

NanoXplore

Performance Through Carbon Chemistry

ANNUAL GENERAL MEETING

Presentation
December 2023

FORWARD-LOOKING STATEMENT

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.

Forward-looking statements are subject to a number of risks, assumptions and uncertainties, many of which involve factors or circumstances that are beyond our control.

Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee that the events and circumstances reflected in the forward-looking statements will be achieved or occur and the timing of events and circumstances and actual results could differ materially from those projected in the forward-looking statements. Accordingly, you should not place undue reliance on these forward-looking statements. All such statements speak only as of the date made, and we undertake no obligation to update or revise publicly any forward-looking statements, whether as a result of new information, future events or otherwise.

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NANOXPLORE AT A GLANCE

Ticker	TSX: GRA
Market Cap	\$388 million Nov. 07
Cash	\$29 million
Total Debt	\$7 million
Total Liquidity	\$40 million
TTM* Revenue	\$126 million
NanoXplore	Montreal

**Advanced material
Company founded in**



2011

ESG vision



**A subsidiary of
NanoXplore**

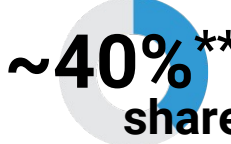


**Graphene-enhanced
Li-ion batteries
manufacturer**

"Blue chip customers"

- Paccar
- Caterpillar
- Volvo
- Ge
- Ford
- Solmax
- Daimler
- Itron
- Morgan Olsen
- Gerdeau


**Largest Graphene
Producer**




~40%
share**

**Worldwide
Nameplate Capacity**

10 Production plants



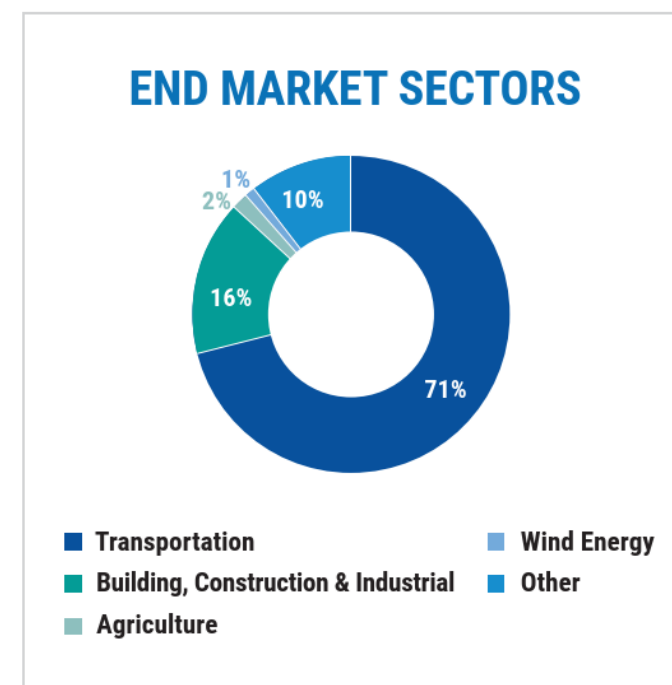
~500 employees



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



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

MANUFACTURING FOOTPRINT & PROCESS

High
Volume

Cost
Effective

Environmentally
Friendly

GIMLI*

BEAUCE¹*

CAMBRIDGE*

MONTREAL¹

* Enhanced products in other form factors (masterbatch, compounded pellets and composite parts)

State-of-the-art graphene facility producing graphene powder



Silicon-graphene-enhanced Li-ion battery R&D

SWITZERLAND*



Vallorbe, Swiss



NEWTON*



Newton, NC



St-Ephrem, QC



Winnipeg, MB



Montreal, QC



Mississauga, ON

11 Facilities in Canada, US and Switzerland


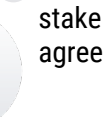
- Production of consistent, high-quality graphene in Montreal
- Manufacturing of GrapheneBlack™ powder and masterbatch
- Fully automated facility ensuring product quality and low cost
- Production of silicon-graphene additives and high-performance cylindrical lithium-ion batteries

¹ISO 9001 certified, state-of-the-art graphene facility



HIGHLIGHTS OF RECENT DEVELOPMENTS

August 2022
 **XG Sciences**
NanoXplore acquires assets of XG Sciences


March 2023
 SiG strong performance result
 NanoXplore purchased Martinrea's stake in VoltaXplore & extend graphene agreement with Martinrea

