



**APPLIED
GRAPHENE
MATERIALS**

Strong progress with market
leading graphene nanoplatelet
dispersion and application
technology

OTC Conference

December 3 2020

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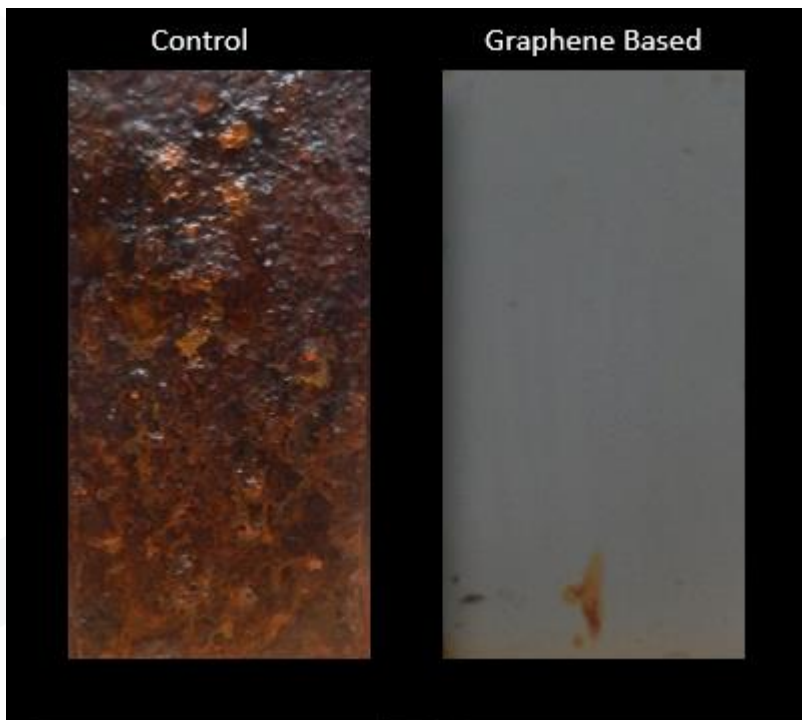
This presentation contains forward-looking statements with respect to AGM’s plans and objectives regarding its financial conditions, results of operations and businesses.

Graphene Nanoplatelet materials technology



Transformational materials potential using graphene nanoplatelet dispersions in real applications

“Making materials even better”

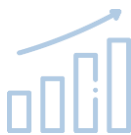


Investment Summary

Unlocking the Potential of Graphene nanoplatelet materials technology



Commercializing world-leading graphene dispersion technology – dispersing graphene nanoplatelets (GNPs) **effectively and safely** in liquids primarily for coatings, composites and high-performance additive applications



Addressing a **\$38.7Bn coatings resin market** expected to grow to \$48.8Bn by 2025, and the global paints and coatings market expected to reach \$220Bn by 2027



Patent-protected, patent pending, know-how and trade secret IP for both manufacture of high-quality synthetic GNPs plus dispersion and application technology – **key for nanomaterials deployment in structural and performance applications**



Long-term customer collaborations resulting in increased product launches and sales momentum throughout 2020



Active technology and product development with **109 industrial and academic partners**



Customer products launched to market **increased substantially** over past year; continued opportunities to develop coatings, composites, inks, printing and adjacent technologies

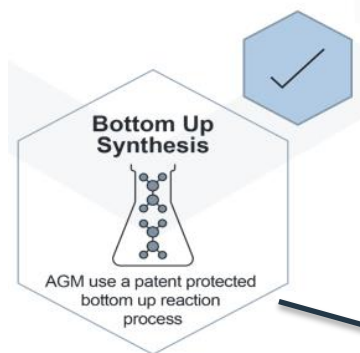


Decade of innovation with more than £20m invested in company

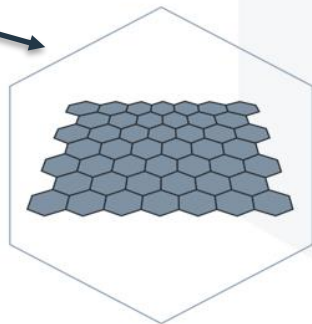
AGM's Differentiated Manufacturing Process: Synthetic Graphene nanoplatelets



AGM was built on synthetic GNP manufacturing. The pillar that underpins commercialization is our **patent-protected & pending dispersion technology and applications know-how and trade secrets**



- Graphene can be produced by molecular growth from small molecular carbon precursors
- Number of layers can be controlled
- Can achieve large surface area and high C content
- Great route for consistent batch to batch high quality Graphene nanoplatelet materials



Synthetic Graphene nanoplatelet production

- Patented bottom-up process for efficient manufacturing
 - Unique process technology for graphene nanoplatelets
 - Solid IP and manufacturing know-how
- The **real value** is the ability to realize the potential of GNPs. AGM's application technology and know-how are the true differentiators

Essence of AGM – Our USP



⬡ The Background

- AGM - Built on graphene in nanoplatelet form
 - We make our GNP's
 - As with others, such nano materials are challenging to use
- AGM – USP - Know-how to make GNP's:-
 - ✓ Usable in volume
 - ✓ Easier to deploy through developed product offering as easy-to-use additives
 - ✓ Commercialisable roadmap for real applications
 - Protective & specialty coatings
 - Composites
 - Thermal applications

⬡ AGM Application Technology – Potential to Reality

- ✓ The commercial value of GNPs lies in the ability to **robustly transfer its intrinsic properties into other materials**,
- ✓ Opportunity – customer products which possess specifically enhanced characteristics able to attract higher value or attain greater customer share
- ✓ AGM utilizes differentiated application technology to create both standardized and end-use specific customized solutions for a range of applications

Cycle of innovation



2010 – c. 2017
Powder technology



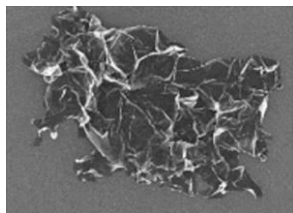
2017 -> Dispersion
Technology



2018 -> Customer product
performance transformation



2019 -> Customer
products



Development of GNP
powder range through
“bottom up” synthesis
process

Scaling of powder

Application Technology
development.

