

# GRAFOID

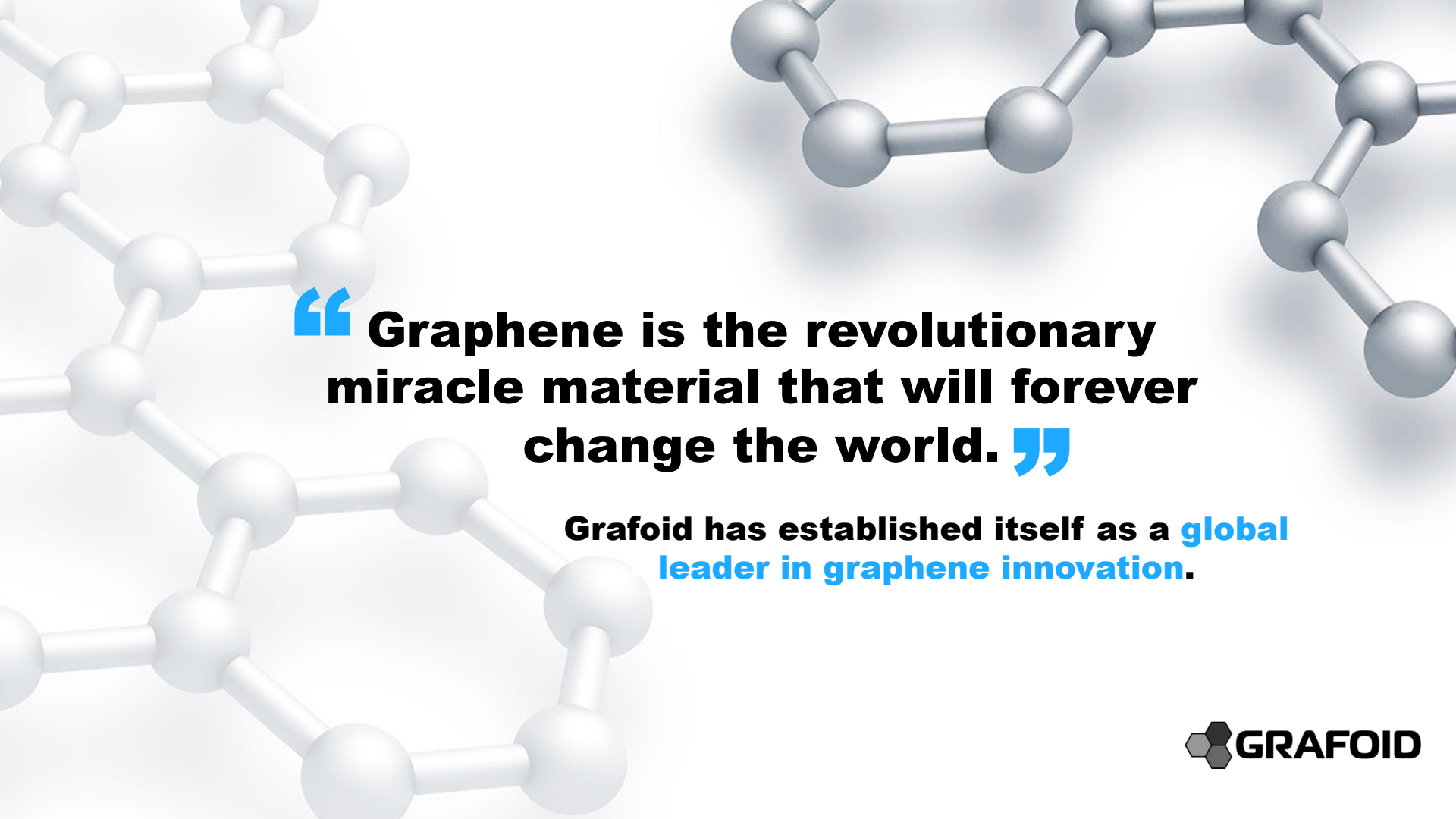
A Complete Solutions **Graphene** Company

Corporate Presentation  
January 2017

## Disclaimer

This presentation may contain forward-looking statements, being statements which are not historical facts, and discussion of future plans and objectives. There can be no assurance that such statements will prove accurate. Such statements are necessarily based upon a number of estimates and assumptions that are subject to numerous risks and uncertainties that could cause actual results and future events to differ materially from those anticipated or projected. Grafoïd Inc. disclaims any intention or obligation to revise or update such statements.

Further detail on Grafoïd's processes or plans may require the signing of a non-disclosure agreement (NDA) between the parties.



