



AVALON

ADVANCED MATERIALS

Restoring North American Critical Minerals Control

Rare Earths | Lithium | Processing

Corporate Presentation

July 2026



CAUTIONARY STATEMENT

FORWARD-LOOKING STATEMENT

This presentation contains "forward-looking information" within the meaning of applicable Canadian securities legislation. Forward-looking information includes, but is not limited to, information with that are not based on historical fact contained in this presentation, including through documents incorporated by reference herein, are forward-looking statements that involve risks and uncertainties that could cause actual events or results to differ materially from estimated or anticipated events or results reflected in the forward-looking statements . Such forward-looking statements reflect the Company's current views with respect to future events and include, among other things, statements regarding targets, estimates and/or assumptions in respect of reserves and/or resources , and are based on estimates and/or assumptions related to future economic, market and other conditions that, while considered reasonable by the Corporation, are inherently subject to risks and uncertainties, including significant business, economic, competitive, political and social uncertainties and contingencies. These estimates and/or assumptions include, but are not limited to: grade of ore; rare metal and by-product commodity prices; metallurgical recoveries; operating costs; achievement of current timetables for development; strength of the global economy; availability of additional capital; and availability of supplies, equipment and labour. Generally, forward-looking information can be identified by the use of forward-looking terminology such as "add" or "additional", "advancing", "anticipates" or "does not anticipate", "appears", "believes", "can be", "conceptual", "confidence", "continue", "convert" or "conversion", "deliver", "demonstrating", "estimates", "encouraging", "expand" or "expanding" or "expansion", "expect" or "expectations", "forecasts", "forward", "goal", "improves", "increase", "intends", "justification", "plans", "potential" or "potentially", "promise", "prospective", "prioritize", "reflects", "robust", "scheduled", "suggesting", "support", "top-tier", "updating", "upside", "will be" or "will consider", "work towards", or variations of such words and phrases or state that certain actions, events or results "may", "could", "would", "might", or "will be taken", "occur", or "be achieved".

Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of the Company to be materially different from those expressed or implied by such forward-looking information, including risks associated with project development such as: environmental hazards and economic factors as they affect the cost and success of the Company's capital expenditures, the ability of the Company to obtain required permits and approvals, the ability of the Company to obtain financing, the ability to source feedstock for the Company's proposed lithium processing facility at reasonable prices or at all, the price of lithium hydroxide, no operating history, no operating revenue and negative cash flow, land title risk, the market price of the Company's securities, the Company's commercial viability, inflation and uncertain global economic conditions, uncertain geo-political shifts and risks, successful collaboration with indigenous communities, future pandemics and other health crises, dependence on management and other highly skilled personnel, , extensive government and environmental regulation, reliance on artificial intelligence technology to influence mining operations, volatility in the financial markets, uninsured risks, climate change, threat of legal proceedings, as well as those risk factors discussed or referred to in the annual information form of the Company dated November 26, 2025 (the "AIF") under the heading "Description of the Business – Risk Factors". Forward-looking information is based on the reasonable assumptions, estimates, analysis and opinions of management made in light of its experience and perception of trends, current conditions and expected developments, as well as other factors that management believes to be relevant and reasonable in the circumstances at the date that such statements are made, but which may prove to be incorrect. Although the Company believes that the assumptions and expectations reflected in such forward-looking information are reasonable, undue reliance should not be placed on forward-looking information because the Company can give no assurance that such expectations will prove to be correct. In addition to other factors and assumptions identified in the AIF, assumptions have been made regarding, among other things: management of certain of the Company's assets by other companies or joint venture partners, the Company's ability to carry on its project activities without undue delays or unbudgeted costs, the ability of the Company to obtain sufficient qualified personnel, equipment and services in a timely and cost-effective manner, the ability of the Company to operate in a safe, efficient and effective manner, the ability of the Company to obtain all necessary financing on acceptable terms and when needed, the accuracy of the Company's operational and price assumptions on which these are based and the continuance of the regulatory framework regarding environmental manners. Readers are cautioned that the foregoing list is not exhaustive of all factors and assumptions that may have been used. Although the Company has attempted to identify important factors that could cause actual results to differ materially from those contained in forward-looking information, there may be other factors that cause results not to be as anticipated, estimated or intended. There can be no assurance that such information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such information. Accordingly, readers should not place undue reliance on forward-looking information. The Company does not undertake to update any forward-looking information, except in accordance with applicable securities laws.

Financial Projections

The Company's financial projections are inherently speculative and may prove to be inaccurate. Any financial projections provided in this presentation have been prepared in good faith based upon the estimates and assumptions considered reasonable by management. However, projections are no more than estimates of possible events and should not be relied upon to predict the results that the Company may attain. Future oriented financial information in this presentation includes statements with respect to (i) capital expenditures; (ii) post-tax net present values; (iii) after-tax rate of returns; (iv) proposed revenues over the course of the project life; (v) operating and production costs; and (vi) projected EBITDA. The projections are based upon a number of estimates and assumptions and have not been examined, reviewed or compiled by independent accountants or other third-party experts, including assumptions with respect to the Company's anticipated future revenues; foreign exchange rates and price fluctuations; corporate income tax rates; working capital requirements; capital expenditures including construction costs and timing, and annual operating costs; type of facility feedstock including minimum requirements; sale price of lithium hydroxide; and purchase price of spodumene. These assumptions may vary from the actual results. Accordingly, there is no assurance that future events will correspond to management's assumptions or that actual results during the periods covered will approximate the financial projections. Any variations of actual results from projections may be material and adverse. Future-oriented financial information and financial outlooks, as with forward-looking information generally, are, without limitation, based on the reasonable assumptions of the Company and management as at the date hereof. The Company's actual financial position and results of operations may differ materially from management's current expectations and, as a result, revenue, profitability, and EBITDA may differ materially from any revenue, and profitability profiles provided in this presentation. Such information is presented for illustrative purposes only and may not be an indication of our actual financial position or results of operations.

Industry Data

This presentation also contains or references certain market, industry and peer group data which is based upon information from independent industry publications, market research, analyst reports and surveys and other publicly available sources. Although the Company believe these sources to be generally reliable, such information is subject to interpretation and cannot be verified with complete certainty due to limits on the availability and reliability of raw data, the voluntary nature of the data gathering process and other inherent limitations and uncertainties. The Company has not independently verified any of the data from third party sources referred to in this presentation and accordingly, the accuracy and completeness of such data is not guaranteed.

QUALIFIED PERSON

Volker Moeller, P.Geo., and Ron Groenewegen, MAusIMM (CP), each a Qualified Person ("QP") as such term is defined by National Instrument 43-101 – Standards of Disclosure for Mineral Projects, have reviewed and approved the technical information included in this presentation within their respective areas of responsibility. Mr. Moeller reviewed and approved information related to the Nechalacho Rare Earths and Zirconium Project, and Mr. Groenewegen reviewed and approved information related to the Lake Superior Lithium / Thunder Bay lithium refinery project.

AVALON ADVANCED MATERIALS INC

A CANADIAN CRITICAL MINERALS COMPANY
BUILDING DOMESTIC CAPACITY IN RARE
EARTHS AND LITHIUM

Avalon operates with a clear conviction that the future will be defined by our ability to develop resilient, domestically anchored supply chains. As demand accelerates across electrification, defense, advanced manufacturing, and energy infrastructure, North America requires a secure, scalable, and self-sufficient critical minerals supply foundation to support long-term economic and industrial strength.



WHO WE WORK FOR

Supporting the industries, communities, partners, and shareholders that depend on a secure North American critical minerals supply chain.



WHAT WE WORK FOR

Developing the critical minerals essential for the energy transition and advanced technologies



WHY WE WORK

To build a secure, sustainable, and independent North American future for generations to come



NECHALACHO
BASAL
RARE EARTH PROJECT
Thor Lake, NWT

DFS COMPLETED (2013) |
MODERNIZATION UNDERWAY

OUR SUBSIDIARIES



LAKE SUPERIOR LITHIUM
(LSLi)

Thunder Bay, ON

PEA COMPLETED (2024) | FS
UNDERWAY

A CRITICAL RISK.

A BROKEN SYSTEM.

CHINA DOMINATES THE SUPPLY CHAINS
THAT POWER OUR FUTURE



Supply Concentration

A significant portion of global critical mineral processing is concentrated in a single region.



Geopolitical Risk

Policy shifts, export controls, and global tensions create supply chain vulnerability.



