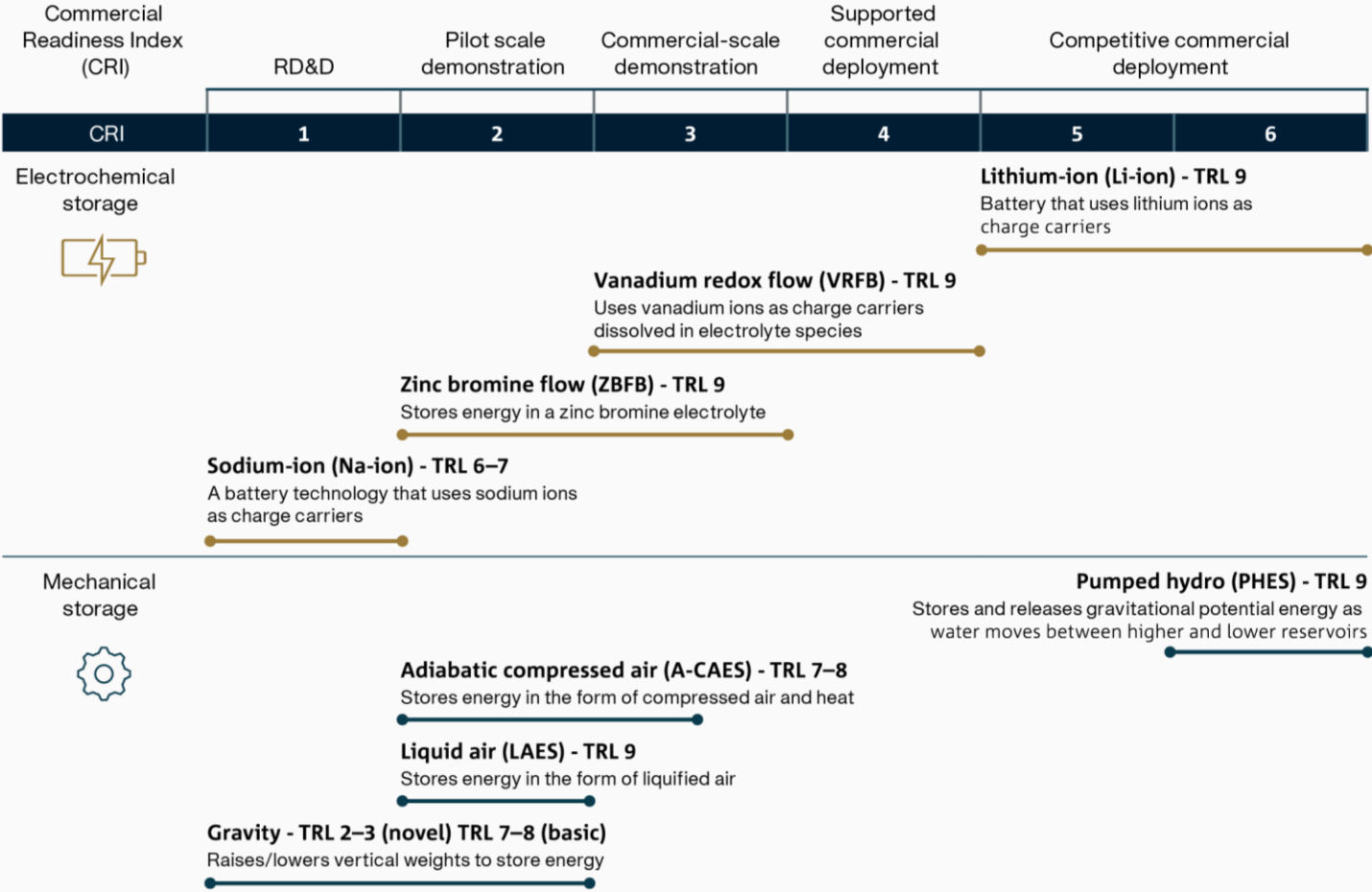


Figure 23: Summary of energy storage technology maturity

Tivan: Addressing price and price volatility through scale

CSIRO's Renewable Energy Storage Roadmap highlights price as a key challenge for VRFB.