November 2022
 NanoXplore unveil its 5-Year Plan

August 2023
 Agreement with OEM for 1GWh

September 2023
 3 programs from 2 existing clients - \$24M in annual sales

November 2023
 Unveils a large-scale dry process for manufacturing graphene

December 2023
 NanoXplore received TSX approval for normal course issuer bid

FQ1 2024 CORPORATE HIGHLIGHTS

Quarterly Key Developments



Transportation

The Corporation has been awarded 3 programs from 2 existing clients



Drilling Fluid

Large global drilling fluid company saw enhanced lubricity which helps lower the coefficient of friction leading to an increase in drilling speed and lower down time



Foams

Actively working on several foam chemistries mainly to improve insulating property and to achieve better flame retardancy performance



VoltaXplore

VoltaXplore has agreed on commercial terms for the supply of silicon-graphene-enhanced Li-ion batteries (1GWh)

TOTAL REVENUES

\$29M up 6%

DRIVERS:

- Positive product mix including graphene-enhanced products
- Higher volume
- Positive FX impact
- Price increases

Partially offset by lower tooling revenues

ADJUSTED EBITDA*

\$0.2M up \$1.8M

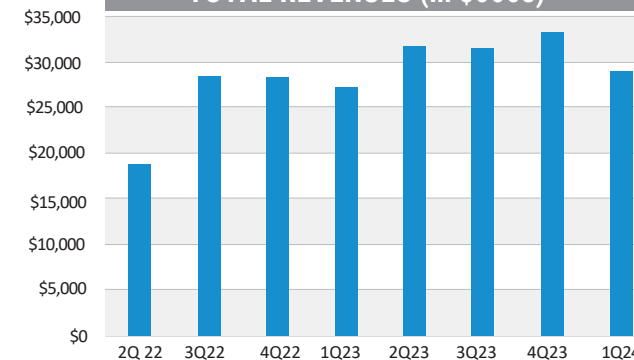
DRIVERS:

- Gross margin expansion driven by:
 - Higher revenues
 - Higher margins product mix
 - Improved productivity
- Cost control
- Advanced materials, plastics & composites segment

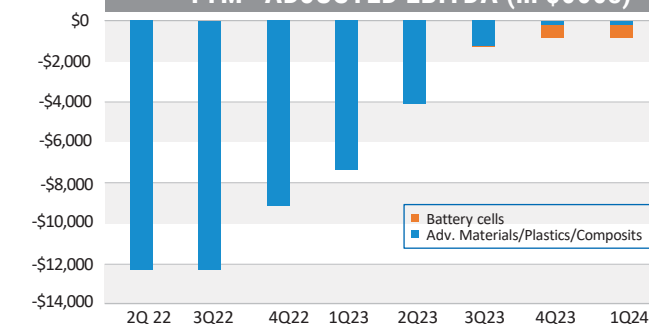
2024 REVENUE GUIDANCE

\$130M up \$6M

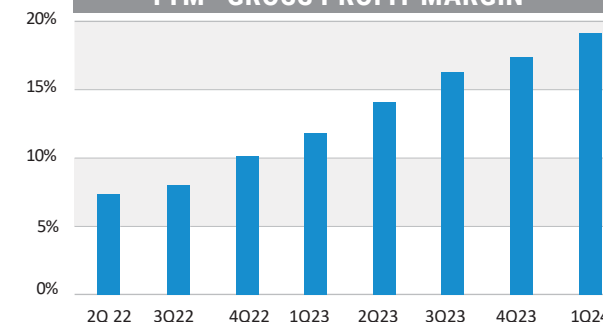
TOTAL REVENUES (in \$000s)



TTM* ADJUSTED EBITDA (in \$000s)



TTM* GROSS PROFIT MARGIN



THE POTENTIAL EVOLUTION AS A LEADING GRAPHENE PRODUCER



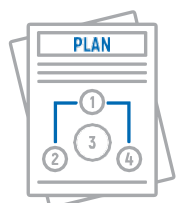
THE SET-UP PHASE 1

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
- \$50M GrapheneBlack SMCTM (Sheet Molding Compound) plant
- Total investments of \$170M financed with cash on hand, grants, debt and equity (only if needed)
- The company will focus to minimize or eliminate equity financing