**“ Graphene is the revolutionary  
miracle material that will forever  
change the world. ”**

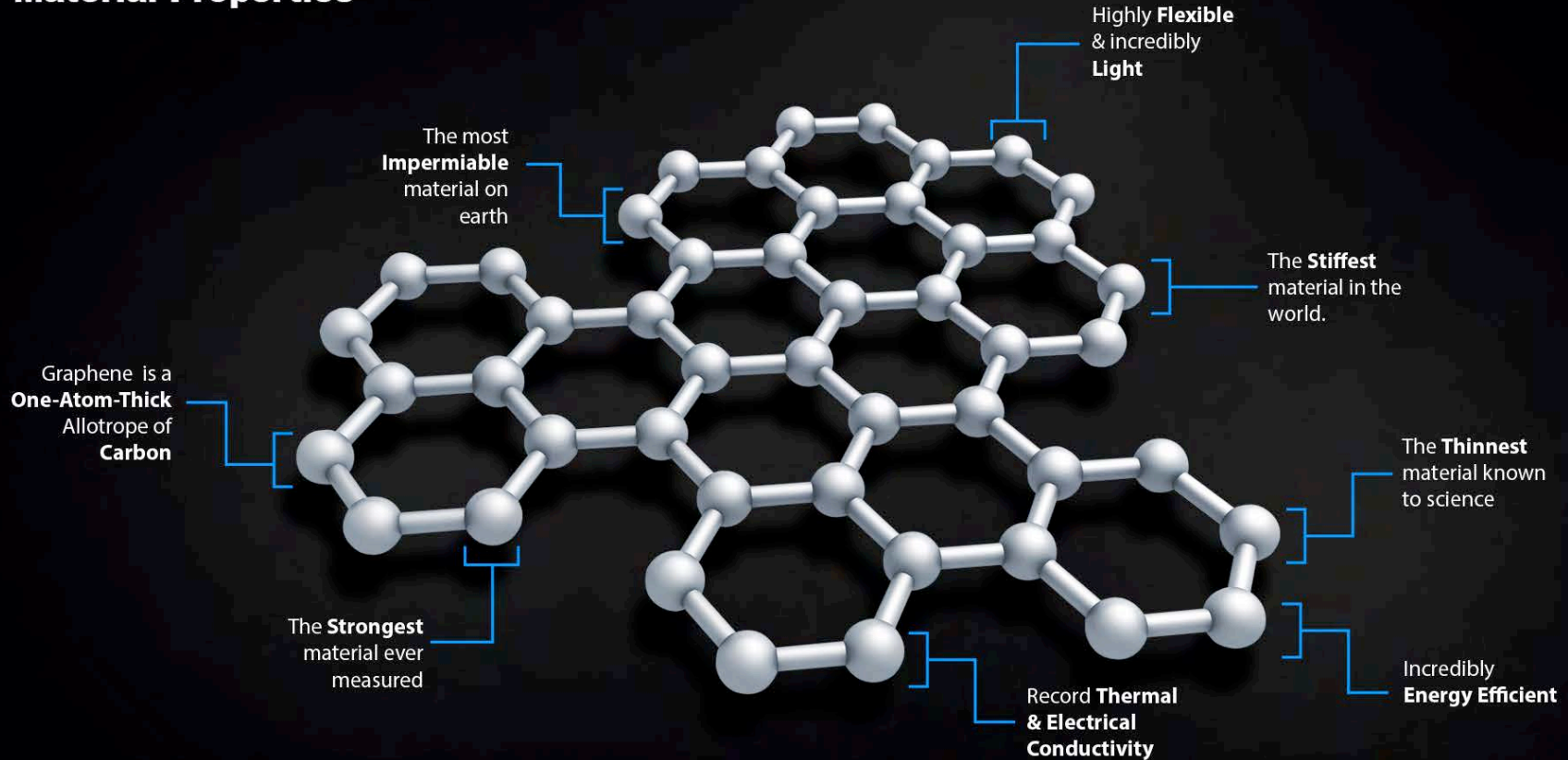
**Grafoid has established itself as a [global  
leader in graphene innovation.](#)**