Tivan offers:

- Economies of scale
- Security of supply
- Financialisation pathway

By supporting an R/D cycle with select global technology partners, further efficiencies will be captured in VRFB relative to other storage solutions.

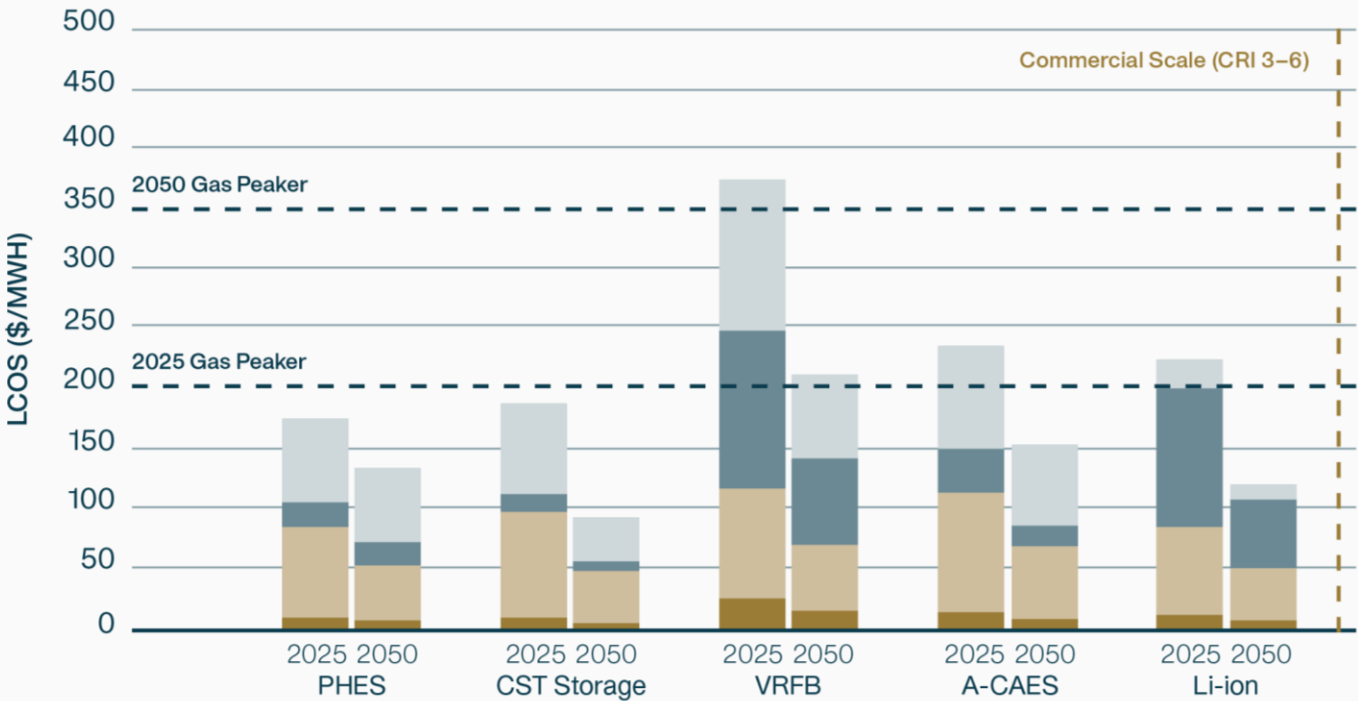


Figure 24: LCOS results, medium-duration storage (8-hour storage duration, 285 annual cycles)

Tivan: Government priorities

Tivan is uniquely well placed to deliver on ten categories prioritized by the Federal government's reset of the Critical Minerals Strategy.