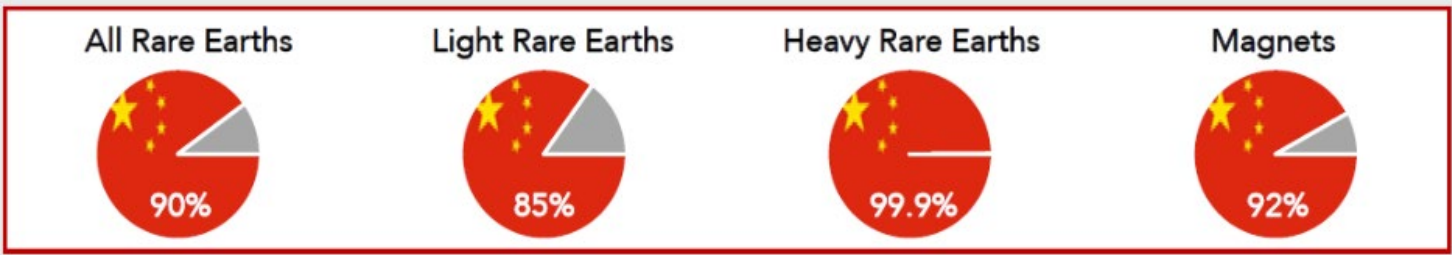
Demand Outpacing Supply

Rapid growth in demand for critical minerals is outpacing supply, increasing pressure on global systems.

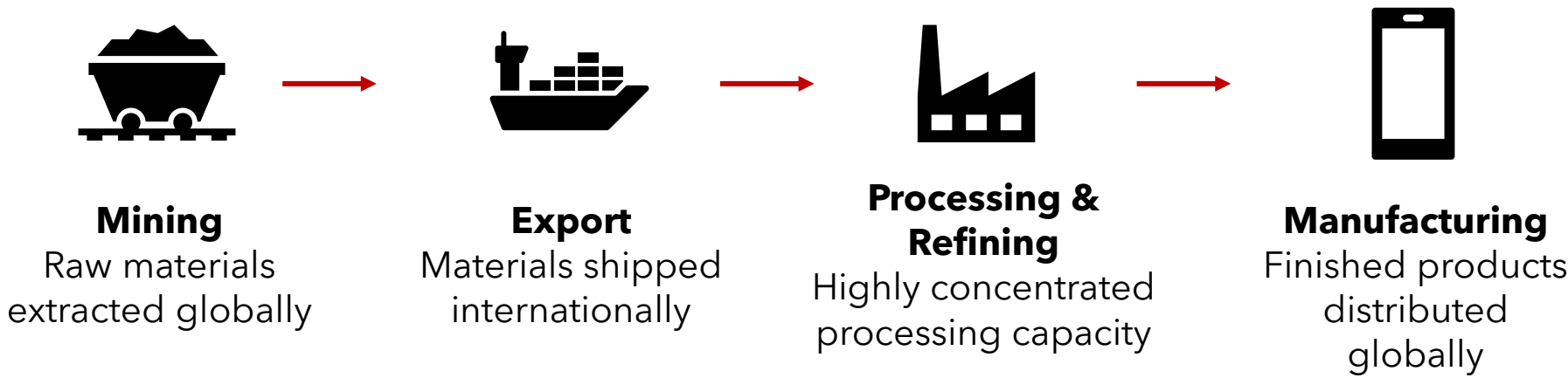


STRATEGIC DEPENDENCY IS A GROWING RISK

A secure domestic supply chain is critical to long-term economic and energy security.



CHINA'S CONTROL ACROSS THE CRITICAL MINERALS SUPPLY CHAIN



LESSONS FROM CHINA'S RARE EARTH PLAYBOOK: 2005-2015

Avalon's Market Capitalization



- > **2005** Avalon acquires 100% interest in the Thor Lake/Nechalacho property
- > **2005-2010** China's dominance in REEs grows; export quotas constrain global supply and concentrate processing in China
- > **Sept 2010** REE shipments to Japan are halted amid a maritime dispute. Prices surge into 2011, and global juniors see outsized investor attention.
- > **July 2010** China slashes its second-half REE export quota by ~72%, stoking tightness
- > **2013** Definitive Feasibility Study for Nechalacho completed and announced with strong economics
- > **2014** WTO rules China's quotas illegal
- > **2015** China scraps export quotas, replacing w/ licenses. Supply normalizes; prices retrace; funding for non-Chinese projects tightens—many Canadian juniors de-rate. REE prices fall 30-50%

TODAY: WHAT HASN'T CHANGED



China still dominates global REE processing



Critical mineral supply remains concentrated



Western supply remains structurally constrained

Asset Locations

-  Corporate Headquarters
Toronto, ON
-  Lake Superior Lithium Inc.
Thunder Bay, ON
-  Nechalacho Project
Thor Lake, NWT
-  Lilypad Cesium Project
Fort Hope, ON
-  East Kemptville
Yarmouth, NS
-  Warren Township Project
Timmins, ON



ASSET OVERVIEW

A diversified portfolio of critical minerals assets and opportunities strategically located in Canada.



MAGMIC RARE EARTHS INC NECHALACHO PROJECT Basal

Location:

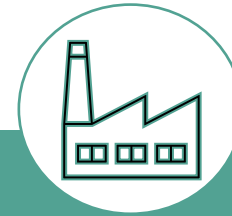
- Thor Lake, Northwest Territories

Stage:

- DFS completed in 2013
- After-Tax NPV (8%) C\$1.3B
- After-Tax IRR ~20%
- CAPEX C\$1.6B
- 2026 PEA underway, advancing cleaner processing with improved project economics

Mineralization:

- Light REEs (e.g., Nd, Pr)
- Heavy REEs (e.g., Tb, Dy)
- 15 of 17 REEs
- Zirconium, Tantalum, Niobium



LAKE SUPERIOR LITHIUM INC (LSLI) LITHIUM PROCESSING FACILITY

Location:

- Thunder Bay, Ontario

Stage:

- PEA completed in 2024
- After-Tax NPV (8%) C\$4.1B
- After-Tax IRR 48%
- CAPEX C\$1.3B
- FS underway, advancing toward construction readiness and partnership engagement

Commodity:

- Production of Lithium Hydroxide

Key Points:

- 100% owned land for proposed lithium processing facility
- Existing strategic infrastructure
- MOU with Metso Corp. and Qualcomm Technologies Inc.



Strategic Partnership & Divestment Opportunities

Lilypad Cesium Project - Fort Hope, Ontario

Mineralization:

- Cesium

Stage:

- Early Exploration

East Kemptville Tin - Yarmouth, Nova Scotia

Mineralization:

- Tin, Mineral Resource Estimate

Stage:

- PEA 2018

Warren Township Anorthosite Project -

Timmins, Ontario

Mineralization:

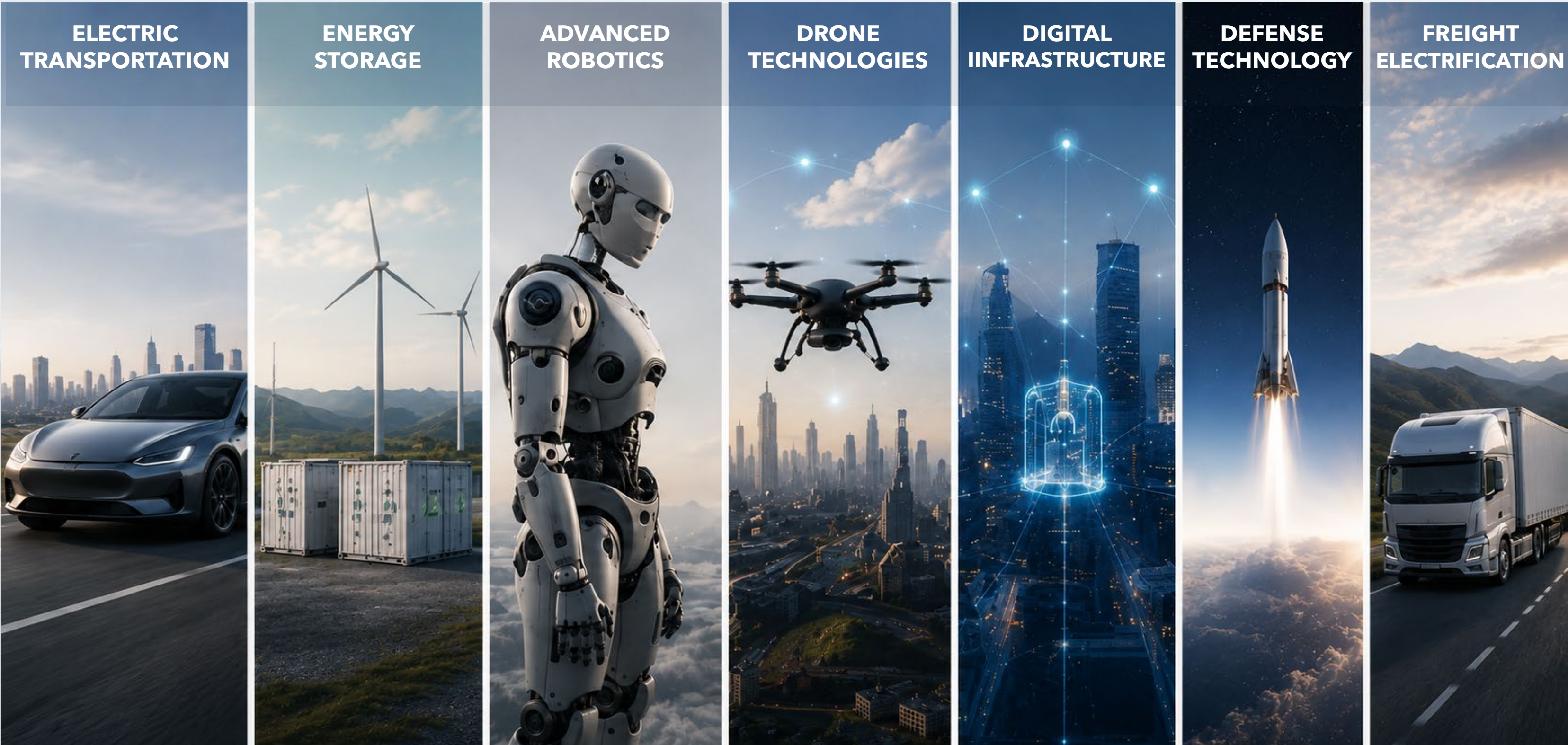
- Calcium Feldspar

Stage:

- Early Exploration

Avalon: A Strategic Critical Minerals Platform for the Next Industrial Cycle

RARE EARTHS & LITHIUM POWERING ELECTRIFICATION, DEFENSE, DIGITAL INFRASTRUCTURE & AUTOMATION



POWERING THE FUTURE OF CRITICAL TECHNOLOGIES

Avalon: A Strategic Critical Minerals Platform for the Next Industrial Cycle

INVESTMENT THESIS

Structural Demand Tailwinds



- **REE:** Permanent magnet demand scaling across electrification, wind energy, and advanced industrial technologies, reinforced by defense-driven and global realignment of supply chains away from China.
- **Lithium:** EVs and energy storage driving battery demand, alongside urgent buildout of regional refining capacity in NA.

Multiple Value Creation Levers



- Management reset
- Board refresh: ~60% new directors
- Strengthening capital structure
- Further resource validation
- Securing strategic funding
- Additional strategic partnerships
- Non-core asset monetization
- Broadening of shareholder base

Unique Diverse Portfolio



- Nechalacho REE DFS (2013) - After-Tax NPV @ 8%: C\$1.3B and 19.6% IRR
- Thunder Bay Facility PEA (2024) After-Tax C\$4.1B NPV & 48% IRR

UNLOCKING VALUE THROUGH STRATEGIC EXECUTION



Valuation Disconnect



- Market cap materially below intrinsic asset values (REE C\$1.2B NPV; Lithium C\$4.1B NPV)
- Management committed to closing this gap through disciplined execution against multiple value creation levers

Strong Partnerships



Strategic collaborations with leading industry players, enhancing capabilities and enabling execution and market reach

- Nordmin Engineering Ltd.
- Primero Americas Inc
- Wood Engineering
- Metso Corp.
- Qualcomm

Government Alignment



- Advancing rare earth and lithium assets central to national defense, technological advancement, energy and industrial policy (strengthening critical mineral supply chains).

NECHALACHO PROJECT

BASAL



One of the most advanced rare earth deposits in North America, located in the Northwest Territories Canada, with the potential to supply a range of magnet rare earth elements and other strategic materials



Global Supply Risk

Today, China controls > 90% of global rare earth processing. That's a high risk to our supply, economy, and national security.



Rare Earths Power Modern Technology

Rare earths are the backbone of modern technology and impact everyday life



Restoring Domestic Supply Advantage

Nechalacho combines scale, high-value rare earth enrichment, and a cleaner development path – supporting secure, sustainable supply within North America.



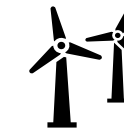
920 lbs

of rare earth elements in a single US F-35 fighter jet



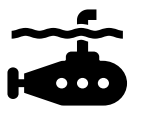
1 kg

of rare earth elements in electric vehicles (EVs)



2 tons

of rare earth magnets in a single 3MW wind turbine



9200 lbs

of rare earth materials in each SSN-774 Virginia-class submarine



**REDUCING
DEPENDENCE.
STRENGTHENING
SECURITY**



**DRIVING THE
CLEAN
ENERGY
REVOLUTION**

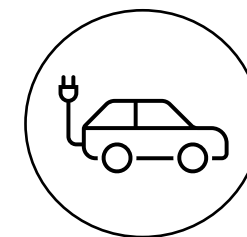


**ENABLING
ADVANCED
DEFENSE**

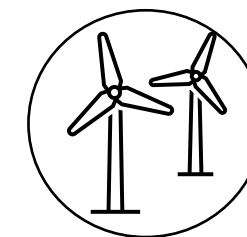


**BUILDING
ECONOMIC
OPPORTUNITY**

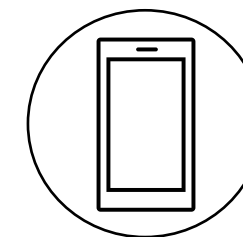
Enabling Critical Technologies



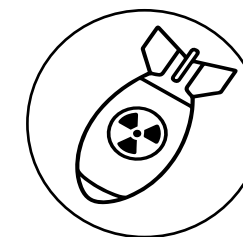
Electric Vehicles



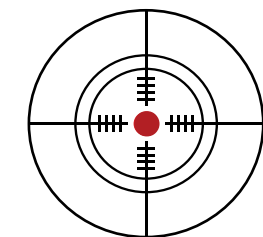
Wind Turbines



Smart Phones



Missiles



Radar



Defense

NECHALACHO PROJECT BASAL Project Overview



Strategic Location

Located at Thor Lake, Northwest Territories, - 100 km southeast of Yellowknife



100% Owned Basal Zone

Avalon owns 100% of resources below 150 metres (Basal Zone)



Tardiff Zone Ownership

An unrelated third party owns resources above 150 metres (Upper Zone)



High Demand for Growing Industries

Supports defense, nuclear, EVs, semiconductors, wind energy, and communications



Permitting Advantage

- Regulatory pathway de-risked with Land Use Permit and Water Licence secured.

ADVANCING TO EXECUTION



Objective

- Update 2013 DFS based on a cleaner, more cost-effective process and new economic considerations.
- Secure funding and strategic partners to advance project



Funding

- Advancing a diversified funding strategy that includes non-core asset divestments, government-backed financing, and strategic partnerships tied to offtake and supply agreements.



Development Phase

Feasibility Study update underway

- Engaged Wood Canada Ltd. to advance updated feasibility work
- Building on the 2013 DFS to reflect a cleaner, cost-effective process, and new economic considerations

wood.
Global engineering leader engaged

HIGH-VALUE RARE EARTH EXPOSURE



1 Deposit **18** Elements of
Economic Interest



High value
High demand
Strategic advantage

MAGNET RARE EARTH ELEMENTS - THE CORE VALUE ENGINE

65
Tb
Terbium



Improves high temperature performance in permanent magnets used in EVs, wind turbines, and defense technologies.

66
Dy
Dysprosium



Provides heat resistance and magnetic strength in high performance motors and advanced defense applications.

59
Pr
Praseodymium



Key component in NdPr permanent magnets used in EV motors, wind turbines, and industrial automation.

60
Nd
Neodymium



Critical input for powerful permanent magnets used in electric vehicles, wind turbines, robotics, and electronics.

