



Nano PLORE

Performance Through Carbon Chemistry

The Power to Transform

Enabling Energy Transition & Sustainability

TSX: GRA
OTCQX: NNXPF

Investor Presentation

February 2024

FORWARD-LOOKING STATEMENTS

This presentation contains express or implied forward-looking statements, which are based on current expectations of management. These statements relate to, among other things, our expectations regarding management's plans, objectives, and strategies. All statements other than statements of historical fact could be considered forward-looking, including, but not limited to, any projections of financial information; any statements about historical results that may suggest trends in our business and results of operations; any statements of the plans, strategies and objectives of management for future operations, including the timing, funding and construction of planned manufacturing facilities and sales offices; any statements of expectation or belief regarding future events, potential markets or applications, the sizes of addressable markets, expected technology developments, strategic partnerships and collaborations, or enforceability of our intellectual property rights; any statements about the projected or expected economic or other benefits of our products compared to petroleum-derived equivalents, future sales and any statements of assumptions underlying any of the foregoing.

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NANOXPLORE AT A GLANCE

Ticker TSX: GRA

Market Cap \$353 million
Feb. 16

Cash \$27 million

Total Debt \$7 million

Total Liquidity \$37 million

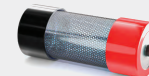
TTM* Revenue \$122 million

Headquarters Montreal

Advanced material
company founded in



ESG vision

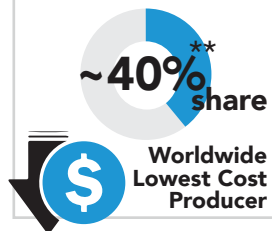


Graphene-enhanced
Li-ion batteries
manufacturer

"Blue chip customers"

- Paccar
- Volvo
- Ford
- Daimler
- Morgan Olson
- Caterpillar
- GE
- Solmax
- Itron
- Gerdau

Largest Graphene
Producer



11 production plants



~500 employees



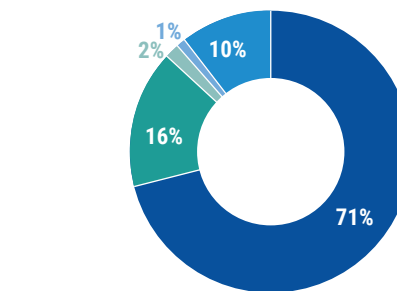
We pride ourselves on
the **quality &**
consistency of our
branded powder



Strong IP portfolio
& Know-how through
years of
R&D development



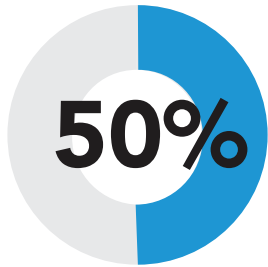
END MARKET SECTORS



- Transportation
- Building, Construction & Industrial
- Agriculture
- Wind Energy
- Other

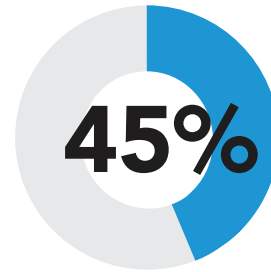
DIVERSITY, EQUITY & INCLUSION

Board of Directors

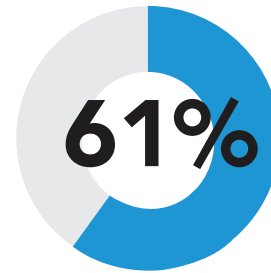


Multi-Cultural
& Women

Corporate Workforce

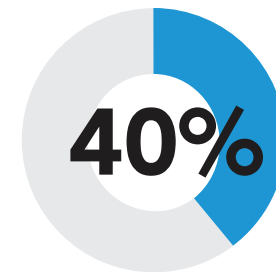


Women



Multi-Cultural
Background

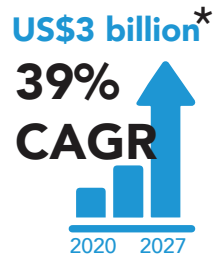
Management Team



Multi-Cultural
& Women



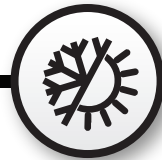
THE POWER OF GRAPHENE



Graphene
Nobel Prize

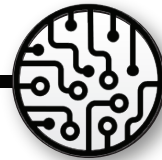
Since its recent discovery in 2004, graphene continues to amaze scientists and researchers of the superlative properties the material exhibits.

Hailed as a “**wonder material**”, graphene is lauded for its durability, sustainability and potential applications that will be part of in the future.