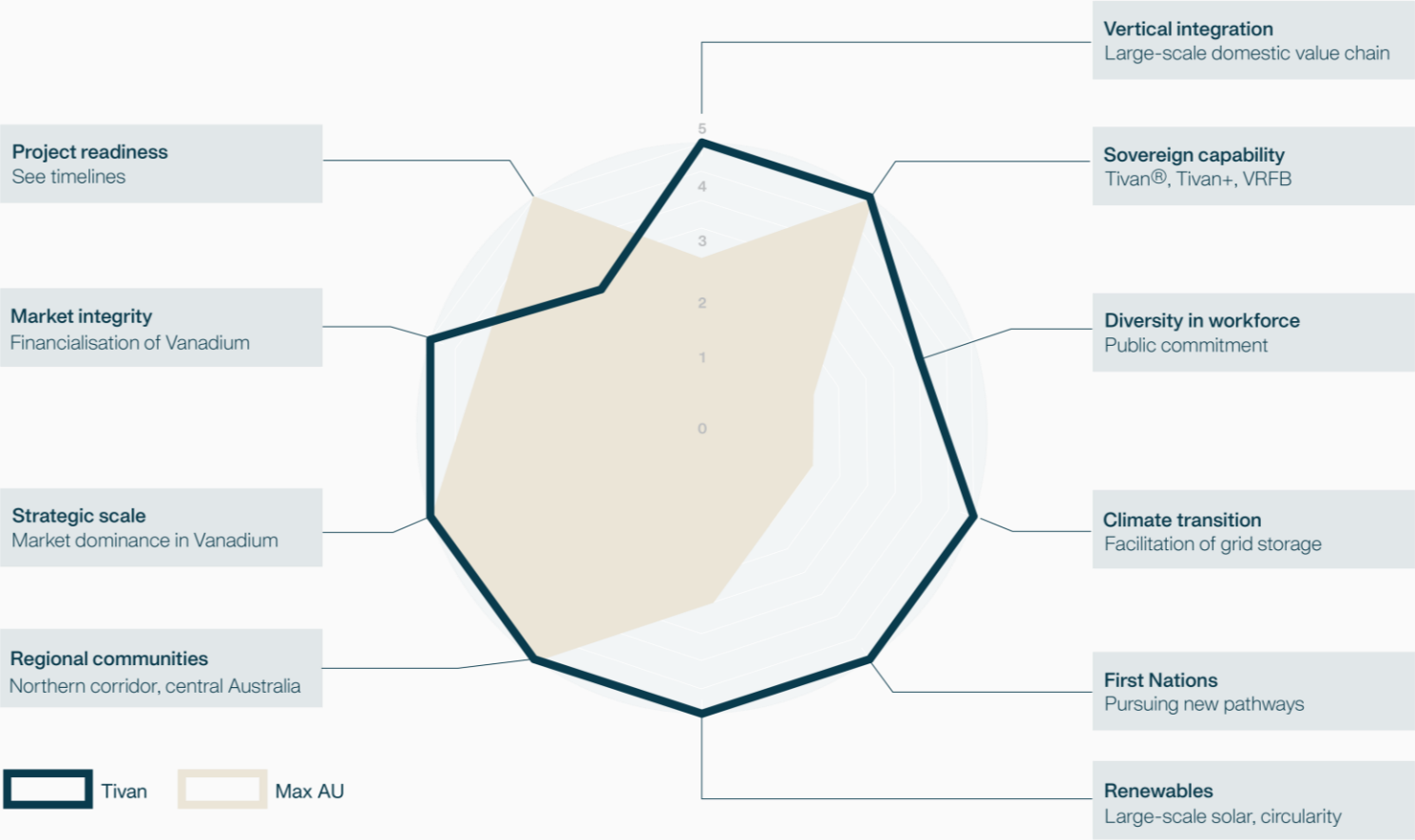


Figure 25: Tivan's Speewah/MASDP project mapped against Federal government priorities and nominal maximum achieved.