LIGHT RARE EARTHS

57
La
Lanthanum

58
Ce
Cerium

62
Sm
Samarium

HEAVY RARE EARTH ELEMENTS

63
Eu
Europium

64
Gd
Gadolinium

67
Ho
Holmium

68
Er
Erbium

69
Tm
Thulium

70
Yb
Ytterbium

71
Lu
Lutetium

39
Y
Yttrium

TRANSITION METALS

40
Zr
Zirconium

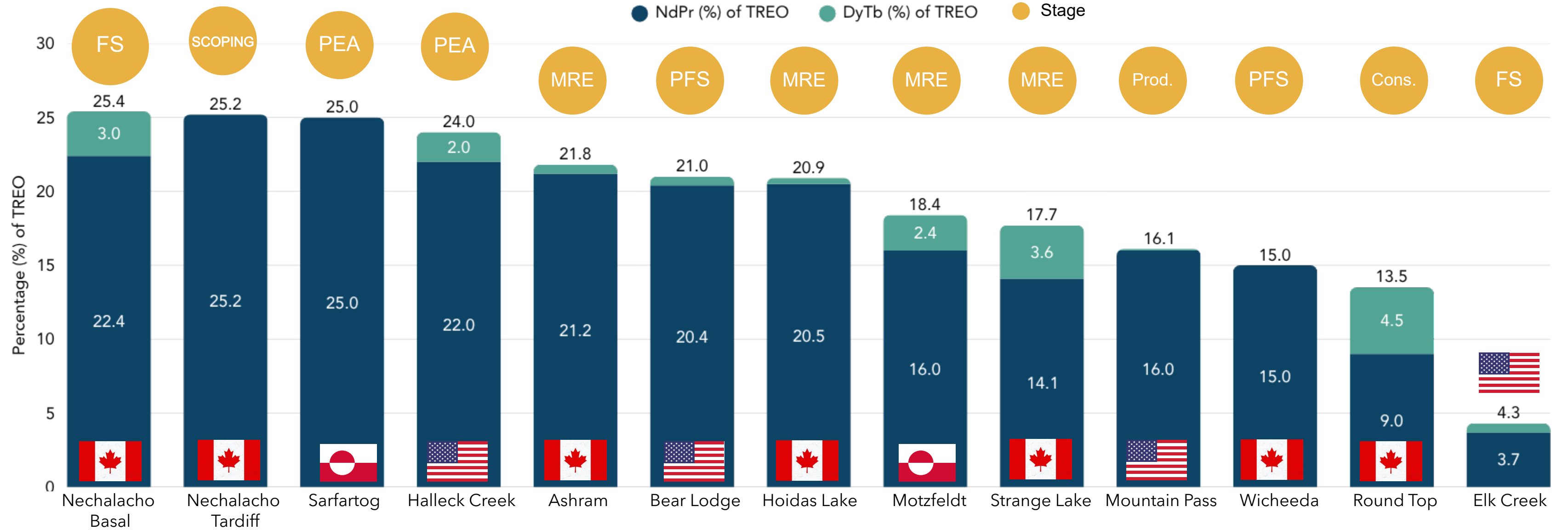
41
Nb
Niobium

73
Ta
Tantalum

HIGHEST MAGNET REE RATIO & AMONG MOST ADVANCED DEVELOPMENT PATHS IN PEER GROUP

One of few projects to have achieved DFS-level – with unmatched quality (NdPr / DyTb proportion)

Peer Projects Viewed by NdPr + DyTb % of TREO



Source: Company public filings, equity research
As of May 2026

NECHALACHO'S MAGNET-CRITICAL REE PROFILE NOT REFLECTED IN AVALON'S VALUATION⁽¹⁾⁽²⁾

Avalon trades at only ~1% to 2% of its Study NPV, well below the peer average, despite strong technical advancement and Nechalacho's significant exposure to magnet-critical NdPr and DyTb.

KEY TAKEAWAYS

✓ Deep valuation discount to REE developer peers

✓ High magnet-critical REE intensity: NdPr + DyTb

✓ Among peer leaders in contained NdPr/DyTb scale

✓ Nechalacho PEA underway to modernize process related to 2013 DFS & refresh economics - Fall 2026 completion targeted

✓ U.S. listing evaluation may improve market visibility

		Mkt Data	Asset Metrics (Main Asset) ⁽³⁾⁽⁴⁾⁽⁵⁾				M&I+I Grade			M&I+I Contained		Valuation
		Market	Main	Asset	Dev.	Study	TREO	NdPr /	DyTb /	NdPr	DyTb /	P/
Company Name	Ticker	Cap	Asset(s)	Location	Stage	NPV 8%	Grade	TREO	TREO	Cont.		Study NPV8%
		(US\$mm)				(US\$mm)		(%)		(Kt)		(x)
Rare Earth Developers												
Arafura Rare Earths	BRE-AU	\$984	Nolans	Australia	DFS	\$1,859	2.60%	26.4%	--	384	--	0.53x
Brazilian Rare Earths	ARU-AU	\$778	Multiple	Brazil	Scope.	\$630	--	--	--	--	--	1.24x
Rare Element Resources	REA-US	\$278	Bear Lodge	Wyoming, USA	MRE	--	3.96%	20.4%	--	64	--	--
Rare Earths Americas	REEMF-US	\$262	Multiple	Brazil	MRE	--	1.93%	21.0%	1.6%	1,896	145	--
Mkango Resources	MKA-CA	\$208	Songwe Hill	Malawi	FS	\$461	1.09%	21.1%	1.0%	216	10	0.45x
American Rare Earths	ARR-AU	\$157	Halleck Creek	Wyoming, USA	PEA	\$733	0.33%	--	--	--	--	0.21x
Leading Edge Materials	DEFN-CA	\$54	Norra Karr	Sweden	PEA	\$1,029	0.50%	14.0%	5.7%	77	31	0.05x
Defense Metals	LEM-CA	\$42	Wicheeda	BC, Canada	PFS	\$992	2.14%	15.2%	0.2%	112	2	0.04x
Namibia Critical Metals	NMI-CA	\$32	Lofdal	Namibia	PFS	\$182	0.16%	11.0%	5.5%	12	6	0.18x
Vital Metals	VML-AU	\$19	Tardiff	NWT, Canada	Scope.	\$445	1.31%	25.2%	--	636	--	0.04x
Mean		\$281				\$791	1.56%	19.3%	2.8%	425	39	0.34x
Median		\$183				\$681	1.31%	20.7%	1.6%	164	10	0.20x
 Avalon	AVL-CA	\$30	Nechalacho	NWT, Canada	DFS (REE) / PEA (Li)	\$4,228	1.51%	22.4%	3.0%	406	55	0.01x
 Avalon (Excl. Lithium)	AVL-CA	\$30	Nechalacho	NWT, Canada	DFS (REE)	\$1,199	1.51%	22.4%	3.0%	406	55	0.02x

Sources: Company public filings, FactSet
(1) Pricing data as of July 10, 2026 (2) Avalon NPV based on Nechalacho and Lake Superior Lithium technical reports; all study NPVs converted to USD at study FX rate (3) Study NPV8% sourced from technical report sensitivity tables where not otherwise disclosed (4) Rare Earth Americas grade and contained resource shown as the sum of the Constellation and Alpha projects (5) No current study economics provided for Rare Earths Americas assets or the Bear Lodge Project

