NanoXplore

Performance Through Carbon Chemistry

# 5-Year Strategic Plan

Updated January 2025

# 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.

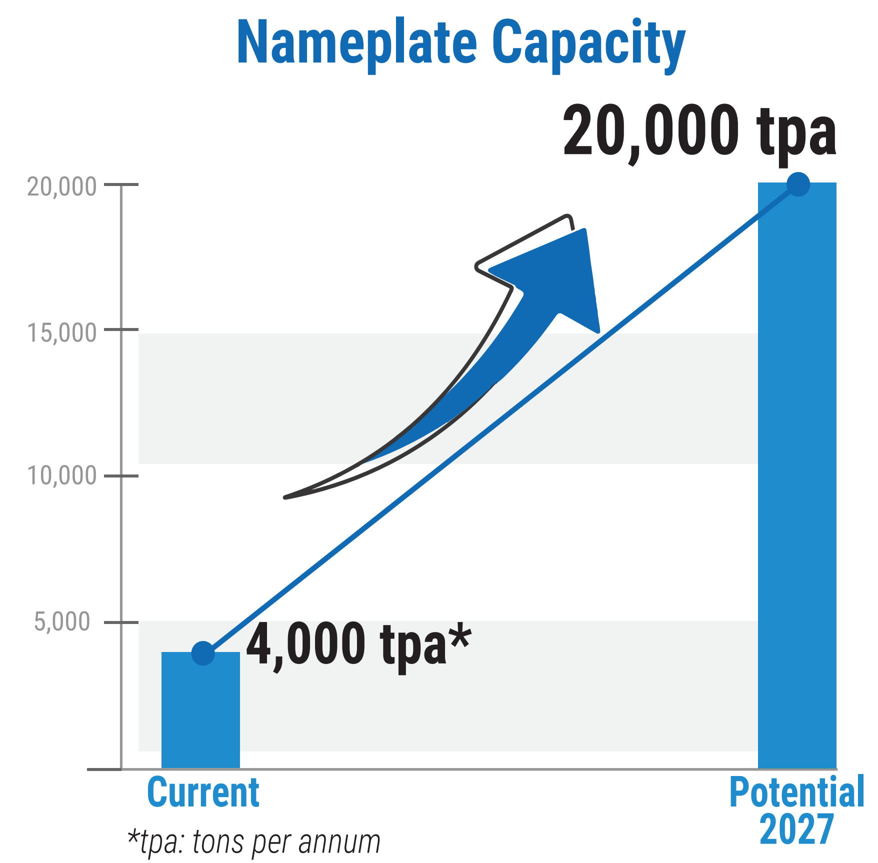
Forward-looking statements are subject to a number of risks, assumptions and uncertainties, many of which involve factors or circumstances that are beyond our control.

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.

**Trademarks**

# CAPEX INVESTMENT PLAN SUMMARY

- Over the next 5 years, our strategic plan will be to develop our leadership position in large, growing, and promising end-markets:
  - Speciality Compounds
  - Battery Materials
  - Lightweighting composites
- Investing $120M to increase graphene & battery materials capacity by 16,000 tpa and benefit from EV and graphene adoption
- Investing $25M to $30M to increase Sheet Molding Compound (SMC) capacity by 10M lbs and benefit from increased demand for lightweighting solutions
- Enabling the energy transition and sustainability megatrends
- In total, NanoXplore will invest $145M to $150M over the next 5 years with a combination of grants, debt and cash on hand



*tpa: tons per annum

See appendix for assumptions

# COMPANY BACKGROUND

## About us

We are a **fully integrated graphene supplier** to various customers in transportation, packaging, pipe, film, electronics, and other industrial sectors. We are headquartered in Montreal, Quebec with manufacturing facilities across North America and Europe

**11** production plants

**~500** employees

## Capabilities

Fully Automated Facility

**Largest Graphene Producer**

**~40%* share**

**Worldwide Lowest Cost Producer**

## Credible & Supportive Shareholders

- Martinrea International Inc. (MRE: TSX)
- Caisse de dépôt et placement du Québec
- Investissement Québec
- Fidelity
- Business Development Bank of Canada