Strategic Partners

CSIRO*
Sun Cable*



Partners

Hatch*
Earth AI*
Cambridge Gulf Limited*
Ti-Cons



Project Finance

Export Finance Australia



Environmental
Consultants

EcOz*
APM



Community

Charles Darwin University



Public Relations

Bespoke Territory*
SEC Newgate*



Legal

Gilbert + Tobin*



Audit

KPMG



Media

True North*



Design

Elaine Allen Design*

*New Era

Tivan: Board of Directors

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Grant Wilson
Executive Chair

Grant led the nationally prominent campaign to change management at Tivan through the second half of 2022.

His 25-year career includes extensive experience in global finance, law, media, technology and government. He previously held senior roles for the Government of Singapore Investment Corporation (GIC), and he ran Civic Capital, a New York based hedge fund, from 2010-18.

Grant sits on the Advisory Board of Exante Data, Inc, based in New York, where he was earlier Head of Asia-Pacific. He is a well-known columnist for the Australian Financial Review.

He holds BComm/LLB (1st) from the Australian National University and MScIPE from the London School of Economics and Political Science.



Christine Charles
Non Executive Director

Christine is an experienced executive and strategic advisor. Currently the Managing Director of professional services firm D4G, she provides strategic and practical advice to a range of clients, covering social and political risk management, social and community investment, regional economic development, leadership and business strategy. Christine has extensive experience in the mining and energy sectors, having spent several years in an executive role with Newmont Mining. She is currently Chair of the Centre for Social Responsibility in Mining, University of Queensland, where she is also an Adjunct Professor, and Chair of the South Australian Government's Resources and Engineering Skills Alliance Board. Christine is a member of the CSIRO Resources Sector Advisory Council, and also sits on the Board of Territory Generation.



Anthony Robinson
Non Executive Director

Anthony has 24 years experience in Business Consulting and 18 years' experience on Boards. Since 2005 his focus as a consultant has been helping major and minor engineering firms to deliver and review capital projects, and to deliver innovation programs and operational improvements. He started his consulting career with GEM Consulting in Perth, was then a co-owner of Momentum Partners, before joining Deloitte as a Partner in 2010. In 2013 he retired as a Partner to focus on working directly on mining projects and on his Board roles, including as Chairman of Artrage for more than a decade. Anthony holds bachelor's degree in commerce and in Engineering, and a PhD in Engineering, all from the University of Melbourne.



Dr Guy Debelle
Non Executive Director

Dr Guy Debelle is an adviser to the Investment Committee of Australian Retirement Trust and a non-executive director at Tivan. He is also co-chair of the ASFI Taxonomy Technical Experts Group developing the Sustainable Finance Taxonomy for the Australian economy.

Guy was the Deputy Governor of the Reserve Bank of Australia from 2016 until 2022 and prior to this was Assistant Governor (Financial Markets) from 2007-2016. After leaving the RBA, Guy worked at Fortescue Future Industries as CFO and non-executive director.

Dr Debelle has previously held roles at the International Monetary Fund, Bank for International Settlements and the Australian Treasury. He has been a visiting Professor of Economics at the Massachusetts Institute of Technology (MIT) and is currently an honorary Professor of Economics at the University of Adelaide. Guy graduated with a Bachelor of Economics (Honours) from the University of Adelaide and gained a PhD in Economics from MIT.

Tivan: Technical Advisory Group

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Dr Maria Skyllas-Kazacos
Emeritus Professor, University of NSW

After graduating with 1st Class Honours and the University Medal in Industrial Chemistry at UNSW Sydney, Maria then completed her PhD in the area of High Temperature Molten Salt Electrochemistry under the supervision of Professor Barry Welch. She spent a year as a Member of the Technical Staff at Bell Telephone Laboratories in the USA where she worked on liquid junction solar cells and on lead-acid batteries.