**HIGH THERMAL
CONDUCTIVITY**

Conducts heat & electricity better than copper

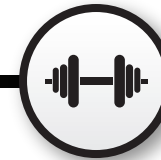


**HIGH ELECTRICAL
CONDUCTIVITY**



**THIN &
LIGHTWEIGHT**

Million times thinner
than a piece of paper
& lighter than feather



**200X STRONGER
THAN STEEL**

Due to the strong
carbon-carbon bonds

OUR SOLUTION

We leverage our **patented technology**



GRAPHENEBLACK™
A Product of NanoXPlore

to provide **sustainable** alternative

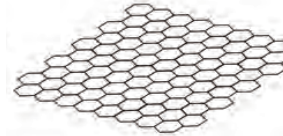


Graphite

Natural flake graphite
(>100,000 layers of carbon)

EXFOLIATION

via a mechanical-liquid
proprietary process



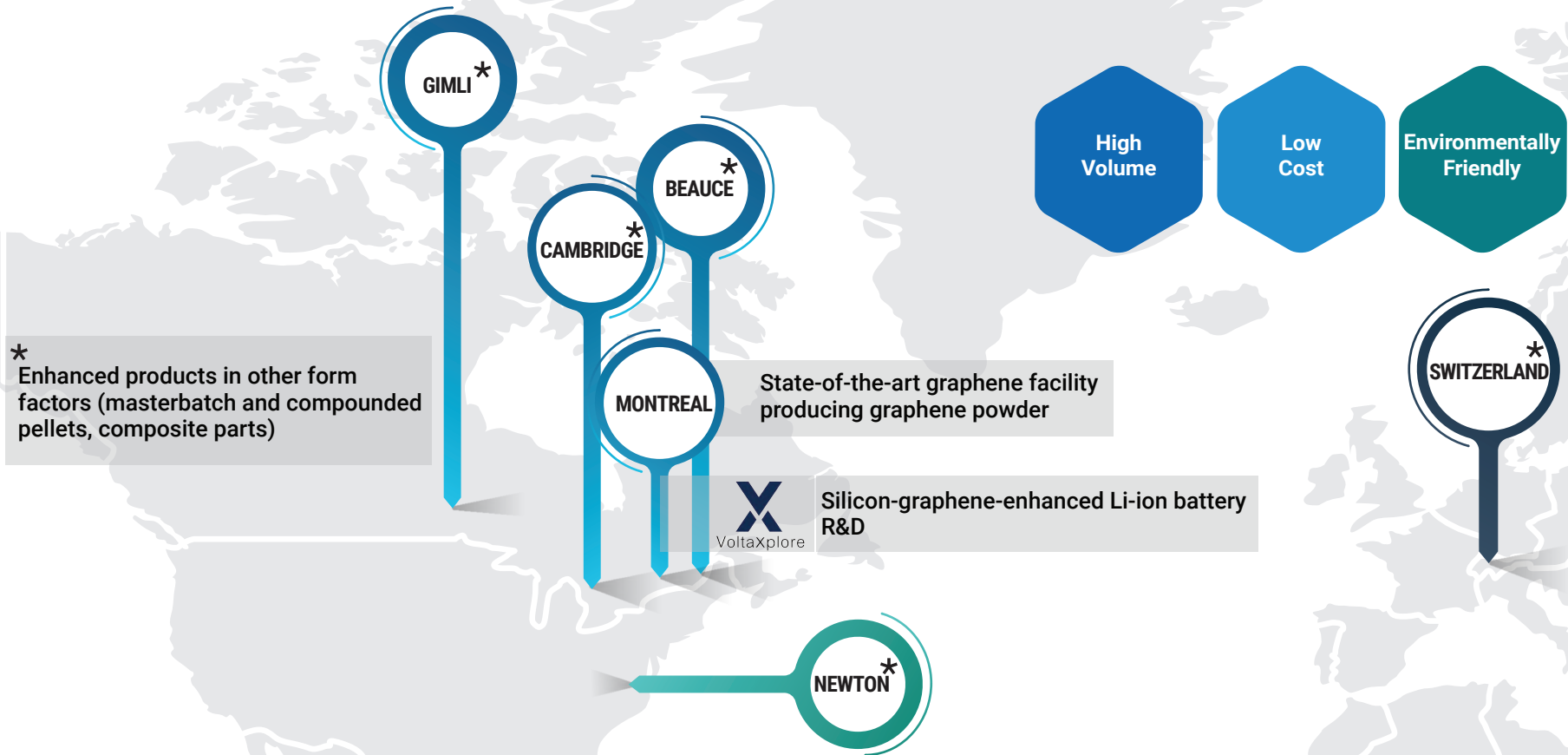
Graphene

6-10 atomic layers
in thickness with 96-98% purity

CLEAN TECHNOLOGY



MANUFACTURING FOOTPRINT & PROCESS



11 facilities in Canada, US and Switzerland

- Production of very consistent and high-quality graphene in volume in Montreal
- Capable of producing different grades of GrapheneBlack™
- Fully automated facility managed by Programmable Logic Controllers, ensuring product consistency and highest level of quality assurance
- Production of silicon-graphene additives and high-performance cylindrical lithium-ion batteries

POWERING 2 KEY GLOBAL MEGATRENDS

Our vision is to create a better tomorrow by providing innovative, sustainable products and solutions across multiple industries and applications



ENERGY TRANSITION

SUSTAINABILITY



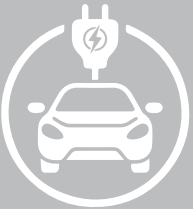