## Proprietary Technology

We own our innovative, **patent-protected graphene manufacturing technology** that provides a significant cost-effective solution to our customers

## Strong IP & Know-how

We own a **strong IP portfolio and know-how through years of R&D development** in adding graphene to current Li-ion chemistries that improves energy capacity and charging speeds

## Globally Registered

REACH COMPLIANCE

EPA certified – United States Environmental Protection Agency

Health Canada

ESG

## High Quality & Consistency

We pride ourselves on the quality and consistency of our branded GrapheneBlack™ powder

GRAPHENEBLACK™

* *The Graphene Batteries Market report by Roni Peleg and Ron Mertens: June 2024*

# 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

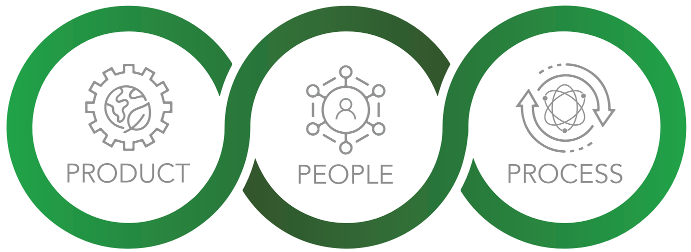
**Graphene**
6-10 atomic layers
in thickness with 96-98% purity

## CLEAN TECHNOLOGY

- High Volume
- Low Cost
- Environmentally Friendly

# 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

NanoXplore

* Based on carbon black emission intensity of 3 versus emission intensity of 0.4 for graphene production
Based on Carbonzero study - www.carbonzero.ca

# THE POTENTIAL EVOLUTION AS A LEADING GRAPHENE PRODUCER

PHASE 1 | PHASE 2 | PHASE 3

## 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**

**EXECUTION**

- $120M graphene and battery materials plant
- $25M to $30M GrapheneBlack SMC™ (Sheet Molding Compound) plant

## OUR VISION PHASE 3

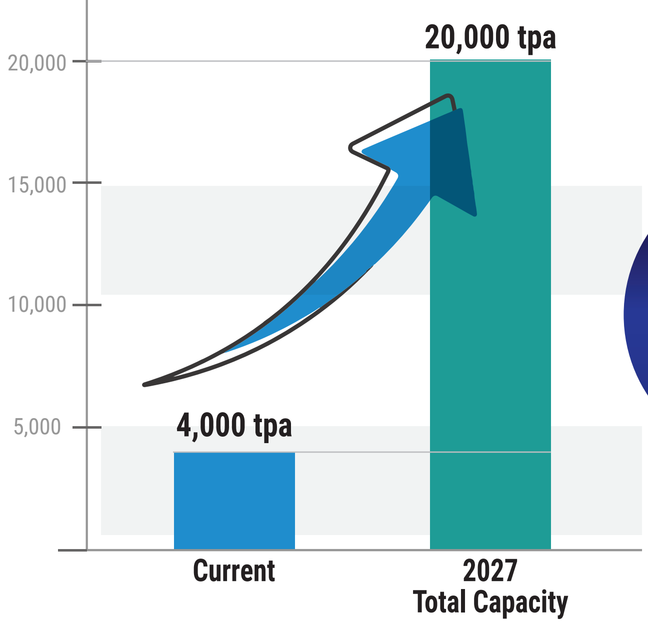
**2026+**

**GROWTH & POSITIVE YIELDING RESULTS**

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

# CAPEX SUMMARY OF 5Y PLAN

**GRAPHENE & BATTERY MATERIALS CAPACITY EXPANSION PLAN**




**Battery Materials:** A global US$50B+ market. North America ramping up capacity to 1000GWh by 2031 driven by EV adoption, energy sustainability, IRA, IoT Adoption.

**Sheet Moulding Compounds:** US$3.8B in 2023* market predominantly used for production of Transportation, Construction materials and Electronics.