# What is Graphene?

# What is Graphene?

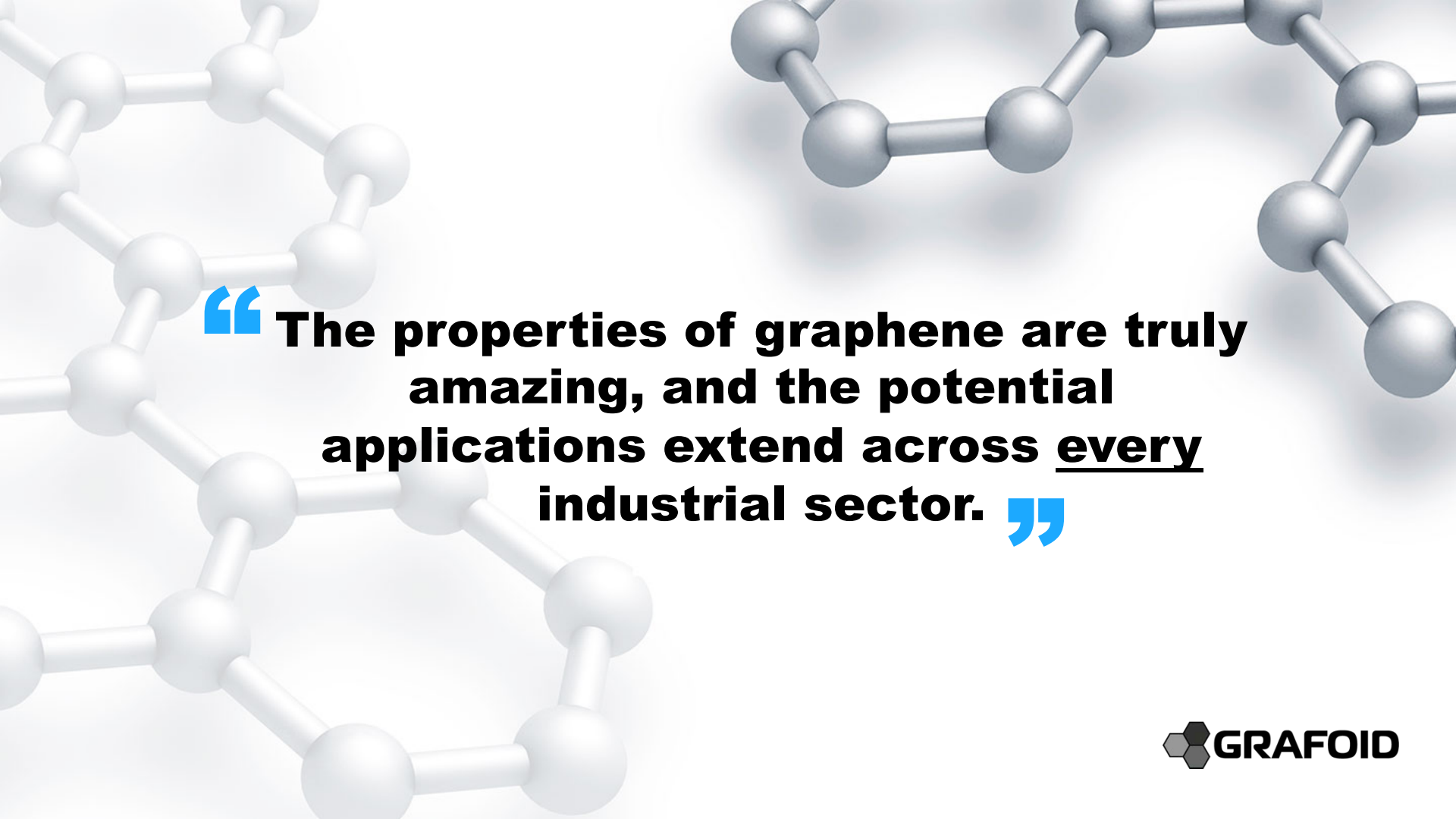
- ◆ Graphene will change the way we **work, live and play**
- ◆ A **two-dimensional** nanomaterial
- ◆ Discovered by physicists **Sir Andre Geim and Sir Konstantin Novoselov**
- ◆ **The Nobel Prize** was awarded for ground-breaking experiments in 2010
- ◆ Graphene holds the potential to bring about **a new era in materials**
- ◆ The addition of graphene achieves a number of **enhanced properties**
- ◆ The total industry size impact exceeds **\$100 billion**
- ◆ The **market** for graphene remains **immeasurable**

# Graphene's Revolutionary Material Properties





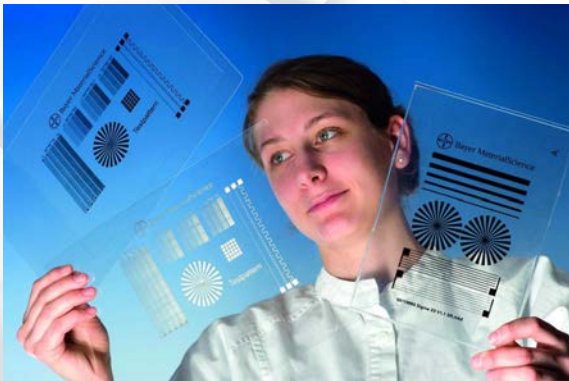
# **Graphene Applications**

The background of the slide features a 3D ball-and-stick model of a graphene lattice. The atoms are represented by light gray spheres, and the bonds are thin gray rods. The structure is shown in a perspective view, with some parts appearing closer and more detailed than others, creating a sense of depth. The overall color scheme is light gray and white.

**“ The properties of graphene are truly amazing, and the potential applications extend across every industrial sector. ”**