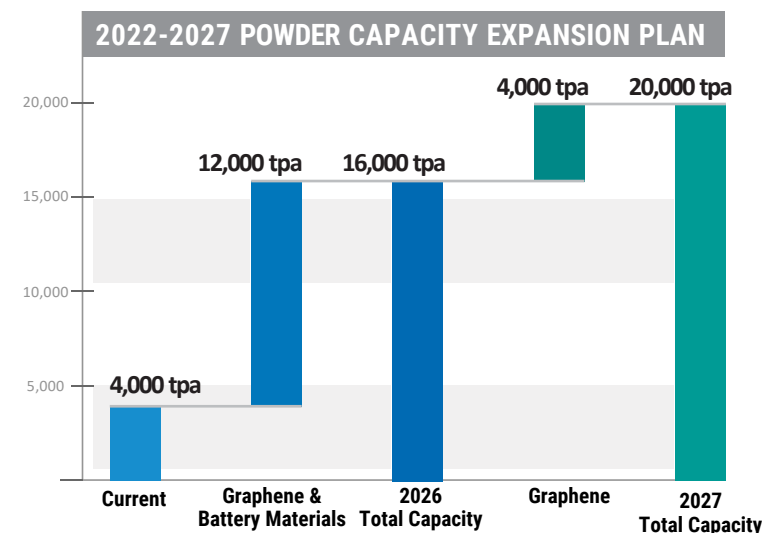
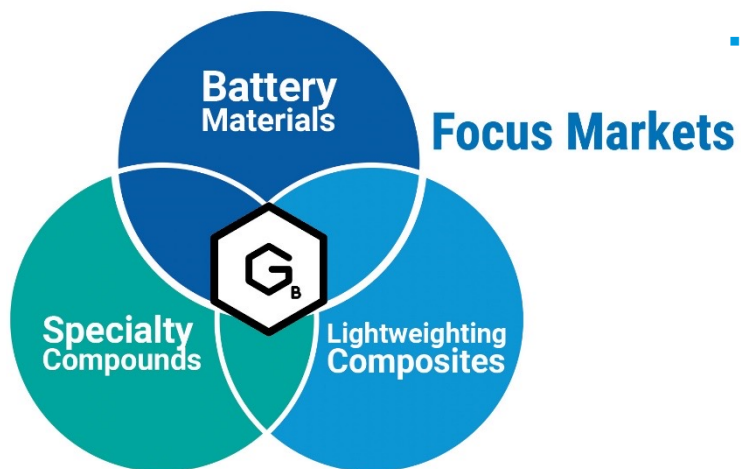
OUR VISION PHASE 3

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



5 YEAR STRATEGY AT A GLANCE

We believe our products add value to these markets:



Battery Materials

- Anode Active Material
- Dry processed graphene
- Conductive additive for batteries
- Graphene based anode material

Building 16kt/y of graphene and anode production facility

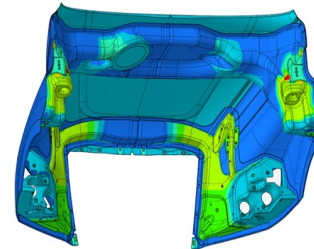


Light weighting composites

Graphene enhanced SMC products



GRAPHENEBLACK SMC™
A NanoXplore Product



Expanding SMC manufacturing capacity to 10Mlb/y

Specialty compounds

- Cement additive
- Drilling fluid additive
- PU foam additive
- PE/PP additive

NANOXPLORE'S ANODE MATERIAL

SG-X Energy Storage Anode Material

Coated Spherical Purified Graphite Li-ion Battery Anode

NanoXplore's CSPG (Coated Spherical Purified Graphite) is a perfect solution for your energy storage needs. Our high-quality, precision-engineered, coated spherical graphite particles, sourced in North America, offer exceptional performance and durability, making them ideal for use in lithium-ion batteries.

Our CSPG is made using advanced manufacturing, low-carbon emission processes, resulting in a consistent, uniform shape that maximizes battery efficiency and lifespan. Its unique properties make it a key component in the production of high-performance batteries for electric vehicles, consumer electronics, and renewable energy storage systems.

Manufactured in Quebec, Canada, SG-X delivers unparalleled performance, reliability, and value. If you are looking for an environmentally responsible source to store energy in your anodes, our CSPG is the smart choice.

General characteristics:

- High electrical and thermal conductivity
- High stability
- Excellent capacity
- Manufactured using clean hydroelectricity