## 5Y PLAN[1]

Five year CAPEX funded through governments incentives and credit facility

| Graphene & Anode Material | | Graphene Enhanced SMC |
|---|---|---|
| $120 M | REVENUE (Est.) | $80M |
| $120 M | INVESTMENT[1,2] | $25-30M |
| New leased facility | SITE TYPE | New leased site |
| 16,000 tpa | CAPACITY ADDITION | 10M lbs/annum |
| 200,000 sqft | FACILITY SIZE | 200,000 sqft |
| Greater Montreal, QC | LOCATION | St-Clotilde QC/ Statesville NC |
| 2026 | COMMISSIONING | 2025 |
| 25% | IRR[1,2] | 25% |

*Source: Lucintel
1 See appendix for assumptions
2 Non-IFRS measure – refer to non-IFRS measures disclosure in MD&A

# BATTERY MATERIALS - EXECUTIVE SUMMARY

## KEY DRIVERS

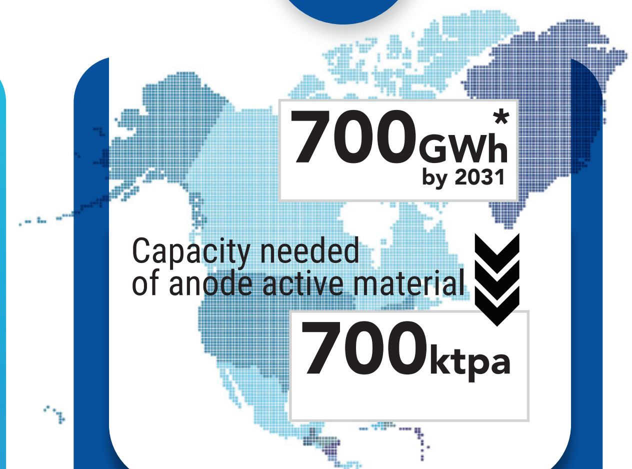
- **EV Adoption**
- **Energy Transition/ Sustainability**
- **Inflation Reduction Act**
- **IoT Adoption/Electronic Devices**

## TARGETED PRODUCTS

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

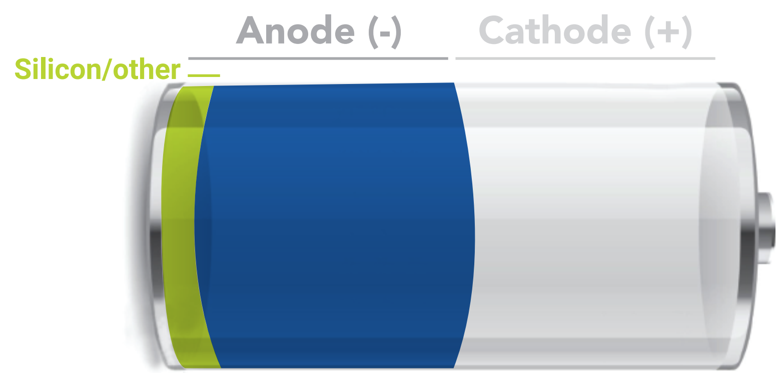
## MARKET SIZE

NORTH AMERICA RAMPING UP CAPACITY




* BMI - Benchmark Minerals Intelligence

# BATTERY MATERIALS - NANOXPLORE 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**

# BATTERY MATERIALS - CAPEX & RETURNS

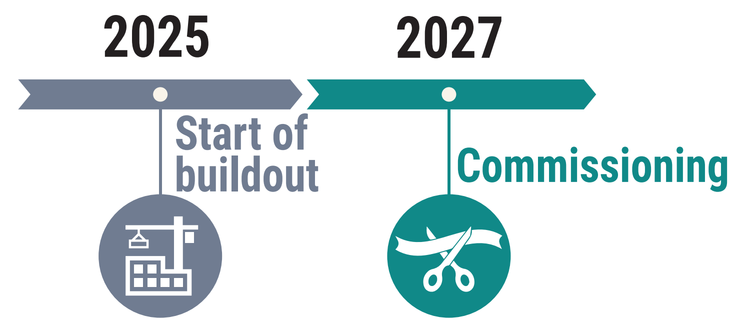
**ASSETS:**
- **16,000 tpa** graphene and battery materials facility
- **100-200 tpa** graphene-silicon line
- R&D Facility