# Graphene Applications



# Energy Storage Applications





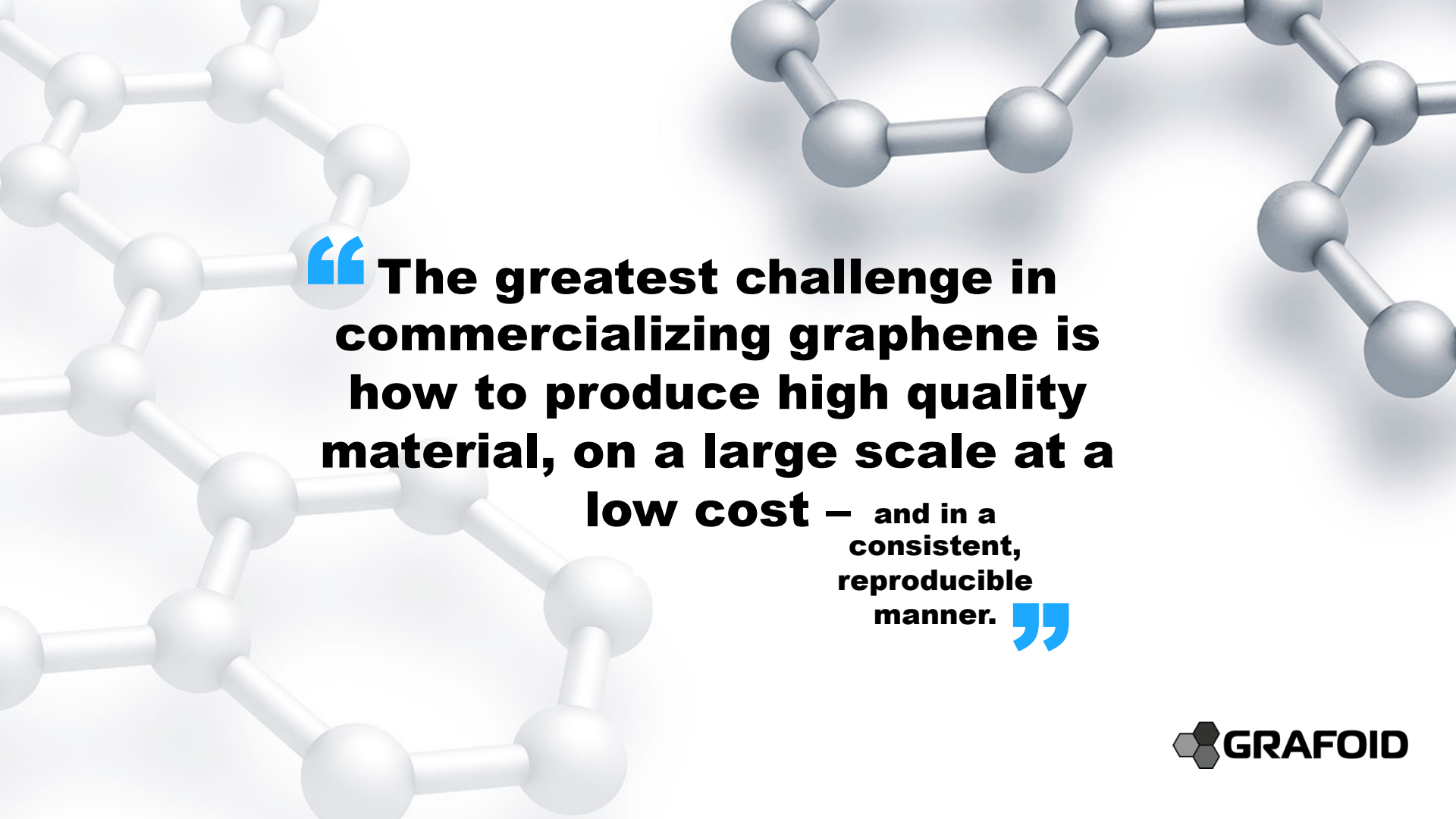
## **Graphene** Applications

- **Plastics and Polymers**
- **Medical**
- **Coatings**
- **Energy**
- **Computers and Electronics**
- **Water Supply**
- **Communications**
- **Construction and Industry**
- **Coatings and Lubricants**
- **Automotive**
- **Aerospace**
- **Marine**
- **Chemicals**
- **Manufacturing**
- **Safety and Environmental**
- **Military and Defense**
- **Food Production**
- **3D Printing**





**Graphene is a potentially  
disruptive technology to all  
of the aforementioned  
industries and applications.**



**“ The greatest challenge in commercializing graphene is how to produce high quality material, on a large scale at a low cost – and in a consistent, reproducible manner. ”**

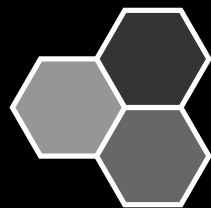
# **The key to successfully commercializing graphene is based on 3 primary factors:**

**Having unlimited access to a secure source of high-grade, high-quality graphite**

**Being able to produce near-pristine graphene on an economically scalable basis**

**Partnering with the right players in the development of the right applications**

**Grafoid** excels in all  
three areas, overcoming  
the barriers to graphene  
commercialization.



# GRAFOID

A Complete Solutions **Graphene** Company



**“The key vendors dominating  
this (graphene) market space  
are BASF, Grafoid Inc, IBM  
Corp, and Samsung  
Electronics Co.”**

**– Global Graphene Markets 2012-2016  
Infiniti Research Limited, October 2013**

# Grafoid

- **Grafoid is a graphene R&D, application development and technology licensing company**
- **The company has established itself as a global leader in graphene innovation**
- **Grafoid's process, developed in conjunction with National University of Singapore, means low-cost, high-purity graphene**
- **Grafoid's has a global presence with research and production facilities in Asia and North America**
- **Grafoid is part of a global platform to deliver mine-to-market products, [www.2GLPlatform.com](http://www.2GLPlatform.com)**
- **Focuses on four areas of graphene application development: energy creation, coatings, composites and membrane technology**
- **Grafoid partners with joint venture and strategic partners around the world to develop applications in those four areas**