GRAPHENEBLACK™
A Product of nanoXplore



↓ ~80%

**Carbon footprint
vs. OTHER SOLUTIONS**

LONG-TERM DRIVERS



EV Adoption



Sustainability



Capacity Expansion



High Return on R&D spend



Market Share Growth



FQ2 2024 CORPORATE HIGHLIGHTS

Quarterly Key Developments

Graphene Enhanced SMC

New programs awards and expansion of existing programs exceeding \$30M in annual incremental revenues

Some of the capacity expansion will be assumed by our customer



Graphene Sales Activities

We started supplying graphene to 5 new customers, 3 in coating market, 1 in adhesive market, 1 in fabric market.

We currently are in validation stage. Ongoing positive validation for insulation foam with one of the largest chemical company in the world. As well as ongoing testing with Oil & Gas companies

VoltaXplore

Final stages of due diligence with lead investor and governments. Near the end of process. We expect plant construction in Q2/2024

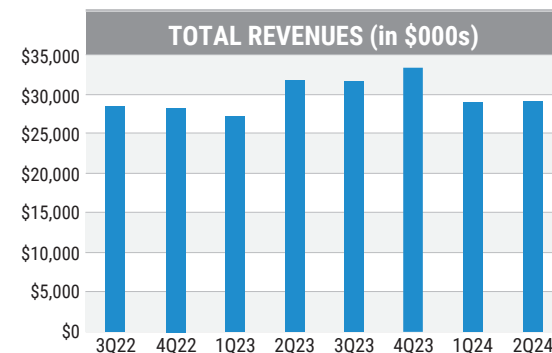
TOTAL REVENUES

\$29M

DRIVERS:

- Positive product mix including graphene-enhanced products
- Higher volume

Partially offset by lower tooling revenues



ADJUSTED EBITDA*

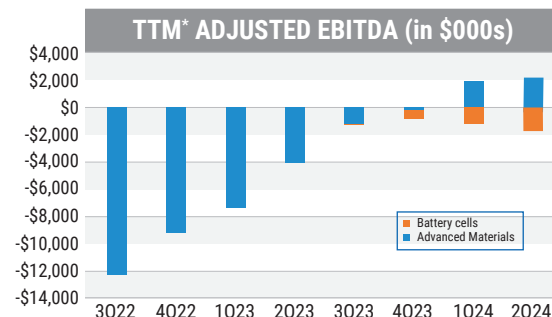
\$0.4M

Advanced materials, plastics & composites segment

DRIVERS:

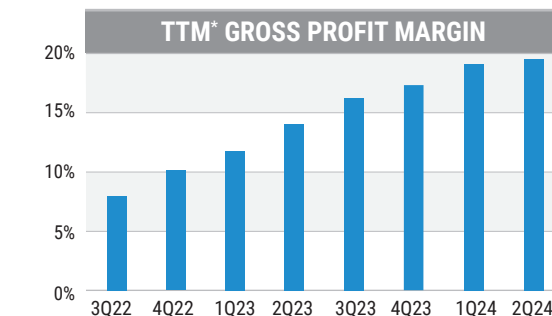
Gross margin expansion driven by:

- Higher revenues
- Higher margins product mix
- Improved productivity
- Cost control