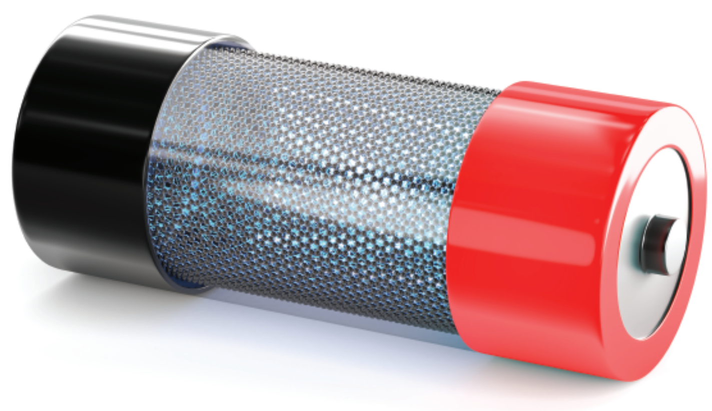
**INVESTMENT[1]:** $120 million

**POTENTIAL ANNUAL REVENUE[1]:** $120 million

**IRR[1,2]:** 25%+

**REASONS TO INVEST/STRATEGY:**
- Large and growing addressable market
- Strong fundamentals with undersupplied market
- Attractive returns
- Flexible manufacturing process



1 See appendix for assumptions
2 Non-IFRS measure – refer to non-IFRS measures disclosure in MD&A

# LIGHTWEIGHTING COMPOSITES - EXECUTIVE SUMMARY

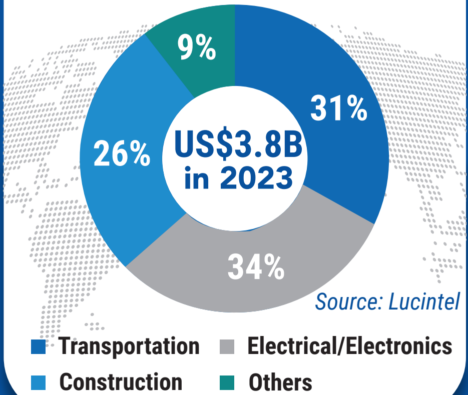
- EV Adoption
- Sustainability
- Transportation industry $CO_2$ Reduction Regulations