# **Grafoid Global Technology Centre**

**Former ALCAN aluminum research facility, based in Kingston, Ontario**

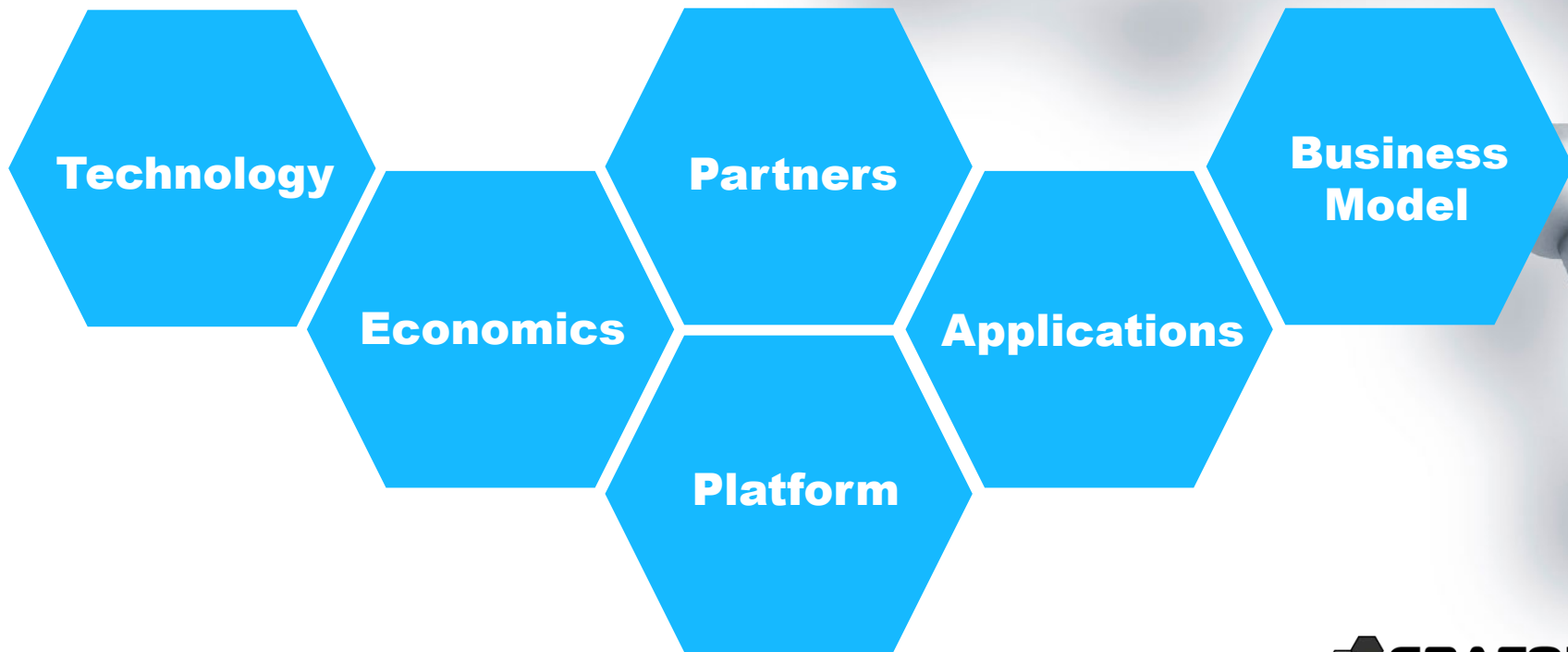
**World-class 220,000-square-foot, state-of-the-art technology R&D center**

**First fully-operational MesoGraf™ graphene production facility in North America.**

**Holds the requisite engineering expertise to advance Grafoid's scientific developments to the commercialization stages for MesoGraf™-based materials, products and novel applications.**



# What's **Unique** about Grafoid?











# How We Compare

- Sells Graphene Solutions**
- Game-changing, one-step process to produce economically scalable graphene\***
- A diverse company that doesn't depend on the success of one application**
- Partners with industry leaders worldwide to advance joint applications**










**Our Competitors**

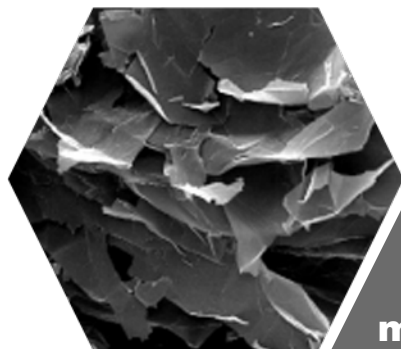


# How We Compare

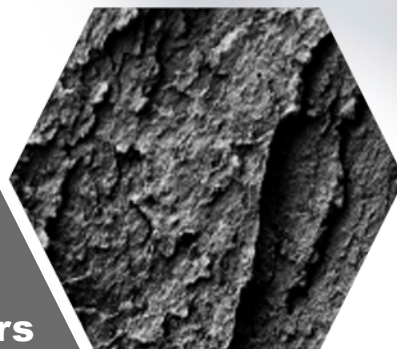
	 <b>GRAFOID</b>	<b>Our Competitors</b>
<b>Able to generate revenue from every market sector</b>		
<b>MesoGraf™ – The Global Standard for Graphene</b>		
<b>Environmentally friendly and sustainable</b>		

**Grafoil** brings world-leading expertise in graphene, resolves commercial scalability issues, tailors graphene for unique applications, and provides solutions for achieving success.