Returning to Australia, she was awarded a Queen Elizabeth II Postdoctoral Fellowship to continue her work on liquid-junction solar cells with Prof Dan Haneman at UNSW. In 1982, she was appointed to the academic staff in the School of Chemical Engineering and Industrial Chemistry where she initiated research programs in aluminium electrowinning and began her pioneering work on vanadium flow batteries.

After filing the first patent on the VRFB in 1986, Maria expanded her research team's efforts into all areas of the VB technology, from electrolyte production to stack materials, design and manufacture, sensors and control system development, while also completing several field trials. Over the next 30 years, her group's work led to more than 40 new patents which currently form the basis of the VFB technology that is being commercialised globally.

In 1999 Maria was made Member of the Order of Australia. She is a Fellow of the Australian Academy of Technological Sciences and Engineering, of the Royal Australian Chemical Institute and of the Institution of Engineers Australia.



Stéphane Leblanc
**Former Managing Director Rio Tinto
Iron & Titanium**

Canadian Senior Executive leveraging extensive global operations and functional leadership experience within diverse mining sectors. Influential, innovative and safety award winning leader with a track record of delivering transformational change and cultivating HSE and ESG as values. Proven capability to align resources, facilitate cohesion and empower teams to deliver on aggressive targets. Expertise in developing strategic plans to increase business value and able to respond rapidly to business changes in complex context. Stéphane formerly served as Managing Director, Rio Tinto Iron & Titanium (RTIT) with operational, commercial and marketing responsibility for RTIT. Based in Montreal, Canada, he additionally led a broad range of innovative demonstration plants, most recently including decarbonisation of ilmenite, production of lithium concentrate and recovery of scandium oxides. Prior to this he was at Kennecott Utah Copper and employed by Rio Tinto for over 30 years in operations management and HSE, including two years as Global Head of HSE for the Alcan smelter group.

Stéphane holds a Bachelor of Science degree in Mechanical Engineering from the University of Sherbrooke in Quebec.



Simon Flowers
Consultant

Simon is a chartered engineer and project delivery professional specialising in the development and delivery of sustainable solutions for the industrial sector. Simon spent seven years in the United Kingdom advising and delivering ERP projects on large infrastructure developments. He led an international team for twelve years with a US energy firm ConocoPhillips where he was responsible for delivering strategic business change initiatives and programmes of engineering projects on onshore and offshore hydrocarbon processing facilities.

Simon is a born and bred Territorian and in his recent role he led the NT Government's team that was accountable for the strategic direction, design and delivery of land and marine infrastructure and Northern Australia's first Strategic Environmental Assessment of the Middle Arm Sustainable Development Precinct (MASDP). The precinct development delivers a comprehensive road map to support critical minerals, low emissions hydrocarbon processing and hydrogen production facilities. Simon is currently the Director and Principle of Sustainergy Consulting Pty Ltd, specialising in improving environmental, social and economic outcomes for industry and he is currently finalising a Masters of Sustainable Energy Development (MSE) at the University of Queensland. He serves as the deputy president of Engineers Australia Northern Division and serves on Engineers Australia National Congress.

Technical Advisory Group



Dr Maria Skyllas-Kazacos
Emeritus Professor
University of NSW



Stéphane Leblanc
Consultant



Simon Flowers
Consultant

Board of Directors



Grant Wilson
Executive Chair



Christine Charles
Non-Executive Director



Dr Anthony Robinson
Non-Executive Director



Guy Debelle
Non-Executive Director



Tony Bevan
Company Secretary



Dan Foo
Project Director



Brendon Nicol
Process Manager



Michael Christ
Project Manager



Jason Giltay
Chief Financial Officer



Katrina Arratoon
VP-Engagement



Stephen Walsh
Chief Geologist



Alex Botterill
Process Engineer



Mousumi Chaudhury
Financial Controller



Helen Yang
Commercial Manager –
Darwin



Helen Nugent
Senior Bookkeeper

Tivan: Corporate overview

Capital Structure*	
Ordinary shares on issue	1,570,778,769
Shareholders	5,919
Share price (22 Sept 2023)	\$0.075
Market cap (undiluted)	\$118m