## SMC KEY DRIVERS

**Transportation**
External parts of vehicles
Battery enclosures

**Construction**
Commercial and
Residential Applications

## TARGETED VERTICALS

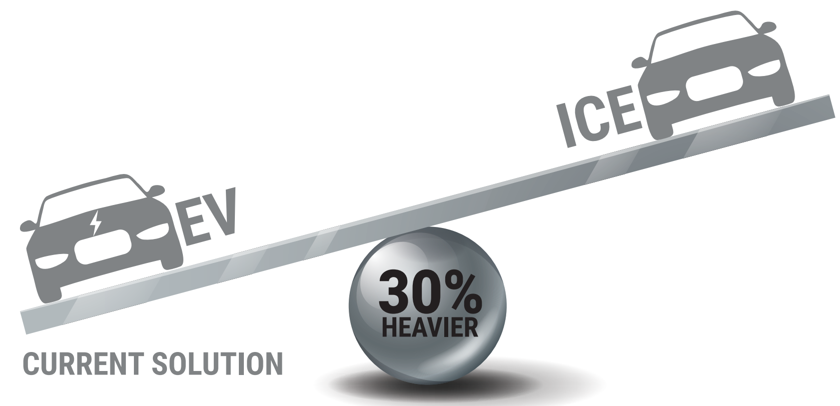



SHEET MOLDING COMPOUND
## GLOBAL MARKET SIZE

# LIGHTWEIGHTING COMPOSITES - NANOXPLORE VALUE PROPOSITION

## Stronger, Lighter, Higher Quality Parts Using

**GRAPHENEBLACK SMC™**
A NanoXplore Product




**LIGHTWEIGHTING** IS A **PRIORITY** FOR OEMs

up to
**15%**
Lightweighting Potential

Sustainability & **Reduced** Emissions

**Lower** Painting Cost

# LIGHTWEIGHTING COMPOSITES - CAPEX & RETURNS

**ASSET:** 10M lbs SMC facility

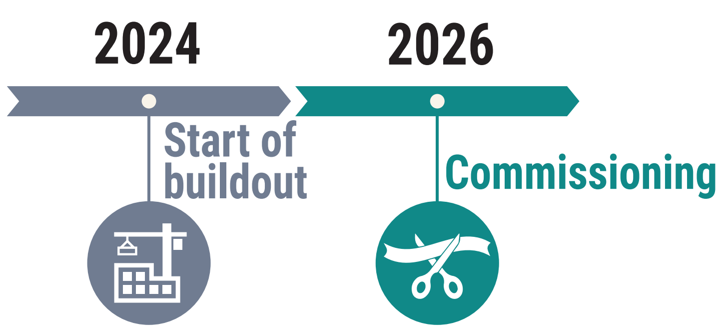
**INVESTMENT[1]:** $25 million to $30 million

**POTENTIAL ANNUAL REVENUE[1]:** $80 million

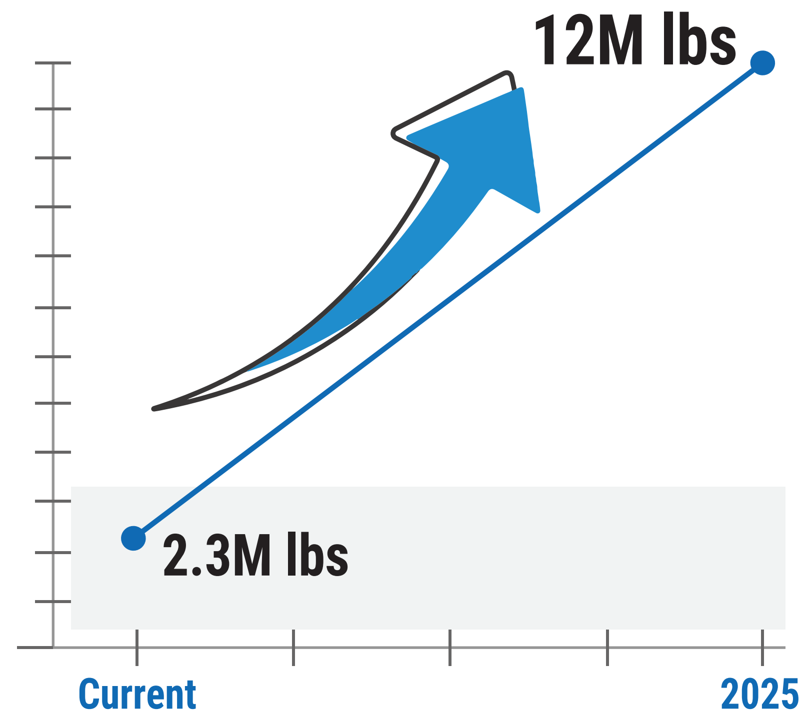
**IRR[1,2]:** 25%+

**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

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2 Non-IFRS measure – refer to non-IFRS measures disclosure in MD&A

## GRAPHENE KEY DRIVERS

- Sustainability
- Market Penetration
- Low-Cost Alternative

## TARGETED VERTICALS

- Concrete
- Polyurethane (PU) Foam
- Drilling Fluids
- Polyethylene (PE)/ Polypropylene (PP) Compound

# SPECIALITY COMPOUNDS - NANOXPLORE VALUE PROPOSITION

| | VALUE PROPOSITION | | | GRAPHENE ADDRESSABLE MARKET SIZE |
|---|---|---|---|---|
| **Concrete** | CO2 EMISSION | COST SAVINGS | PERFORMANCE & DURABILITY | 6,000 ktpa[1] |
| **Drilling Fluids** | FASTER DRILLING SPEED | EXTENDED TOOL LIFE | REDUCED FLUID LOSS | 256 ktpa[2] |
| **PU Foam** | BETTER THERMAL INSULATION | FLAME RETARDANCY | SUSTAINABILITY | 170 ktpa[3] |
| **PE/PP Compound** | MORE RECYCLABLE PLASTIC | MECHANICAL PERFORMANCE | COST REDUCTIONS | 90 ktpa[4] |