2024 REVENUE GUIDANCE MAINTAINED

\$130M



HIGHLIGHTS OF RECENT DEVELOPMENTS

Foundation
2011



2017
CEBO Acquisition



Martinrea Strategic
Investment 2018-2020



2018
Sigma - RMC
Acquisition



Newton Plant
Acquisition
2020



JUNE Agreement with Techmer PM (U.S.) to supply GrapheneBlack™



JUNE Multi-year supply and distribution agreement with Gerda



JULY Graduation to the Toronto Stock Exchange



AUGUST EPA Approval



APRIL Established VoltaXplore 50/50 joint venture with Martinrea

2021 DECEMBER Canuck Acquisition



MAY Solmax and NanoXplore announce blanket purchase order



MAY NanoXplore & Molding Products announce long-term supply agreement

2022



AUGUST NanoXplore acquires assets of XG Sciences



2023



MARCH NanoXplore provides update for its battery material initiative and VoltaXplore's 2GWh battery gigafactory

MARCH NanoXplore unveils strong performance for its newly patented SiG™ anode additive solution

MARCH NanoXplore purchase of Martinrea's stake in VoltaXplore and extend graphene commercial agreement with Martinrea

THE POTENTIAL EVOLUTION AS A LEADING GRAPHENE PRODUCER



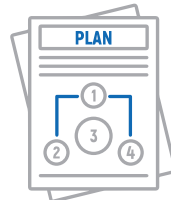
THE SET-UP PHASE 1

2017-2022

DE-RISKED & POSITIONED FOR SUCCESS



- ✓ Strengthened our balance sheet
- ✓ Positioned our company as a leading industrial scale graphene producer
- ✓ Successful at lowering our cost per unit to improve adoption



OUR PLAN PHASE 2

2023-2026

CAPEX EXECUTION



- \$120M graphene, battery and battery materials plant
- \$25M to \$30M GrapheneBlack SMC™ (Sheet Molding Compound) plant
- Total investments of \$140M to \$150M financed with debt, ITCs, and cash



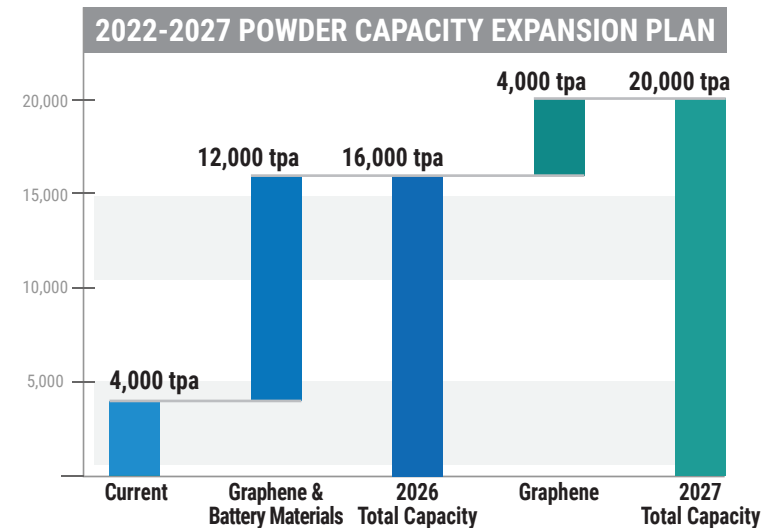
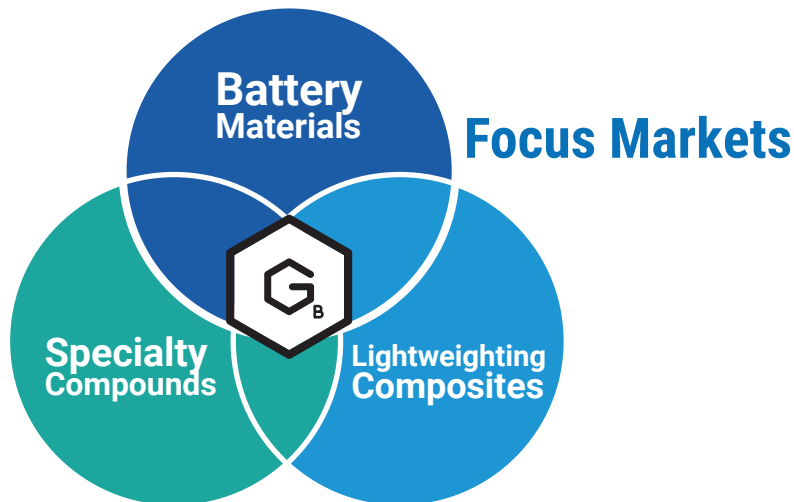
OUR VISION PHASE 3