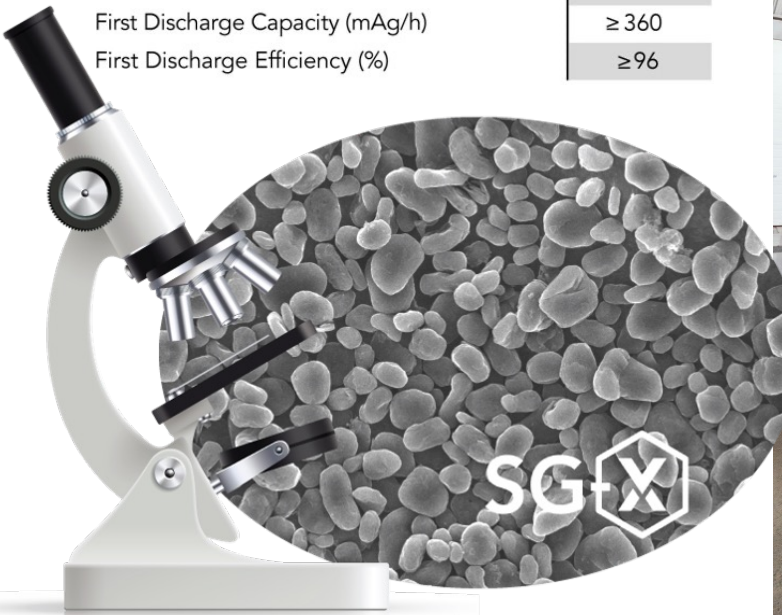
8,000T/Y capacity in 2026 for
8-20GWh battery production



Renewable Energy Used
throughout the process

SG-X Product Characteristics

Particle Size (µm)	D ₁₀	9
	D ₅₀	18
	D ₉₀	29
SSA (m ² /g)		2
TAP Density (g/cm ³)		≥ 1.1
Moisture (%)		≤ 0.20
Ash (%)		≤ 0.05
First Discharge Capacity (mAh/g)		≥ 360
First Discharge Efficiency (%)		≥ 96



Anode Production Pilot Line

NANOXPLORE'S DRY PROCESSES GRAPHENE

Unveiling a Large-Scale Dry Process for Manufacturing of Graphene: Cost Competitiveness and Scalability

Technological Advancement:

Utilizes advanced exfoliation technology with innovative media.

Intellectual Property:

Fusion of NanoXplore's IP portfolio and strategic patents acquisition from XG Sciences.

Cost and Scalability:

50% reduction in capital expenditures compared to traditional liquid exfoliation methods; lower feedstock cost.

Capacity and Square Footage

- Net 8,000 metric tons capacity in 2026 with \$20M in capital expenditures.

Supply Chain

- Robust supply chain, streamlined equipment procurement.

Scalability and Efficiency

- Highly scalable, operates on a continuous basis for streamlined production efficiency.

Applications

- Light weight composites, pipes, geosynthetics, recycled plastics, concrete, foams, etc.

Key Improvements

- 20% improvement in physical properties of polymers
- Substantially reduces the environmental footprint
- Eliminates washing and drying steps, addressing environmental concerns

SMC MARKET DATA

Transportation

\$912.3 Mil Market Size in 2021

5.5% CAGR from 2022 to 2027

\$1,379.0 Mil Market Size in 2027

Drivers: Growing automotive production and increasing focus on lightweight materials



Electrical and Electronics

\$1000.3 Mil Market Size in 2021

4.6% CAGR from 2022 to 2027

\$1,355.8 Mil Market Size in 2027

Drivers: Growing demand for high quality electronic products and smart devices.



Construction

\$778.5 Mil Market Size in 2021

4.8% CAGR from 2022 to 2027

\$1065.9 Mil Market Size in 2027

Drivers: Growing development of infrastructure and increasing demand for lightweight, non-corrosive materials



Others

\$269.0 Mil Market Size in 2021

5.4% CAGR from 2022 to 2027

\$375.0 Mil Market Size in 2027

Drivers: Growing demand from marine, consumer goods, and other end use industries



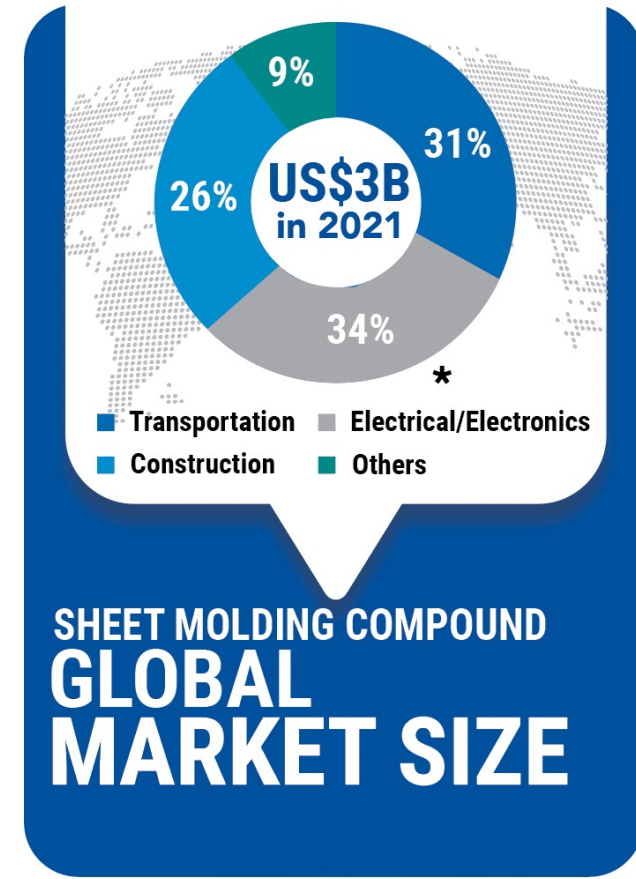
SMC MARKET DATA (LUCINTEL)