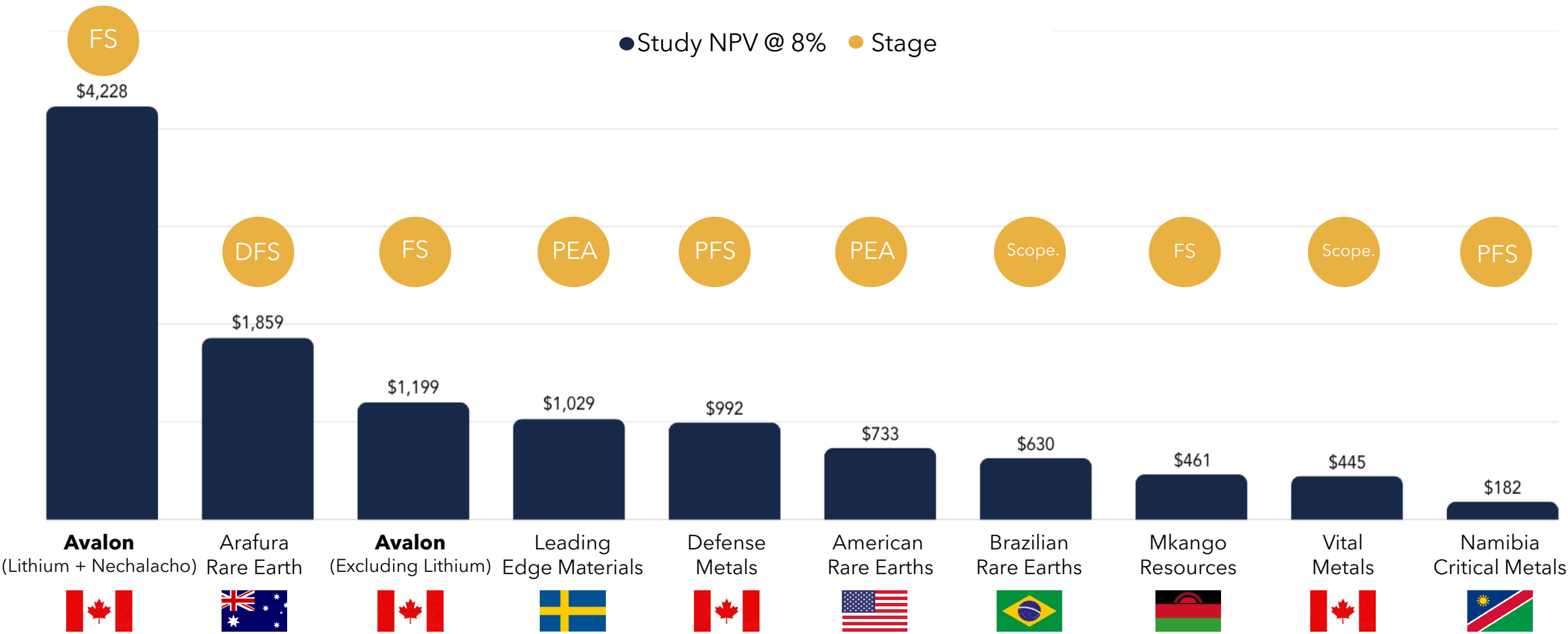
NECHALACHO:
HEAVY AND LIGHT
REE DEPOSIT –
CURRENTLY
UNDERRECOGNIZED
BY THE MARKET

NECHALACHO 2013 DFS +
Lithium 2024 PEA STUDY
NPV
\$4.2 BILLION

PEA underway, in collaboration with
Wood Canada Ltd, to modernize
process related to 2013 DFS and
refresh project economics – Fall 2026
completion targeted

AVALON OFFERS TECHNICALLY WELL-ADVANCED HEAVY AND LIGHT REE EXPOSURE
TRADING AT A MATERIAL DISCOUNT TO COMPARABLE REE DEVELOPERS

(US\$ millions)



Note: Market data as of July 10, 2026. Study NPV figures reflect latest publicly disclosed technical/economic studies and are converted to USD at study exchange rate. Multiples calculated as market capitalization divided by after-tax Study NPV @ 8%, unless otherwise noted. Sources: company filings, technical reports, investor presentations, and public market data.

VALUATION DISCONNECT

RELATIVELY STRONG STUDY NPV
VERSUS PEERS



\$4.2B versus \$0.8B
peer average

ADVANCED TECHNICAL STATUS



Benefits from prior DFS-
level work, technical
studies, and clear path
toward updated economic
analysis.

HIGH MAGNET-CRITICAL REE RATIO



Differentiated by high concentration
of magnet-critical REEs
(NdPr and DyTb) as % of TREO,
supporting strategic relevance to
magnet supply chains.

NECHALACHO:

Heavy and Light REE Deposit – Currently Underrecognized by the Market

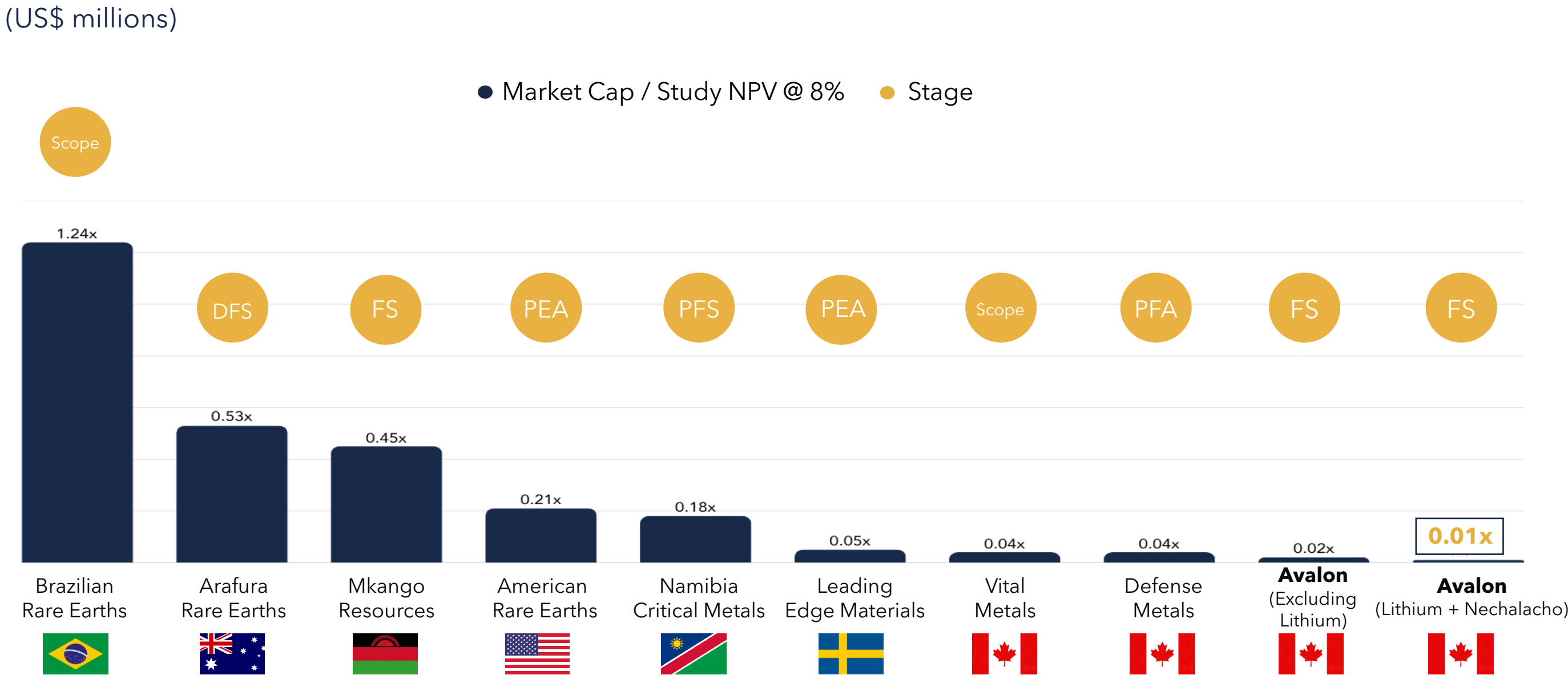
PEA underway, in collaboration with Wood Canada Ltd, to modernize process related to 2013 DFS and refresh economics – Fall 2026 targeted completion

0.01x
P/ Study NPV
AVALON

0.34x
PEER AVERAGE

MATERIAL DISCOUNT
TO PEER AVERAGE

AVALON TRADES AT A FRACTION OF PEER VALUATION DESPITE NECHALACHO’S SCALE, TECHNICAL ADVANCEMENT & HEAVY REE EXPOSURE



Note: Market data as of July 10, 2026. Study NPV figures reflect latest publicly disclosed technical/economic studies and are converted to USD at study exchange rate. Multiples calculated as market capitalization divided by after-tax Study NPV @ 8%, unless otherwise noted. Sources: company filings, technical reports, investor presentations, and public market data.

VALUATION DISCONNECT

SIGNIFICANT DISCOUNT TO PEERS
AVL trades at ~0.01x Study NPV versus peer average of 0.34x.

RE-RATING POTENTIAL
Achieving milestones has potential to narrow valuation gap

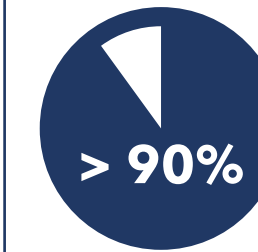
HIGH MAGNET-CRITICAL REE RATIO
Differentiated by high concentration of magnet-critical REEs (NdPr and DyTb) as % of TREO, supporting strategic relevance to magnet supply chains.