2026+

GROWTH & POSITIVE YIELDING RESULTS



- Benefit from our investments
- Focusing on sustainability and energy transition
- Bring new applications to graphene
- Extending our battery materials initiatives



BATTERY MATERIALS - EXECUTIVE SUMMARY



- EV Adoption
- Energy Transition/
Sustainability
- Inflation Reduction Act
- IoT Adoption/Electronic
Devices

KEY DRIVERS



- Anode Active Material
- Anode Performance
Additive (Gn + Si)
- Cathode Conductive
Additive

TARGETED PRODUCTS



1,000^{*}GWh
by 2031

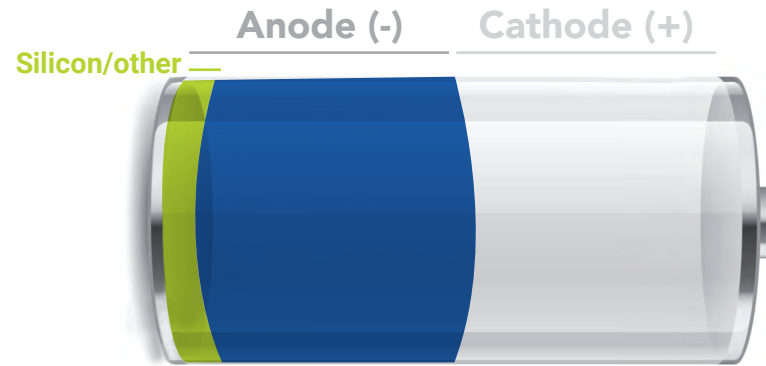
Capacity needed
of anode active material

1,000ktpa

MARKET SIZE

NORTH AMERICA
RAMPING UP CAPACITY

BATTERY MATERIALS - NANOXPLORE AND VOLTAXPLORE VALUE PROPOSITION



Anode:



Enhanced capacity
versus other anodes



Enhanced conductivity resulting
in faster charging time



More consistent anode performance
in hot and cold temperature versus
already existing anodes



Improved safety due to
enhanced heat dissipation
properties

SiG™ ANODE ADDITIVE SOLUTION

- Patent-approved Silicon/Graphene anode additive solution under the trademark SiG™
- Our versatile SiG™ solution covers a range of different chemistries and extend to all cylindrical cell form factors
- GrapheneBlack™ acts as a coating agent around Silicon alleviating swelling and dislodgment of particles making the cell safer and more reliable



Driving range

Increase vehicle range by

8-10%

or

40 kilometers

for a typical Electric Vehicle



Charging Time

Reduce charging speed to

10 - 13 min

due to high electrical conductivity
without compromising
battery life



Safety

10% cooler
than typical Li-ion batteries
reducing risk of thermal runaway

These incredible features can facilitate the acceleration of EV mass adoption and help improve vehicle performance and safety

STRONG PERFORMANCE
OF THE NEWLY PATENTED
SiG™ ANODE ADDITIVE SOLUTION
IN BATTERY CELLS

BATTERY AND BATTERY MATERIALS - CAPEX & RETURNS

ASSETS:

- **16,000 tpa** graphene, battery and battery materials facility

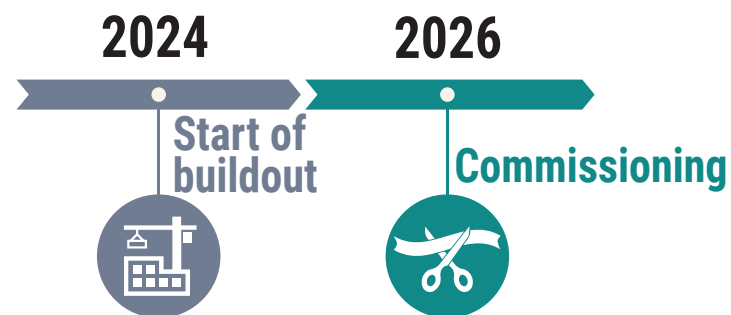
CAPEX: \$120 million

POTENTIAL ANNUAL REVENUE: \$140 million
(excluding VoltaXplore)

IRR: 25%+

REASONS TO INVEST/STRATEGY:

- Large and growing addressable market
- Strong fundamentals with undersupplied market
- Attractive returns
- Flexible manufacturing process