2021 global market size is \$3 Billion USD, and is expected to reach an estimated \$4.2 billion by 2027 with a CAGR of 5% from 2022 to 2027

The demand for SMC materials has been growing rapidly.

Much of the growth in this market can be attributed to the following factors:

- Transportation designers continue to stress improved **fuel efficiency and weight reduction** while focusing on safety, aesthetics, and durability
- **SMC material is lightweight** compared to other traditional materials and has **very good corrosion resistance**
- The **increased use of fire-resistant** materials in transportation and electrical/electronics industries
- **Growing infrastructural development** and **increasing demand for lightweight and non-corrosive materials**



GRAPHENEBLACK SMC BENEFITS

Stronger, Lighter, Higher Quality Parts Using



GRAPHENEBLACK SMC™
A NanoXplore Product





- ✓ Superior surface quality; reduced surface waviness
- ✓ Significant light weighting compared to traditional SMC
- ✓ Significant increase in mechanical strength and safety factors
- ✓ Improved moisture and humidity absorption
- ✓ Improved cracking resistance
- ✓ Enhanced UV resistance
- ✓ Sound dampening & NVH improvements
- ✓ No strong odor


Less
SMC
material

Avg.
15%
Light-weighting
potential

Sustainability &
Reduced
Emissions

Enhanced
Class A

Surface Finish

Increase
EV vehicle range
& Fuel economy


Better
In-mold Flow


SPECIALITY COMPOUND - VECTORS



CONCRETE

PRODUCT OFFERING

Graphene powder to
admixture manufacturers



DRILLING FLUID

PRODUCT OFFERING

Graphene powder to Oil and
Gas companies to formulate
drilling fluid additives



POLYURETHANE FOAM

PRODUCT OFFERING

Graphene powder and
masterbatch to compounders
and foam manufacturers



PE/PP INCLUDING RECYCLED

PRODUCT OFFERING

Graphene powder to
compounders and internally

SUCCESSFUL COMMERCIALIZATION STEPS



High-Quality Graphene Production

- Scalable, green-technology
- Large volume at low cost
- Batch to batch consistency
- Security and quality of supply
- IP protection
- Smart inventory management
- Local production