# The **Grafoid** Advantage



**Most  
proclaimed  
manufacturers  
sell 'graphene'  
that is not  
graphene**



**Graphene is  
a very difficult  
product to  
work with**

**Expanded  
flake materials  
are difficult  
to be utilized**

## Grafoid's Active Applications

SECTOR	TOTAL AVAILABLE MARKET (TAM)	SERVED AVAILABLE MARKET (SAM)
LFP Graphene Batteries	\$74B	\$11.1B
Graphene Polymers/Plastics	\$796B	\$119.4B
Graphene Foam	\$13B	\$2.3B
Fuel Cells	\$2.5B	\$280M
Electrochemical Capacitors	\$1.2B	\$108M



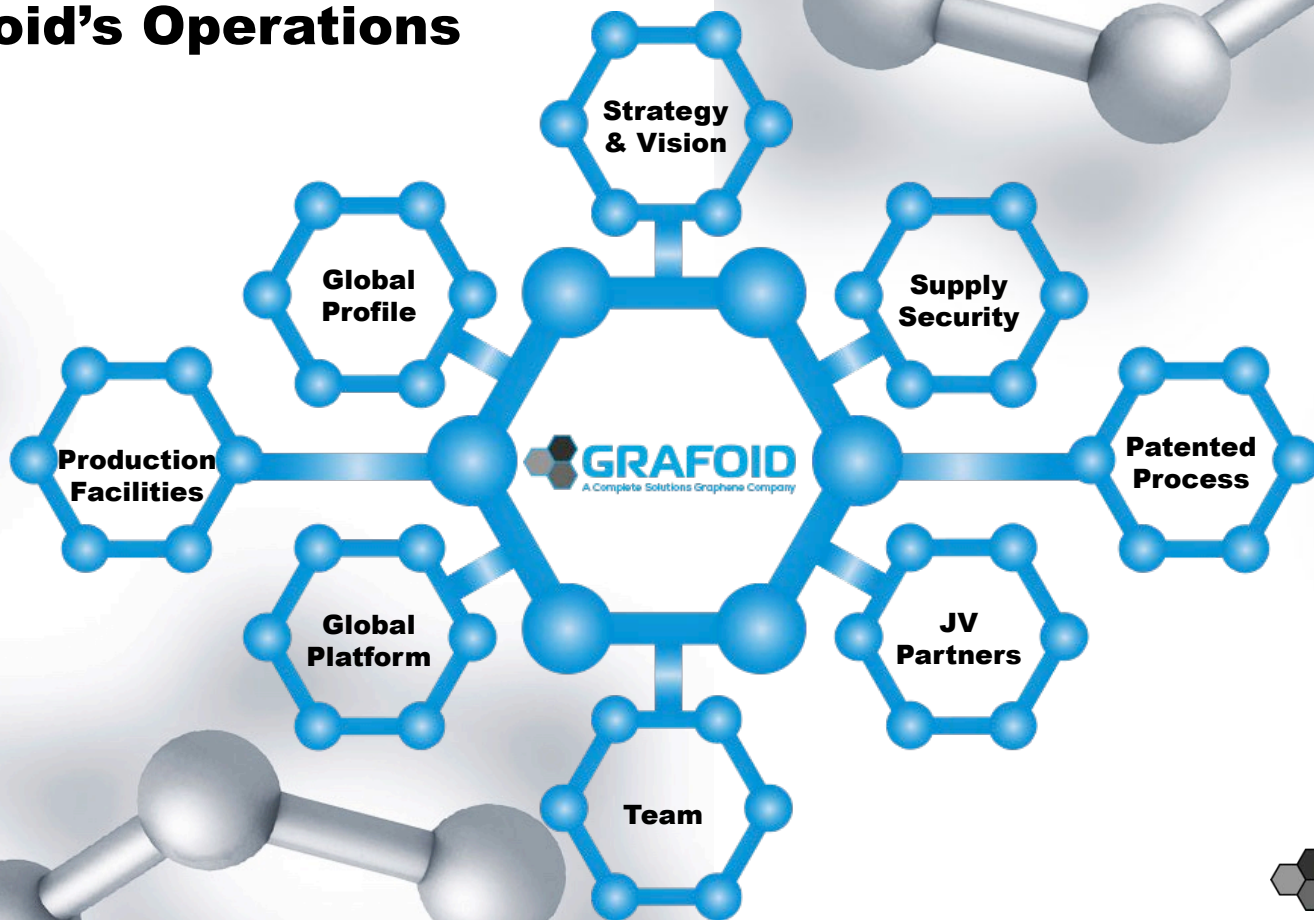
# Grafoid's Active Applications

SECTOR	TOTAL AVAILABLE MARKET (TAM)	SERVED AVAILABLE MARKET (SAM)
Solar Panels/Solar Cells	\$90B	\$9.4B
Graphene Foils	\$9.3B	\$1.4B
3D Printing Materials	\$1.5B	\$330M
Automotive	\$5.1T	\$390B
Aerospace	\$4.8T (2013-2032)	\$531B