LIGHTWEIGHTING COMPOSITES - EXECUTIVE SUMMARY



- **EV Adoption**
- **Sustainability**
- **Transportation industry CO₂ Reduction Regulations**

SMC KEY DRIVERS



Transportation

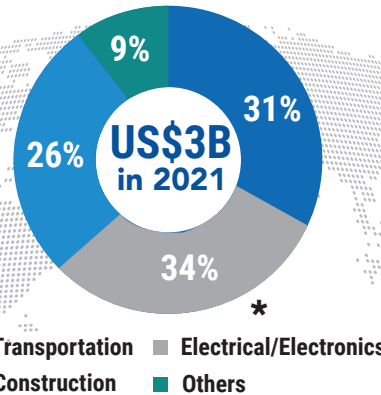
External parts of vehicles
Battery enclosures



Construction

Commercial and
Residential Applications

TARGETED VERTICALS



SHEET MOLDING COMPOUND GLOBAL MARKET SIZE

LIGHTWEIGHTING COMPOSITES - NANOXPLORE VALUE PROPOSITION

Stronger, Lighter, Higher Quality Parts Using



up to
25%
Lightweighting
Potential



Sustainability &
Reduced
Emissions



Lower
Painting Cost



LIGHTWEIGHTING COMPOSITES - CAPEX & RETURNS

ASSET: 10M lbs SMC facility

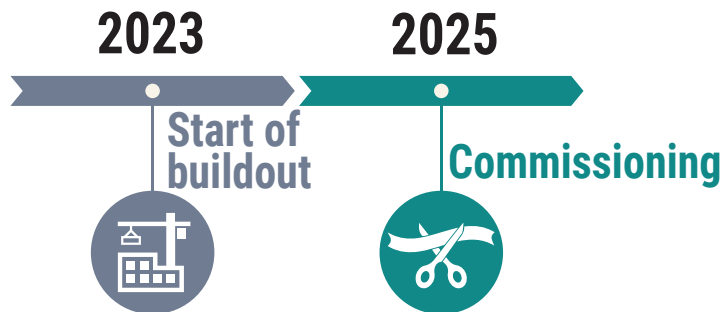
CAPEX: \$25 million to \$30 million

POTENTIAL ANNUAL REVENUE: \$80 million

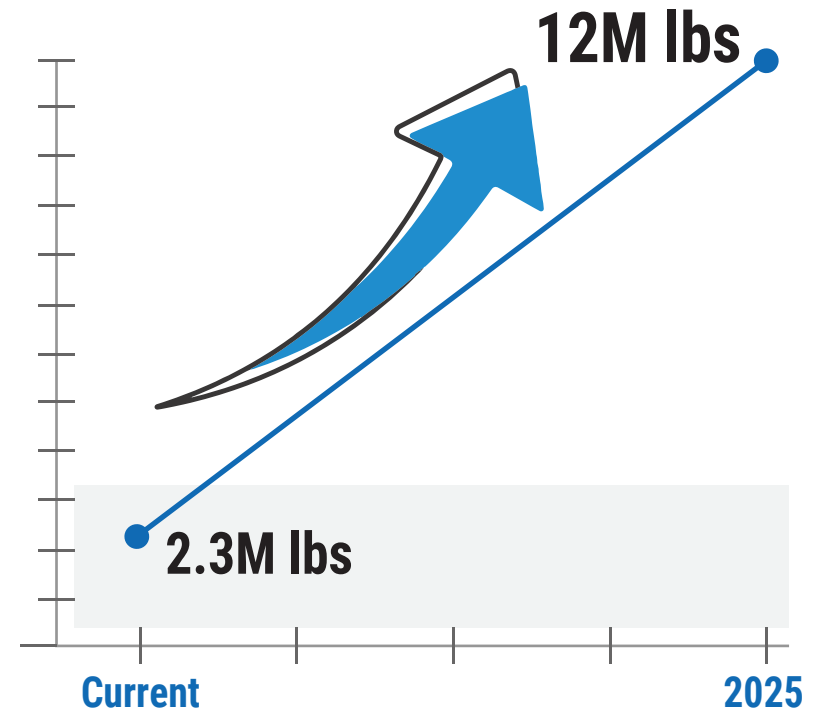
IRR: 25%+

REASONS TO INVEST/STRATEGY:

- Large and growing addressable market
- Attractive EV adoption market
- Undersupplied market
- Further capacity expansion potential (organic and/or inorganic)