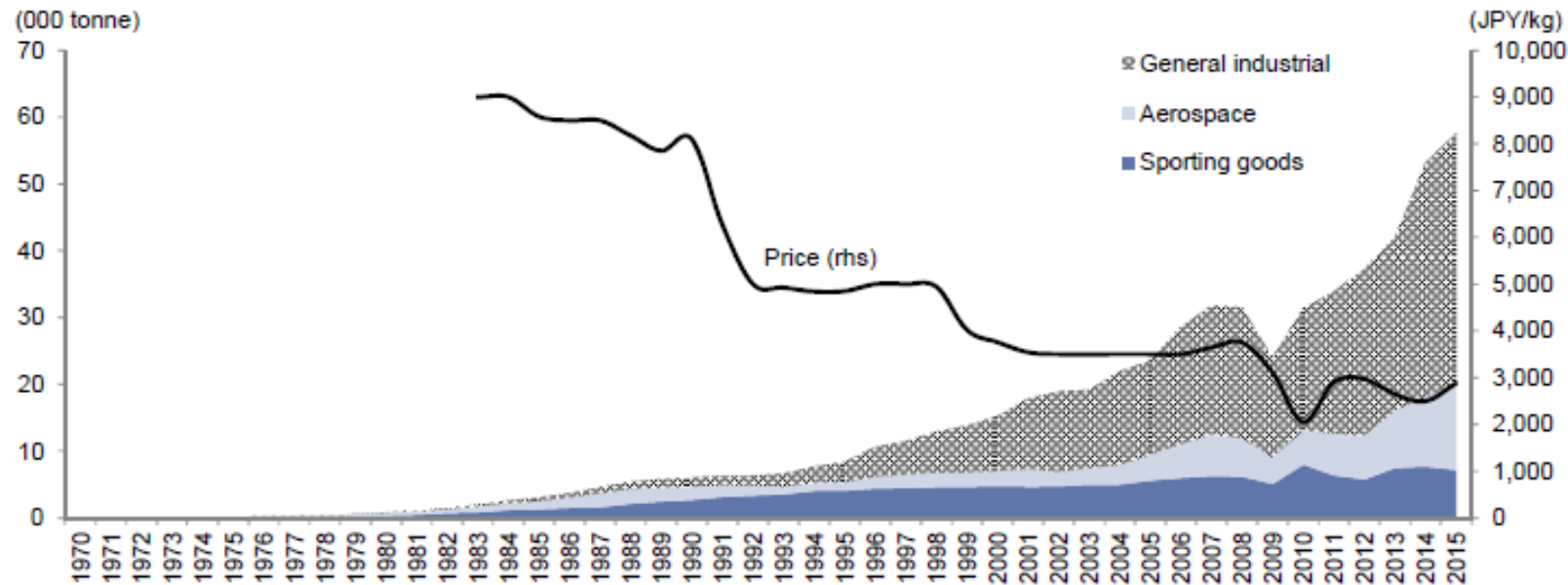
High Quality Mixing

- Partnering with customers and mixing companies for product development
- Effective transfer of graphene properties to product matrix at low cost
- IP protection
- Customer education and expectation management
- Smart supply chain management

Enhanced Products

- Strong performance/cost ratio
- Certifications and standards
- Product trials and proof of concepts
- IP transfer and supply contract/purchase orders
- Low cost shipping solutions
- Smart relationship management

CARBON FIBER



1971-1983 Introductory period	1984-1993 Growing period	1994-2003 Expansionary period	2004 onwards Demand acceleration period
<ul style="list-style-type: none"> Fishing rod Artificial satellite Secondary structural material for Boeing 757/767 	<ul style="list-style-type: none"> Tennis racket Golf shaft Primary structural material for Airbus 320 	<ul style="list-style-type: none"> General industrial-use applications (energy, transportation, etc) Primary structural material for Boeing 777 	<ul style="list-style-type: none"> Primary structural material for Airbus 380 & Boeing 787 Windmill blade Automotive-related use

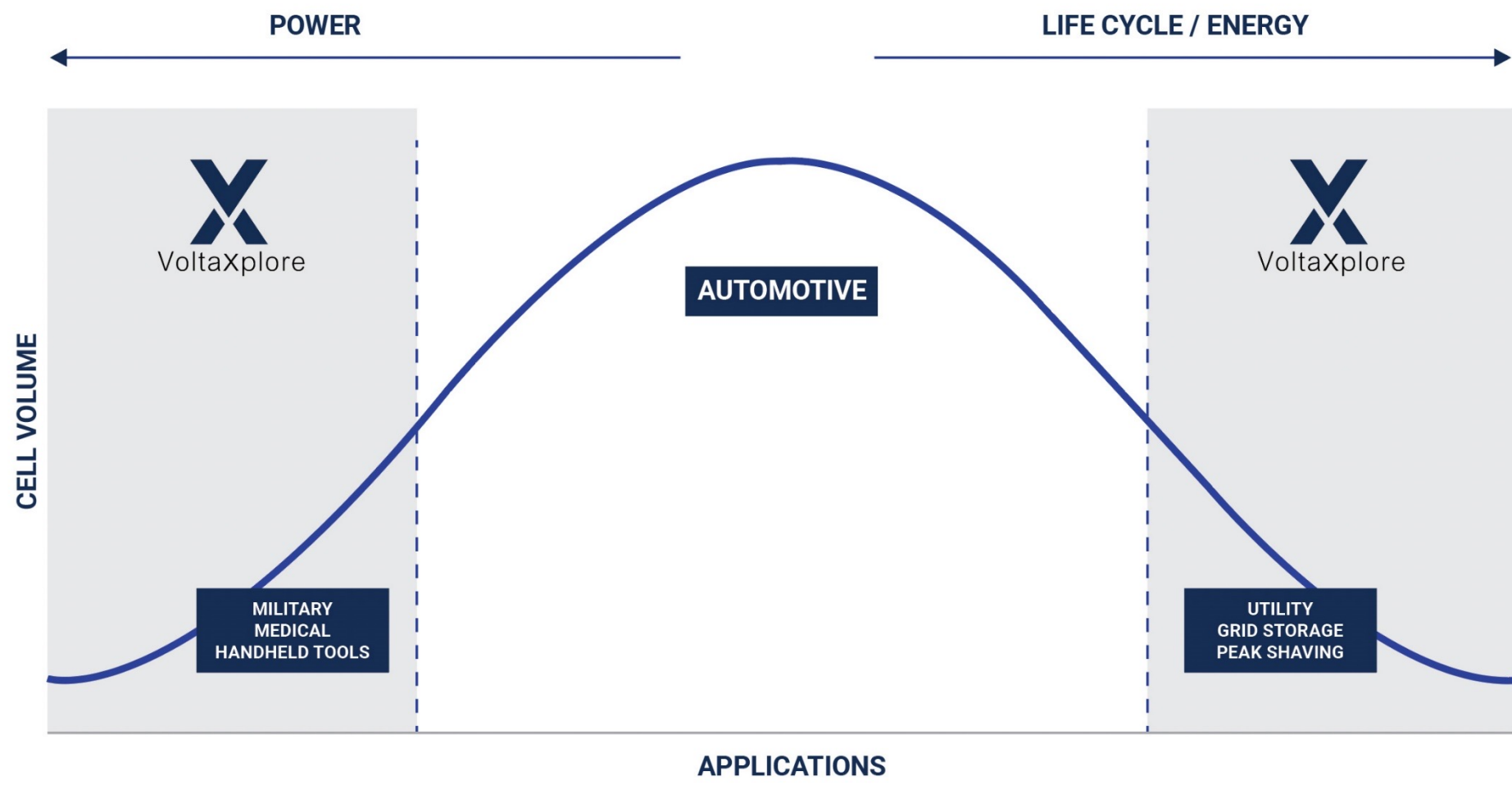
Source: Toray Industries, Nikkei Shimbun, Goldman Sachs Global Investment Research