*Excludes performance rights and options on issue

Major Shareholders**	
Deutsche Balaton Group	10.56%
VM Salgaocar	7.05%
King River Resources	6.37%
W & M Brown	5.94%
Aosu	3.58%

Grant Wilson (Executive Chair)	1.66%
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**Grouped holdings

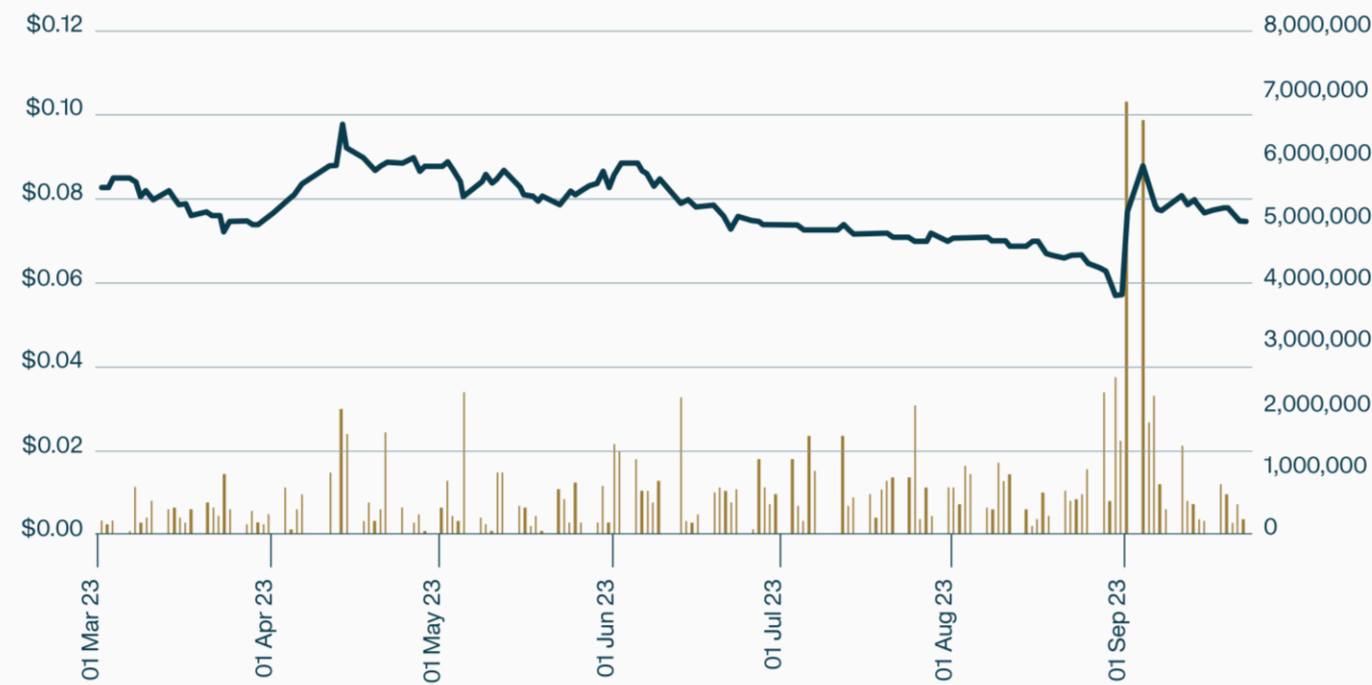


Figure 26: TVN/ASX Closing Share Price & Volume

Tivan: What's next?