SMC Nameplate Capacity



Page 18 : Capex : \$25M to \$30M

VOLTAXPLORE AT A GLANCE

NanoXplore
TSX: GRA

100%

X
VoltaXplore

VoltaXplore, a wholly-owned subsidiary of NanoXplore, is a **Canadian manufacturer of proprietary designed and graphene-enhanced cylindrical lithium-ion batteries** supporting the energy transition across several industries

2024



Start of
buildout

2026



Commissioning



VoltaXplore benefits from NanoXplore's proprietary graphene anode technology



VoltaXplore commissioned a 1 MWh demonstration battery facility in March 2022



Technology has been validated



Customer discussions are progressing well










Proposed 2 GWh 21700 battery plant

NanoXplore

TSX: GRA - OTCQX: NNXPF

ADVANTAGES OF GRAPHENE-ENHANCED BATTERY CELLS

18650 Battery Cell KPIs*		Regular Anode with NMC Cathode	Graphene Enhanced Anode with NMC Cathode
 Energy Density Increase	>	X	Up to 10% Improved range performance for the EV market
 Cycle Life at Normal Charge Rate (@80% capacity retention)	>	Up to 1500	Up to 2000 Energy stability and extended life for battery packs even at lower temperatures
 Cycle Life at High Charge Rates (@80% capacity retention)	>	Up to 300	Up to 450 Improved charging time without compromising battery performance
 Internal Resistance (mΩ)	>	<30	<28 Fast charging improvement with reduced safety concerns
 Maximum Weight of Battery Cell	>	48g	45g Lower vehicle weight and improved energy efficiency
 Temperature at High Charge Rate	>	Under 30°C	Under 26°C Reduced load on BMS and improved cooling properties on pack level
 Anode Electrode Expansion Rate (@100% state of charge)	>	Up to 60%	Up to 40% Reduced risk of thermal runaway with graphene / silicon technology

BENCHMARKING LITHIUM-ION BATTERIES



KPIs*	COMPETITOR 1	COMPETITOR 2	VoltaXplore
Capacity (mAh)	2500-2600	2500-2600	2500-2600
Energy Density (Wh/Kg)	204	196	214
Cycle Life (@80%)	300 (@ 4A Charge Rate)	250 (@ 4A Charge Rate)	450 (@ 4A Charge Rate)
Internal Resistance (mΩ)	<30	<20	27.5
Mass (g)	45.8	47.8	43.7
Temperature (°C)	Under 30° (@ 4A Charge Rate)	Under 30° (@ 4A Charge Rate)	Under 26° (@ 4A Charge Rate)

VoltaXplore's Graphene-Enhanced Batteries Offer Clear Performance Advantages in Terms of Energy Density, Temperature and Cycle Life Under a Lower Weight

LEADERSHIP TEAM



Dr. Soroush Nazarpour, Ph.D.
 Founder &
 Chief Executive Officer

Ph.D in Nanotechnology from the University of Barcelona;

Serial entrepreneur and the founder of NanoXplore President & CEO since 2011 and serves as a director on the board of directors;

Acknowledged expert in the field of graphene and co-author of "Graphene Technology From Laboratory to Fabrication" published by Wiley & Co in 2016;

CEO of VoltaXplore, an electric vehicle battery manufacturing company.



Rocco Marinaccio
 Chief Operating Officer

More than 20 years of experience within operations;

Vice President of Flexible Manufacturing Group at Martinrea;

Occupied multiple senior positions at Martinrea International Inc. including Material Production and Logistics Manager, General Manager and Director of Modules;

Formerly responsible for over-seeing the construction of key Martinrea facilities located in Ramos Arizpe, Mexico and Riverside, Missouri as well as the relocation of two facilities in Canada.



Pedro Azevedo
 Chief Financial Officer

Extensive experience in manufacturing and operations, as well as M&A;

Former CFO of Tarkett Sports, a division of publicly traded global manufacturing company Tarkett S.A.;

Occupied a variety of positions starting from a cost accountant to different corporate controller functions.



Nima Moghimi
 Global Director of R&D

Ph.D. in Mechanical Engineering from the University of Victoria;

Master's in Nanotechnology from the University of Barcelona;

Materials and battery scientist; +8 yrs of product development leadership experience in graphene and battery materials;

Extensive materials regulation experience: TSCA, REACH, CEPA, FDA;

Government grants: Managed several program IRAP, SDTC, TechnoClimat;

Inventor of 6 Patents in graphene and batteries;

Author of >30 peer reviewed scientific articles.