VoltaXplore Inc., a wholly-owned subsidiary of NanoXplore Inc., is a **Canadian manufacturer of proprietary designed and graphene-enhanced cylindrical lithium-ion batteries**

VoltaXplore will play a strategic role in the Quebec and Canadian battery value chain and will become a **critical supplier of batteries for the electrification of transportation and grid storage**

VOLTAXPLORE'S BUSINESS MODEL



WHERE WE ARE TODAY

- Operational since March 2022
- Production of 18650 and 21700 cylindrical batteries Capacity: 1 MWh
- To become a battery technical center equipped with range of R&D equipment, and precision testing device upon commissioning of the 2 GWh facility
- Signed a supply agreement with a major commercial vehicle OEM for 10 years starting from 2026 for 1GWh/Y

Next Step: Construction of Gigafactory

- We are continuing our engineering and procurement process
- Permitting is ongoing



Validated technology through the successful commissioning of the Demonstration Facility

GO TO MARKET APPROACH

A Sales Approach Tailored by End Customers



Pricing strategy following a cost-plus model

- | | | |
|---|--|--|
| 1 | Original Equipment Manufacturers (50% of Capacity) | Signed deal with a commercial vehicle and bus OEM for 10 years starting from 2026 for 1GWh/Y |
| 2 | Battery Pack and Module Manufacturers (25% of Capacity) | Includes manufacturers offering battery pack and modules to clients mainly for high power applications |
| 3 | Grid Storage (25% of Capacity) | Long cycle life batteries and modules |

VoltaXplore is already in advanced discussions with key players in the industry

CORE FOCUS

PRICE

SPECIFICATIONS

PROXIMITY

SAFETY

PERFORMANCE

LANDED COST

SECURITY OF SUPPLY

Why silicon
graphene (instead
of silicon alone)?

10X CAPACITY



LOW
CONDUCTIVITY

POOR
STABILITY

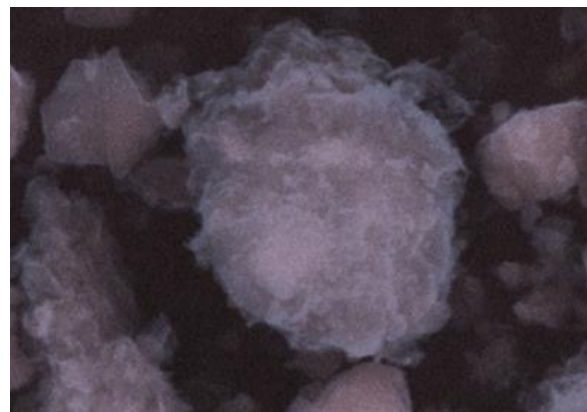
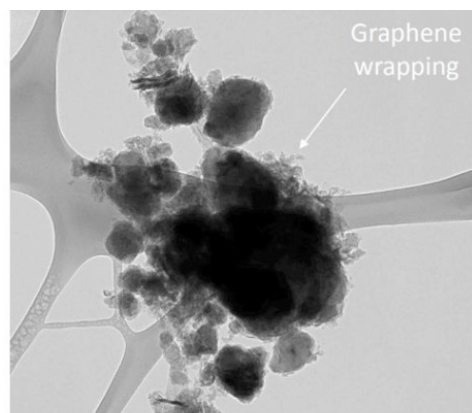
NanoXplore
Performance Through Carbon Chemistry