*1- The Graphene Council & NanoXplore*
*2- Fortune Business Insights & NanoXplore*
*3- MarketsandMarkets & NanoXplore*
*4- MarketsandMarkets, PPI, Straits Research & NanoXplore*

# APPENDIX

# ASSUMPTIONS & RISKS 5 YEARS STRATEGIC PLAN

## Graphene & Anode Material

| | |
|---|---|
| **Revenue Assumptions** | In recent years, North American demand for battery cells has resulted in numerous battery cell production facilities being built or announced to be built in North America. Along with this trend, North American governments are requiring and incentivising manufacturers to source more battery materials in North America. Against this backdrop, the Corporation sees a capability to sell all its annual anode materials capacity of 8,000MT over the course of 2 years at a price above $7.50 USD/kg and an equivalent quantity of low-price graphene at a price above $3USD/kg. Both with annual price escalations assumptions of 3%. |
| **Major risks** | While risks of not achieving the expected revenues are numerous, the Corporation sees these as the main risks:<br>> Significant delay or non-creation of North American battery cell production market<br>> Slowdown in Electric Vehicle adoption<br>> New battery technologies<br>> New entrants to the anode materials market taking majority of future market share |
| **Investment** | Sum of all capital expenditures expected for the investment. The investment amount does not take into consideration sunk costs or costs already occurring in the Corporation that may be reaffected to execute the project. |
| **IRR calculation** | IRR is based on the expected net annual cash flows discounted at 8.8% over a period of 10 years with a 3% inflation assumption. |
| **Financing** | Financing for project is expected in part through investment tax credits (~30%), Federal and Provincial low-interest loans (~20%) which are currently being secured and with balance of financing needs covered through either additional debt financing yet to be secured or new equity, but only in favorable market conditions. |

# ASSUMPTIONS & RISKS 5 YEARS STRATEGIC PLAN

## Graphene Enhanced SMC

| | |
|---|---|
| **Revenue Assumptions** | Demand from our customers for SMC parts is in excess of our capacity to produce which indicates a continued market shift towards composite materials and more specifically SMC. Capacity to produce SMC parts for the commercial vehicle market in North America is limited with only a few large manufacturers, including the Corporation. The capacity being added with this initiative is smaller than the expected demand into the future and as such the Corporation expects to fully sell the added capacity over the course of 3 years. Production capacity will allow for the production of 80,000 truck parts at an average of $750USD per part. |
| **Major risks** | While risks of not achieving the expected revenues are numerous, the Corporation sees these as the main risks:<br><br>> Inability to increase sales with existing customers or to attract new customers<br>> Shift to other composite production processes |
| **Investment** | Sum of all capital expenditures expected for the investment. The investment amount does not take into consideration sunk costs or costs already occurring in the Corporation that may be reaffected to execute the project. |
| **IRR calculation** | IRR is based on the expected net annual cash flows discounted at 10.0% over a period of 10 years, with a 3% inflation assumption. |
| **Financing** | Financing for project fully secured by RBC credit agreement through available equipment leasing and revolving credit line. |

# NON-IFRS MEASURES

The information contained in this presentation was prepared using results and financial information determined under IFRS. However, the Corporation considers certain non-IFRS financial measures as useful additional information in measuring the financial performance and condition of the Corporation.

These measures, which the Corporation believes are widely used by investors, securities analysts and other interested parties in evaluating the Corporation's performance, do not have a standardized meaning prescribed by IFRS and therefore may not be comparable to similarly titled measures presented by other publicly traded companies, nor should they be construed as an alternative to financial measures determined in accordance with IFRS.
Non-IFRS measures include "Adjusted EBITDA" and "Adjusted gross margin".

Performance Through Carbon Chemistry

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