A CLEAN APPROACH TO RARE EARTH PROCESSING

Avalon and Engina Corporation have successfully recovered 15 rare earth elements from Nechalacho concentrate with >90% total recovery in preliminary bench-scale testing using a novel CO₂-based extraction process.

TWO DIFFERENT WAYS TO GET RARE EARTHS OUT OF ORE	
CONVENTIONAL PROCESSING (INDUSTRY STANDARD)	AVALON / ENGINEA HYBRID SUPERCRITICAL REFINING PROCESS (NOVEL APPROACH)
 Strong acids & high heat Complex process Large volumes of waste Environmental challenges • Uses harsh chemicals and high heat • Higher chemical and water use • Significant waste and emissions • More difficult to permit	 CO₂-based extraction Closed-loop system Lower waste Designed to reduce impact, capex and opex • Uses CO₂-based extraction in a closed-loop system • Designed to reduce chemical use, waste, and environmental impact • Lower water and chemical use potential • Supports Western supply chain objectives

WHAT WE HAVE ACHIEVED



Demonstrated recovery of **15 rare earth elements** from Nechalacho with 90% recovery yields

Preliminary bench scale results

High recovery across the full
suite of rare earths

Novel process designed to
reduce environmental
impact

WHY THIS MATTERS?

Reduced Environmental Footprint Potential

Designed to use fewer chemicals and generate less waste

Potential Economic Benefits

Higher recovery and
lower cost potential,
(subject to validation)

Permitting Advantage

Cleaner process may support a more favorable permitting pathway

Aligned with Strategic Supply Chain Priorities

Supports development of secure, diversified supply chains

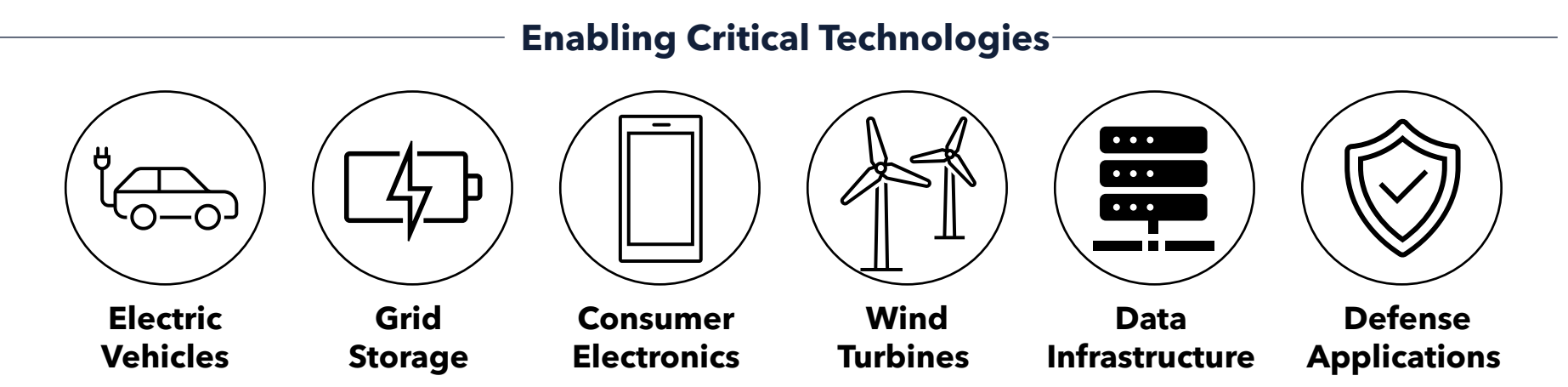
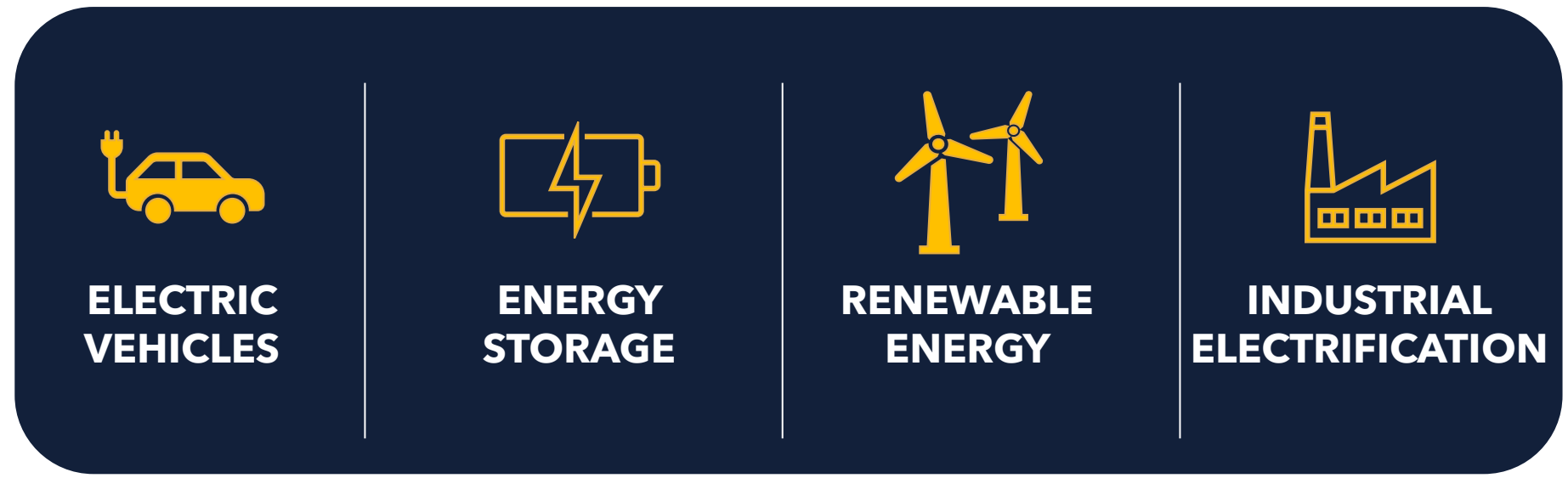
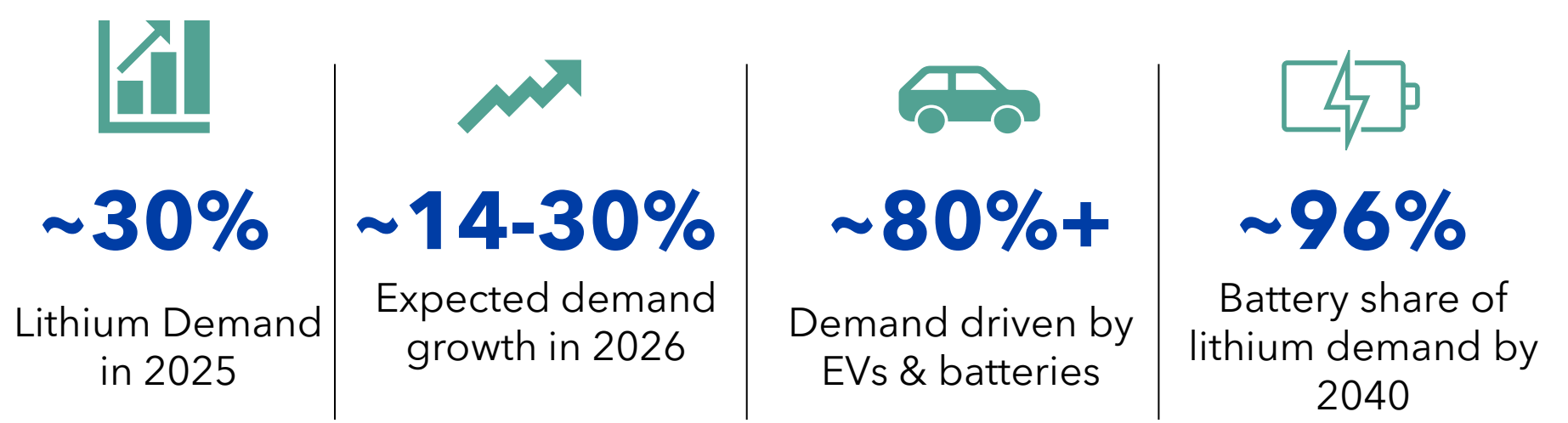
WHATS NEXT?

Wood Canada Ltd. advancing
engineering evaluation and
process optimization work.