SiG™ Energy Storage Materials

Silicon-graphene for Li-ion battery anode

NanoXplore's graphene-stabilized silicon anode delivers high specific capacity for enhanced run-time in drone aircraft, portable electronics and other high density energy storage applications.

Our proprietary manufacturing process creates a silicon-graphene composite featuring highly conductive, flexible graphene sheets, establishing a network that reduces silicon-electrolyte reactions, provides robust mechanical support and improves high rate capacity.



Technical Data Sheet

SiG™ - Silicon Graphene

DS-SiG-230111



Driving range



Charging Time



Safety

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

Chemistry & Form Factor Agnostic

Cost Competitive

Proprietary Technology

SiG™ DEVELOPMENT EVOLUTION



YEAR	GENERATION	CAPACITY RETENTION	EXPANSION
2011-2013	GEN 1	80% @ 200 cycles	53%
2014-2015	GEN 2	80% @ 300 cycles (70% @ 500 cycles)	40%
2015-2019	GEN 3	80% @ 600 cycles (65% @1000 cycles)	35%
2019-2023	GEN 4	80% @ 800 cycles	30-34%
2023- Ongoing	GEN 5	80% @ 1000 cycles (with + 90% FCE)	30%

VOLTAXPLORE POWER CELLS

Strong Performance of the Newly Patented SiGTM Anode Additive Solution in Battery Cells

- Patent-approved Silicon/Graphene anode additive solution under the trademark SiGTM
- Our versatile SiGTM solution covers a range of different chemistries and extend to all cylindrical cell form factors
- GrapheneBlackTM 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



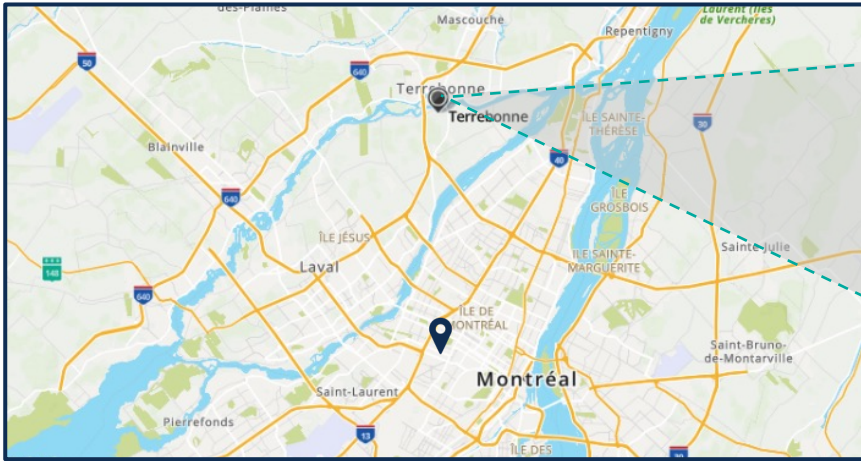
Safety

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

LOCATION OF NEW FACILITY

VoltaXplore is planning to construct a 2 GWh lithium-ion battery cell facility in Terrebonne, Quebec



The project involves the construction and commissioning of a Gigafactory in Terrebonne, Quebec

- Proximity of location to Montreal will allow VoltaXplore to benefit from the city's knowledge economy and large talent pool of skilled laborers and engineers
- Highly strategic project for the province of Quebec given the abundance of mineral deposits in the province including the majority of the raw materials needed for the production of batteries along with the presence of a number of potential customers of lithium-ion battery cells in the region
- Upon commissioning of the 2 GWh facility, the current 1 MWh demonstration facility in Montreal will become a battery technical center equipped with a range of R&D equipment and precision testing devices
- This project will provide VoltaXplore with the expertise and know-how to subsequently expand its production capacity



Performance Through Carbon Chemistry

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TSX: GRA | OTCQX: NNXP