Vincent Livoti
 Global VP Sales & Marketing

Over 20 years of experience in sales and marketing for specialty chemicals & advanced materials;

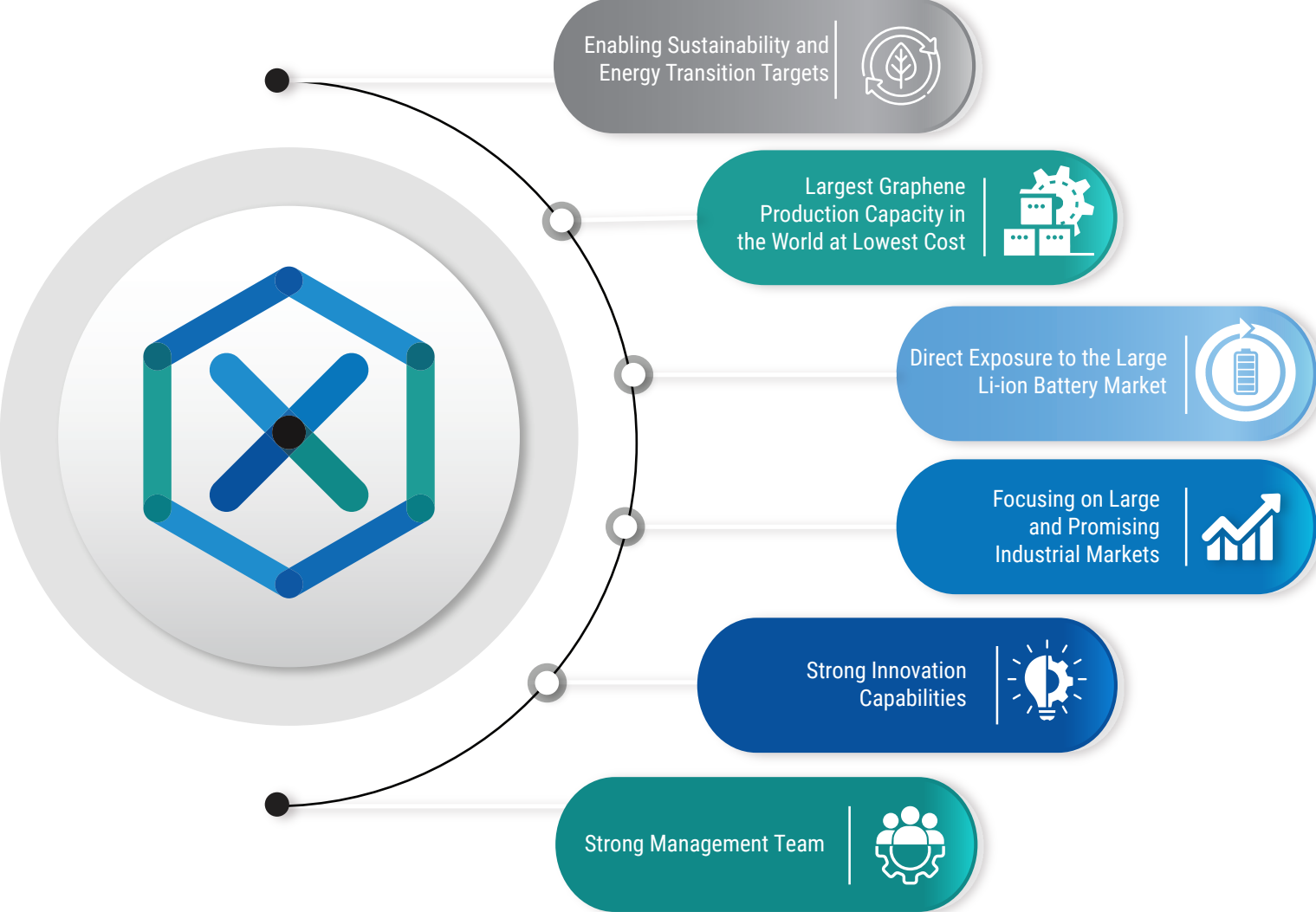
Former Vice President of Sales and Business Development at Daikin America (Chemical Division);

Former Head of Specialty Ingredients / Microbial Control at Lonza Inc.;

Former Director of Business Development at BASF;

Occupied multiple senior positions at Ciba Specialty Chemicals including Director of Business Development, Global Marketing Manager, and Sr. Global Account Manager.

KEY TAKEAWAYS





Performance Through Carbon Chemistry

4500 Thimens Blvd, Montreal, QC H4R 2P2

www.nanoxplore.ca

TSX: GRA | OTCQX: NNXPF

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