LAKE SUPERIOR LITHIUM PROJECT

A proposed lithium chemical processing facility designed to convert spodumene concentrate into battery-grade lithium chemicals for electric vehicles and energy storage systems.

-  **Demand is accelerating rapidly**
Lithium demand grew ~30% in 2025 and continues to expand as electrification scales globally
-  **Batteries are becoming the dominant end-use**
Battery applications are expected to represent ~96% of total lithium demand by 2040
-  **Supply is tightening as demand scales**
Market deficits are expected to emerge this decade, reinforcing the need for new supply
-  **Lithium is critical to energy security, decarbonization, and industrial growth.**



LAKE SUPERIOR LITHIUM PROJECT PROJECT OVERVIEW

A strategically located lithium hydroxide asset in Ontario, well positioned to support the growing electric vehicle and energy storage supply chain.



Strategic Location

Located at Thunder Bay, Ontario, located in proximity of feed sources and main infrastructure



100% Owned

100% Avalon Owned



Optimized Site

Site is ideally positioned to optimize supply chain efficiency and product logistics



Technology Collaboration

Collaboration with Qualcomm Technologies Inc. to support advanced process development



Strong Partnerships

Partnership with Metso Corp. to leverage sustainable processing technologies

Metso
Qualcomm



Objective

- Aims to support the rapidly expanding electric vehicle market by establishing a state-of-the-art lithium hydroxide facility in Thunder Bay, Ontario



Funding

- Exploring funding options, including non-core asset divestments, government loans, grants, and strategic partnerships related to offtake and supply agreements.



Development Phase

Feasibility Study underway with:

- Engaged Nordmin Engineering Ltd. to advance from a positive September 2024 PEA toward a Feasibility Study, positioning the Project for construction readiness and strategic partnerships

Nordmin
Engineering

KRECH OJARD PRIMERO

19

19

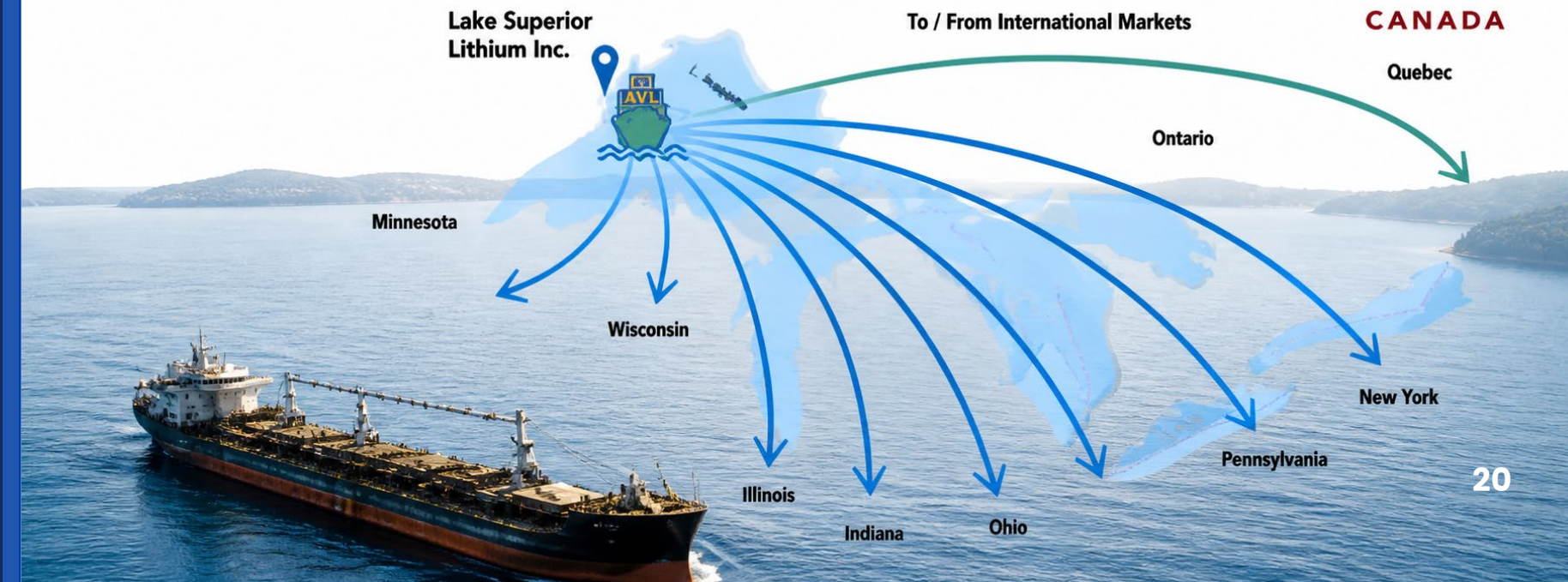
LAKE SUPERIOR LITHIUM PROJECT

STRATEGIC INVESTMENT OVERVIEW

- **Strategic Location:**
Proximity to key markets and resources, supporting efficient supply chains
- **Infrastructure Advantage:**
Robust infrastructure, including existing buildings, extensive rail connectivity, and a deep-water port
- **Supporting Government Incentives:**
Leverage Canadian, and U.S. government incentives for green energy and technology projects
- **Meeting High Demand:**
The facility will help meet the escalating demand for lithium in EVs and renewable energy storage
- **Scalable Growth Potential:**
Capable of processing Spodumene concentrate, with a facility designed with scalability in mind, capable of expanding to meet future market demands
- **Sustainability Commitment:**
Implement environmentally friendly processes to minimize ecological impact and support sustainability goals
- **Integrated Lithium Platform:**
Host processing, recycling, chemical, and cell manufacturing capabilities at the Thunder Bay site
- **Community Partnerships:**
We prioritize partnerships with First Nations communities, ensuring that benefits are extended to all regional communities

2024 PEA Financials (CAD \$)

\$35,360 Base Case LiOH \$/t LiOH (USD \$26,000/t LiOH)	\$4.1B After-Tax NPV @ 8% Discount	30 Year Operating Life
\$1,360 Spodumene conc. \$/t (USD \$1,000/t Spodumene @ 6%)		2.5 Year Payback Period
30,000 tpa Annual LiOH production	48% After-Tax IRR	\$1.3B CAPEX



TSX:AVL

OTCQB:AVLNF

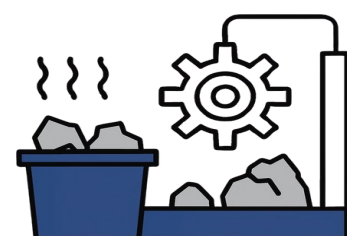
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A MORE EFFICIENT AND SUSTAINABLE PATH TO BATTERY-GRADE LITHIUM

Avalon, in partnership with Metso, is advancing a proprietary alkaline process that converts spodumene to battery-grade lithium hydroxide using **cleaner chemistry, lower inputs, and a more sustainable footprint**

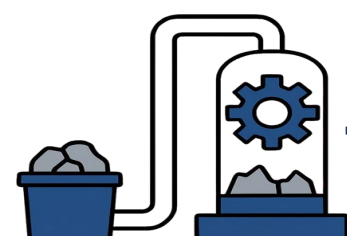
THE METSO ALKALINE PROCESS

1. Calcination & Milling



Spodumene concentrate is calcined and milled to liberate lithium

2. Alkaline Pressure leach



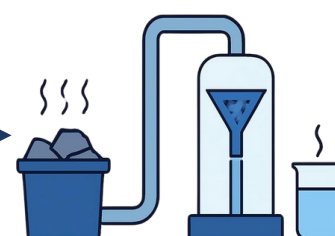
Milled spodumene is leached with soda ash in a high-pressure reactor

3. Lithium Conversion



Lithium in solution is converted to lithium hydroxide using lime

4. Purification



Solution is filtered to remove impurities and maximize purity

5. Crystallization & Drying



Purified solution is evaporated, crystallized and dried to produce battery-grade lithium hydroxide monohydrate



Cleaner Process

No sulfuric acid, fewer hazardous byproducts and a neutral, inert residue



Lower Operating Intensity

Significantly less water and chemical consumption



Permitting Advantage

Simpler environmental profile supports permitting and community acceptance



Proven Technology

Pilot- tested for the Lake Superior Lithium Project and commercially operating in Texas



A cleaner process with the potential to **reduce operating risk, improve permitting outcomes, and support long term cost efficiency**

Our Goal

Deliver battery-grade lithium with a lower environmental footprint and stronger economics

POSITIONING AVALON FOR A POTENTIAL U.S. EXCHANGE LISTING

A strategic step to broaden investor access, enhance market visibility and strengthen long-term capital markets flexibility.