# Grafoïd's Active Applications

SECTOR	TOTAL AVAILABLE MARKET (TAM)	SERVED AVAILABLE MARKET (SAM)
Chemicals	\$5.3T	\$486B
Coatings and Lubricants	\$113B	\$13.8B
Thermal Management	\$10.1B	\$1.1M
Organic LED Lighting	\$14.5B	\$1.6B
Medical	\$124.5B	\$18.2B

# Grafoid's Operations





**Grafoid is a graphene  
technology licensing company.  
We are unique.**



**The Global Standard for Graphene**



# MesoGraf™

**MesoGraf™ is the first graphene to  
be trademarked in the world (May 2013)**

**MesoGraf's 5 Core Attributes**

Cost

High  
Purity

High  
Yield

Versatile

Scalable

**MesoGraf™ is the foundation of our suite of products**

 **GRAFOID**

- **Novel technology for deposition of graphene and chemically functionalized graphene coatings**
- **For metal, glass, polymer, ceramic and other substrate applications**
- **Ability to control levels of surface coverage, thickness, etc. to meet requirements**
- **Overcomes barriers to entry for graphene coating technology**
- **For industries looking to develop next generation materials and products with a cost effective way of laying down graphene coatings on large surface areas**

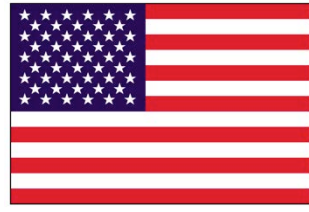
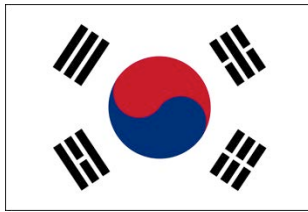




# Worldwide **Graphene** Market

## Research Investment

- **Billions are being invested worldwide on graphene R&D**
- **Funding is critical for graphene's commercial success**
- **Geopolitically there's a strategic race to commercialize graphene**



- **Over 200 major corporations are currently funding graphene research**



## **Government Involvement**

**Governments recognize the long-term economic imperative to support and foster new materials and clean technology**

**Federal and Provincial grants are available and Grafoid is successfully pursuing all eligible avenues for funding and partnering initiatives**

**Grafoid received \$8.1m from the Canadian Government to build the world's first automated graphene production line**

Canada 



Ontario



# Worldwide **Graphene** Market

## Revenue Forecasts

- ◆ **First commercially significant sales of graphene products before 2018**
- ◆ **The graphene market is expected to expand dramatically in the next 4 years**
- ◆ **China has included 3 key sectors, based on carbon, for economic growth in the next 5 years: new materials, energy storage and EV's**
- ◆ **60% CARG over the next five years**
- ◆ **Mass commercialization is contingent on the affordability of graphene**
- ◆ **Collaboration and cooperation is key**



# The **MesoGraf™** Global Platform

- ✓ **Grafoid's growth potential is in markets where governments foster clean technology development**
- ✓ **Grafoid has entered into a number of significant development relationships**
- ✓ **Opened an office in China and appointed a China General Manager**
- ✓ **Established JV relationships for development of next-generation products**
- ✓ **Grafoid brings the graphene and expertise and matches it with the customer's products or ideas**
- ✓ **The business model is royalty driven**