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Corporate

Oct 9–10: AJBCC Conference

Oct 17: SXSW

Oct 31–Nov 2: IMARC

Nov 29: ASFA Conference



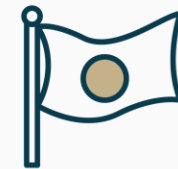
Initiatives

Firmwide incentive scheme
Corporate governance policies



AGM

Nov 17: Darwin



International Travel

Japan



New Era:
Hard Work
Integrity
Resilience

Tivan: Appendix 1: Hard Rock Vanadium Peer Comparison

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For live links:  [Read here](#) ASX Announcement dated 20th February 2023

Acquisition			Australia			Overseas				
Company	Code	Deposit	Location	Stage	Resource Category	Resource (Mt)	Resource Grade (V2O5%)	Total Resource (Mt V2O5%)	Concentrate Grade	Sources and Notes
Tivan	ASX: TVN	Mount Peake	NT	Development	Measured	118.0	0.29	160Mt @ 0.28% (Cutoff V2O5% 0.10%)	1.04	ASX announcement 24 January 2023 Quarterly Activities Report, TNG investor presentation https://tivan.com.au/wp-content/uploads/2023/02/61132915-1.pdf https://www.asx.com.au/asxpdf/20190604/pdf/4451qv6lxy90gf.pdf
					Indicated	20.0	0.28			
					Inferred	22.0	0.22			
KRR	ASX: KRR	Speewah	WA	Development	Measured	322.0	0.33	4712Mt @ 0.30% (Cutoff V2O5% 0.23%)	2.40	ASX announcement 1 April 2019, 10 May 2022, 22 September 2022 https://app.sharelinktechnologies.com/announcement/asx/4fd202b184aaf93bc7350413f16d283 https://app.sharelinktechnologies.com/announcement/asx/5f6090d1a01816a20d24a633a15ecb20 https://app.sharelinktechnologies.com/announcement/asx/41ad6aa2b6c9b0c09cb45d6b2046327d
					Indicated	1,054.0	0.30			
					Inferred	3,335.0	0.29			
AVL	ASX: AVL	Gabanintha	WA	Development	Measured	11.3	1.14	239Mt @ 0.73% (various cutoffs)	1.40	ASX announcement 6 April 2022 Bankable Feasibility Study. 73.6Mt of the Indicated and 88.5Mt of the Inferred tonnes use 0.40% V2O5 cutoff. All other tonnages (95.6Mt) are at 0.70% V2O5 cutoff.
					Indicated	82.4	0.70			
					Inferred	145.3	0.71			
TMT	ASX: TMT	Gabanintha	WA	Development	Measured	12.1	1.00	154Mt @ 0.85% (Cutoff V2O5% 0.40%)	1.40	ASX announcement 23 November 2022 RUI Resurgence Conference 23 November 2022
					Indicated	51.2	0.90			
					Inferred	90.5	0.80			
Todd Resources	Private	Balla Balla	WA	Development	Measured	219.0	0.64	456Mt @ 0.64% (Cutoff V2O5% 0.30%)	0.80	Integrated feasibility study December 2009. ASX disclosure 16 December 2011. https://www.asx.com.au/asxpdf/20111216/pdf/4239v45c02k79t.pdf https://drive.google.com/file/d/1wGS4cibLxmYmTnltz39T_n5uoU1W0LH/view
					Indicated	86.7	0.63			
					Inferred	150.2	0.64			
Atlantic	Private	Windimurra	WA	Development	Measured	34.6	0.49	210Mt @ 0.50% (Cutoff V2O5% 0.28%)	1.24	2019 Mineral Resource Estimate https://atlanticptyltd.com.au/projects/windimurra/geology-reserves-resources
					Indicated	123.5	0.50			
					Inferred	51.6	0.50			
Neometals	ASX: NMT	Barambie	WA	Development	Measured	n/a	n/a	280Mt @ 0.44% (Cutoff V2O5% 0.20%)	1.40	ASX announcement 17 April 2018 Updated Barambie Mineral Resource Estimate https://wsecure.weblink.com.au/pdf/NMT/01971759.pdf
					Indicated	187.0	0.46			
					Inferred	93.0	0.40			