BROADER INVESTOR ACCESS

A U.S. exchange listing could increase visibility with U.S. retail investors, institutions, analysts, brokers and market participants.



IMPROVED MARKETABILITY

A post-consolidation share price more consistent with U.S. exchange norms may help address price-level constraints that can limit investor engagement.



STRATEGIC ALIGNMENT

Avalon's critical minerals portfolio is North American in scope; the Company's public market profile should evolve with the next stage of development.



CAPITAL MARKETS FLEXIBILITY

The proposed consolidation is intended to preserve flexibility as Avalon evaluates potential U.S. exchange listing requirements.



SHARE CONSOLIDATION COMPLETED

Avalon will continue evaluating a potential U.S. exchange listing as part of its broader long-term capital markets strategy.

LEVERS TO CLOSE VALUATION DISCONNECT

ACHIEVED



Management Reset

Senior leaders new since 2023



Governance Reset

4 of 7 directors joined since 2023, bringing operational and capital markets expertise.



Secured Tactical Funding

- Recent C\$18.7M capital raise
- Finnvera LOI supports potential €100M export credit financing for Metso equipment
- Refresh 2013 Nechalacho DFS
- Advance September 2024 Lithium PEA to FS
- Strengthen balance sheet and reduce selling pressure by prepaying convertible note



Advancing Technical Studies

- Initiated Nechalacho PEA; to be followed by Feasibility Study.
- Commenced Feasibility Study at Lake Superior Lithium Project

NEXT STEPS TO UNLOCK VALUE



Secure Strategic Funding

- Finnvera LOI supports potential €100M export credit financing
- Private: Pursue strategic equity at the asset level (Nechalacho and Thunder Bay)
- Public: Pursue Canadian & U.S. government support programs
- SCP Resource Finance appointed as Strategic Capital Advisor



Lithium: Commercial Enablement

- Secure feedstock source
- Secure offtake agreement



Broaden and Strengthen the Shareholder Base Through Targeted Investor Outreach and Enhanced Market Access



Non-Core Asset Sales

- Completed Sibelco JV reorganization—debt eliminated, dilution overhang removed, and Lilypad cesium asset repositioned for potential monetization
- Monetize tin, cesium, and other valuable but non-core assets, providing non-dilutive funding

EXECUTING THE PLAN

DELIVERING RESULTS.



C\$18.7M **CAPITAL RAISED**

Strengthening liquidity
to fund growth



DEBT-FREE

~\$7.5M debt eliminated
In a non-cash transaction



~15% **DILUTION REMOVED**

Potential shareholder
dilution eliminated



100% **LILYPAD OWNERSHIP**

100% ownership of
Lilypad Cesium
Project regained



BALANCE SHEET STRENGTHENED

- ✚ C\$18.7M equity financing completed
- ✚ ~C\$7.5M debt eliminated in non cash transaction
- ✚ Lind convertible note fully repaid
- ✚ Convertible debenture extinguished with no shares issued
- ✚ Working capital strengthened to support next phase advancement



PORTFOLIO REPOSITIONING COMPLETED

- ✚ Exit of Separation Rapids JV completed
- ✚ 100% ownership of Lilypad cesium project regained
- ✚ Portfolio aligned to core lithium and REE strategy
- ✚ Nechalacho DFS refresh initiated
- ✚ Lake Superior Lithium advanced from PEA toward Feasibility Study
- ✚ Cesium positioned for potential monetization

Management Team



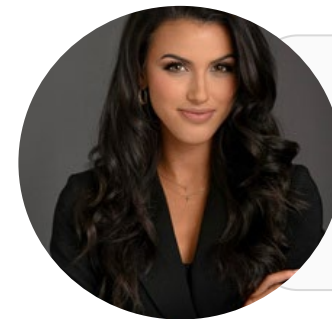
Scott Monteith, President & CEO
Scott Monteith, CEO of Avalon since May 2023, is an experienced entrepreneur and founder of Monteco Ltd.



Christopher Senyk, VP, Corporate Development
Mr. Senyk brings extensive experience across lithium, battery materials, and specialty chemicals, supporting Avalon's corporate strategy, partnerships, and commercial growth initiatives.



Lorin Crenshaw, CFO
Mr. Crenshaw brings nearly 30 years of financial leadership, including as CFO of Compass Minerals, Orion S.A., and Albemarle's global lithium business, with earlier Wall Street experience as an equity investor at Citigroup and debt investor at PGIM.



Vienna Psihos, Director, Public Affairs & Government Relations
Ms. Psihos is an experienced government relations professional with a strong track record in Ontario's policy and funding landscape, including her recent leadership role at the Treasury Board Secretariat.



Crystal Yi Gordon, Director, Accounting & Financial Reporting
Ms. Gordon brings over 20 years of international finance leadership experience across public companies and global operations, overseeing financial reporting, disclosure, and strategic financial planning.



Bliss Baker, Strategic Advisor
Mr. Baker brings over 30 years of public affairs experience, advising senior government leaders, including two Prime Ministers and Cabinet Ministers, with senior executive roles across renewables, and energy.



Burl Joseph, Project Director, Nechalacho
Mr. Joseph brings over 15 years of experience delivering large-scale mining and infrastructure projects in northern environments, leading Nechalacho through engineering, permitting, and execution planning.



Glen Smith, Project Director, LSLi
Mr. Smith brings over 35 years of experience in metallurgical and process engineering, supporting the advancement of complex projects from feasibility through to operations.

Board of Directors



Alan Ferry, Chair

Mr. Ferry, with 28 years in mining finance, is Avalon's director since 2000, and chairs the Audit Committee.



Scott Monteith, CEO, Director

Scott Monteith, CEO of Avalon since May 2023, is an experienced entrepreneur and founder of Monteco Ltd.



Flavio Hees, Director

VP of Geology and Mining at Sibelco, oversees over 130 mines, focuses on optimizing assets and compliance. He holds a master's in Geotechnical Engineering.



Naomi Johnson, Director

Ms. Johnson, Titan Mining VP since 2018, joined Avalon's Board in 2019 and chairs the Compensation Committee.



Timothy Haig, Director

A successful entrepreneur in renewable fuels and cleantech, known for transforming lab ideas into public companies, leading motivated teams, and upholding integrity and ethics.



Alec Kodatsky, Director

Alec Kodatsky, with over 20 years in finance, is Co-President of Forthlane Partners and a former top mining sector analyst. He holds a B.Sc. in Mining Engineering and an MBA.



Harvey Yesno, Director

Harvey Yesno, former Chief of Eabametoong First Nation and Grand Chief of Nishnawbe Aski Nation, led NADF and worked with Ontario's Ring of Fire Secretariat.



PJ Juvekar, Director

PJ Juvekar, former top-ranked Wall Street analyst with 30+ years of experience in capital markets, industrials, and the energy transition. Currently Senior Advisor to Boston Consulting Group and Nouryon.

DE-RISKED.
FOCUSED.
POSITIONED
TO DELIVER.



STRONG, SECULAR GROWTH TAILWINDS: RARE EARTHS AND LITHIUM

Advancing assets in two of the fastest-growing critical minerals—lithium and rare earths—projected to see sustained demand growth over the next decade



TRANSFORMATIONAL FINANCING (OCTOBER 2025) CLOSED

Poised to advance rare-earth and lithium assets, strengthen balance sheet, and position Avalon at the heart of the global shift toward establishing more secure critical minerals supply chains



STRATEGIC PORTFOLIO SIMPLIFICATION (APRIL 2026)

Exited Separation Rapids JV, eliminated associated debenture, and retained 100% of Lilypad cesium—enhancing focus and monetization optionality



MULTIPLE POTENTIAL CATALYSTS TO REDUCE GAP BETWEEN CURRENT MARKET CAP AND INTRINSIC VALUE



NECHALACHO
RARE EARTH PROJECT



LAKE SUPERIOR LITHIUM
(LSLi)

Capital Structure

Description	Value (CAD)
Ticker Symbol	TSX: AVL
Stock Price	\$24.30 / \$6.30
52-Week High / Low	835M
Common Shares Outstanding	4.64M
RSU & DSU	23K
Stock Options (additional shares if converted)	155K
Warrants (additional shares if converted)	1.18M
Fully Diluted Shares	6.00M
Market Capitalization	\$37.1M

 As of July 15, 2026

OWNERSHIP STRUCTURE