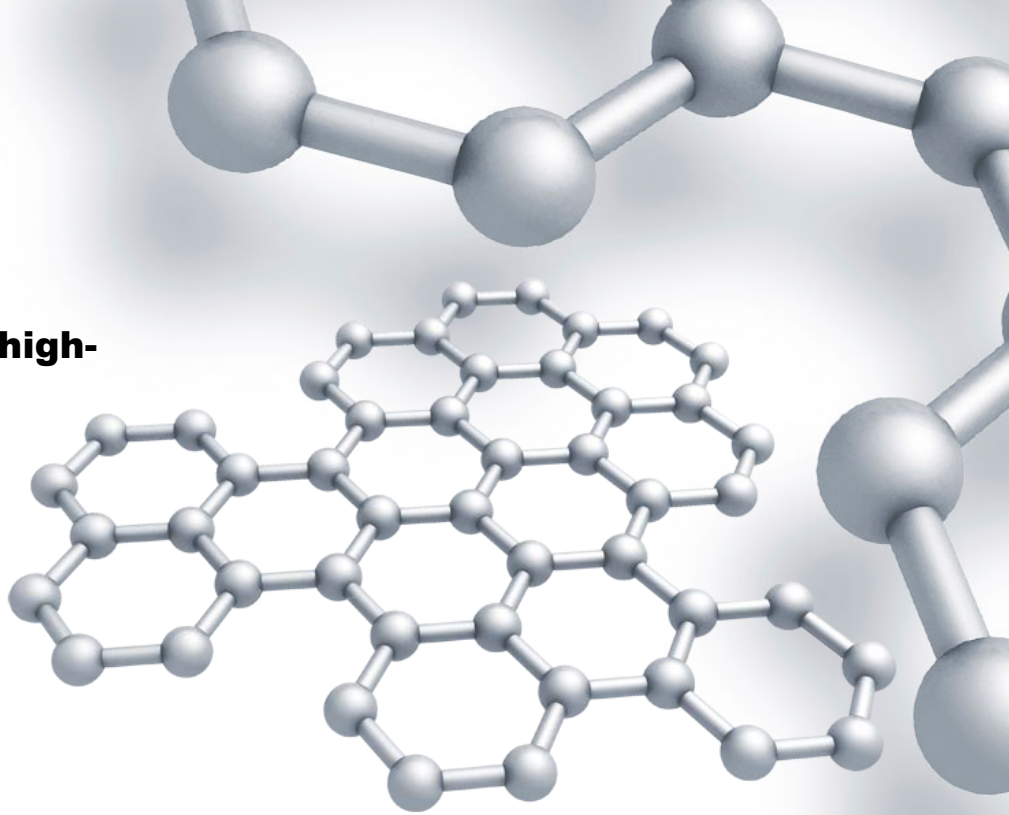




# **The Grafoid Global Platform**

# The Grafoid Global Platform

- **Grafoid has entered into a number of high-profile development relationships**
- **Establishing JV relationships for the development of next-gen products**
- **Royalties will primarily drive revenue**
- **Grafoid has and will continue to sell MesoGraf™ to JV partners**
- **15 Joint Venture Partnerships underway (6 announced partnerships)**





**Joint Venture  
Partnerships**

**Wholly Owned  
Subsidiaries**



**GRAFOID**



**In-Discussion  
Relationships**

**Academic  
Partnerships**

## Partnerships



# Academic Partnerships & Affiliations



## **Where is Grafoid headed?**

**2017 is expected to be a breakout year in the graphene application development marketplace and Grafoid intends to:**

- **Assume a leading position in the global graphene industry**
- **Grow existing and attract new significant partnerships**
- **Brand Grafoid as a global leader**
- **Promote Grafoid as the purest way to invest in the Graphene Revolution**

## **Near-Term Timetable**

A black hexagon containing a grayscale image of a crumpled, translucent sheet of graphene.

**Graphene  
Production**

A black hexagon containing a photograph of two hands holding a thin, transparent sheet of material, likely graphene, over a blue background.

**Further  
Relationships**

A black hexagon containing a blue-tinted image of a hexagonal lattice structure, resembling a graphene crystal, with a glowing blue arc above it.

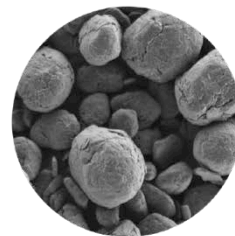
**Enhance  
Profile**



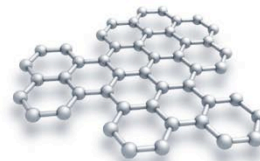
**PLATFORM**  
GRAPHENE - GRAPHITE - LITHIUM



An Advanced Technology  
Graphite Source  
[www.focusgraphite.com](http://www.focusgraphite.com)  
TSX-V:FMS



A Complete Solutions  
Graphene Company  
[www.grafoid.com](http://www.grafoid.com)



A Lithium Technologies Innovator  
and Mining Developer  
[www.strialithium.com](http://www.strialithium.com)  
TSX-V:SRA



A Leading Supplier of NextGen  
Battery Technologies  
[www.braillebattery.com](http://www.braillebattery.com)





# Summary



**MesoGraf™ is the global  
standard for graphene.**



**Grafoid is a complete solutions  
graphene company.**





# Summary

- **Grafoid is an application development company that licenses graphene technology**
- **It brings expertise in graphene and provides solutions for success**
- **It offers corporations an entrée into the graphene revolution**
- **Patented one-step process for producing high-purity graphene leads to MesoGraf™ suite of proprietary products**
- **Offers graphite security of supply through its position in the 2GL platform of companies**
- **Global network of sophisticated academic and commercial relationships**
- **A large R&D facility in Canada at GGTC (Grafoid Global Technology Centre)**

A 3D molecular model of a graphene lattice, showing a hexagonal arrangement of carbon atoms (represented as white spheres) connected by bonds (represented as white rods). The structure is shown in a perspective view, with some parts appearing closer and more detailed than others. The background is a light gray gradient.

**“Grafoid is the purest way to invest in graphene.”**



# Thank You

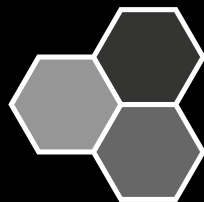
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