Bushveld	LSE: BMN	Vametco	South Africa	Production	Measured	n/a	n/a	183Mt @ 0.78% (Cutoff = 0.20% magnetite)	1.98	Vametco Inferred & Indicated Mineral Resource and Ore Reserve Update for Annual Reporting https://www.bushveldminerals.com/wp-content/uploads/2022/04/J4590-Vametco-Mineral-Resources-and-Ore-Reserves-31-December-2021-Dated-30-Mar-2022.pdf
					Indicated	140.1	0.74			
					Inferred	42.6	0.90			
Bushveld	LSE: BMN	Mokopane	South Africa	Development	Measured	n/a	n/a	297Mt @ 0.68% (Cutoff V2O5 = 0.30%)	1.75	Mokopane Vanadium project Pre-Feasibility Study 30/1/2016 http://bushveldminerals.com/wp-content/uploads/2017/08/201602040458050.pdf
					Indicated	63.2	1.32			
					Inferred	234.0	0.51			
SPD VR	ASX: VR8	Steelpoortdrift	South Africa	Development	Measured	145.5	0.72	680Mt @ 0.70% (Cutoff V2O5 = 0.45%)	2.10	ASX announcement 17 November 2022. Investor Presentation May 2022. https://vr8.global/sites/default/files/2022%2005%2009%20Vanadium%20Resources%20Investor%20Presentation%20.pdf
					Indicated	327.3	0.70			
					Inferred	207.4	0.68			
Largo Resources	NASD: LGO TSX: LGO	Maracas	Brazil	Production	Measured	45.9	0.83	79Mt @ 0.78% (Cutoff V2O5 = 0.30%)	2.45	43-101 Technical Report 10 October 2021 https://s29.q4cdn.com/562286712/files/doc_downloads/technical_report/marac%C3%A1s_menchen_mine/TR_GE21_Largo_43101_16122021_Final-Version-Conformed-for-Filing.pdf
					Indicated	17.7	0.70			
					Inferred	15.5	0.74			
Lac Dore	TSX: VRB	VanCorp	Canada	Development	Measured	24.0	0.50	304.9Mt @ 0.41% (Cutoff V2O5 = 0.30%)	1.26	Lac Dore Mineral Resource Estimate 29 October 2020 https://www.vanadiumcorp.com/releases/vanadiumcorp-reports-the-lac-dore-mineral-resource-estimate-mre-2/
					Indicated	191.0	0.40			
					Inferred	89.9	0.40			

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Disclaimer: Competent Person

The information in this presentation related to the Speewah Mineral Resource estimate is extracted from an ASX announcement of King River Resources Limited (ASX: KRR) entitled “Vanadium Resource Amendment” dated 1 April 2019 and is available to view on www.kingriverresources.com.au and www.asx.com.au. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original announcement, and, in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person’s findings are presented have not been materially modified from the original market announcement.

The information in the KRR ASX announcement “Vanadium Resource Amendment” dated 1 April 2019 on pages 1 to 4 is based on information compiled by Ken Rogers (BSc Hons) and fairly represents this information. Mr. Rogers is the Chief Geologist and an employee of King River Resources Ltd, and a Member of both the Australian Institute of Geoscientists (AIG) and The Institute of Materials Minerals and Mining (IMMM), and a Chartered Engineer of the IMMM. Mr. Rogers has sufficient experience of relevance to the styles of mineralisation and the types of deposits under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr. Rogers consents to the inclusion of the information in the KRR announcement “Vanadium Resource Amendment” dated 1 April 2019 on pages 1 to 4 of the matters based on information in the form and context in which it appears.

For more details regarding the reporting of Mineral Resources and Ore Resources during an acquisition see ASX JORC FAQ 37, linked [here](#).



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