Clarity on deployment of
graphene nanoplatelets in
real applications

Strategy for core markets

Development of standard
product range



Control

Graphene-
Based

Development of
broader database on
GNP impact on anti-
corrosion
performance

Coatings customer
products come to
market containing
AGM GNP Dispersions



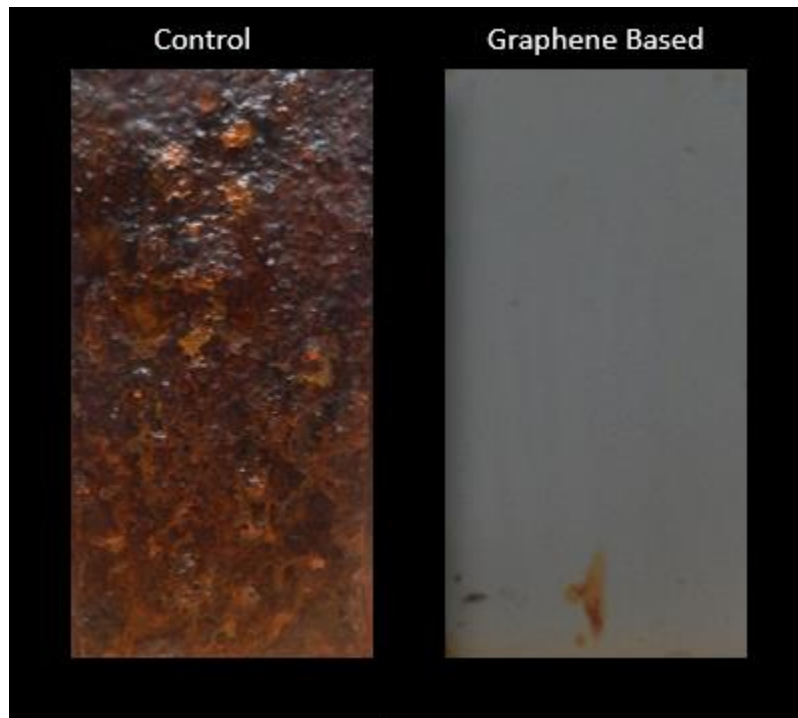
Success Study -



Graphene nanoplatelets for improved anti-corrosion aerosol coatings

CHALLENGE

- Improve anti-corrosion performance of sprayable primer for automotive applications
- Maintain processibility
- Ensure safe application for consumer market



SOLUTION THROUGH MATERIALS ENGINEERING

- 300% improvement in corrosion endurance performance
- Ease of manufacture using GNP dispersions
- Sprayable primer coating
- Safe use demonstrated
- Customer products launched into retail sector
- Building commercial traction



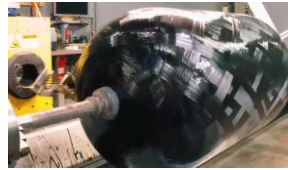
Source:- AGM test report, JBL



Graphene nanoplatelets for lighter, stronger, cost effective composites for space

CHALLENGE

- Linerless composite tanks the holy grail of gas storage for space applications
 - Weight
 - Cost
 - Lead time
 - Performance
- Support NASA programs such as Artemis and Lunar Gateway
- Enable customers in launch vehicles satellite applications with ultra lightweight storage tanks
- Next generation cryogenic pressure tanks a key technology to enable USA to maintain space superiority



SOLUTION THROUGH MATERIALS ENGINEERING

- Liner removed through a combination of materials engineering with GNP's, manufacturing process design and assembly design.
- AGM GNP custom dispersions integrated into linerless composite matrix of pressurized tanks
 - Mass reduced 40%
 - Cost reduced 50%
 - Lead time reduced 80%
 - Enables tanks to be taken to higher pressures. 5000psi gas storage capable
 - Simulated 20 years life – composite gets stronger over the pressure cycles with GNP addition
 - Potential for Space, Aviation, Transportation and Industrial

Dispersion

Use Cases & Early Deployment

Unique offering - AGM's *Genable*® standard graphene-based dispersions sold through distribution partners



AGM Customer Product and Technology Launches



AGM Dispersions

Standard Dispersions:



Customized Dispersions:

- 30+ parent materials into which AGM is currently developing production-ready graphene dispersions for existing and new customer base.
- In the last 2 years, AGM has developed over 200 customized dispersions for customer development trials.

What GNPs could do?

Where we see potential of AGM nanoplatelet dispersions

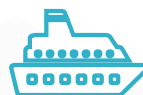
Anti-corrosion,
erosion, composites
in wind turbines



Satellite – Thermal
management and
Light-Weighting



Aerospace performance
advantages for
composites



Anti-corrosion
and Chemical
Resistance for
marine

Aerospace –
Aluminium
corrosion
protection



Offshore harsh
environment
protective
coatings

Enhanced
Pipelines
coatings



Heat
management
potential



Infrastructure
– chemical
resistant floor
coatings



Replacement of poor
environmental agents

Transportation –
vehicle lightweighting
and anti-corrosion
plus batteries



Anti-corrosion
/ Chemical
resistance –
industrial plant



Coatings for
Textiles



Battery and Thermal
conductivity for
Electrification of
Vehicles

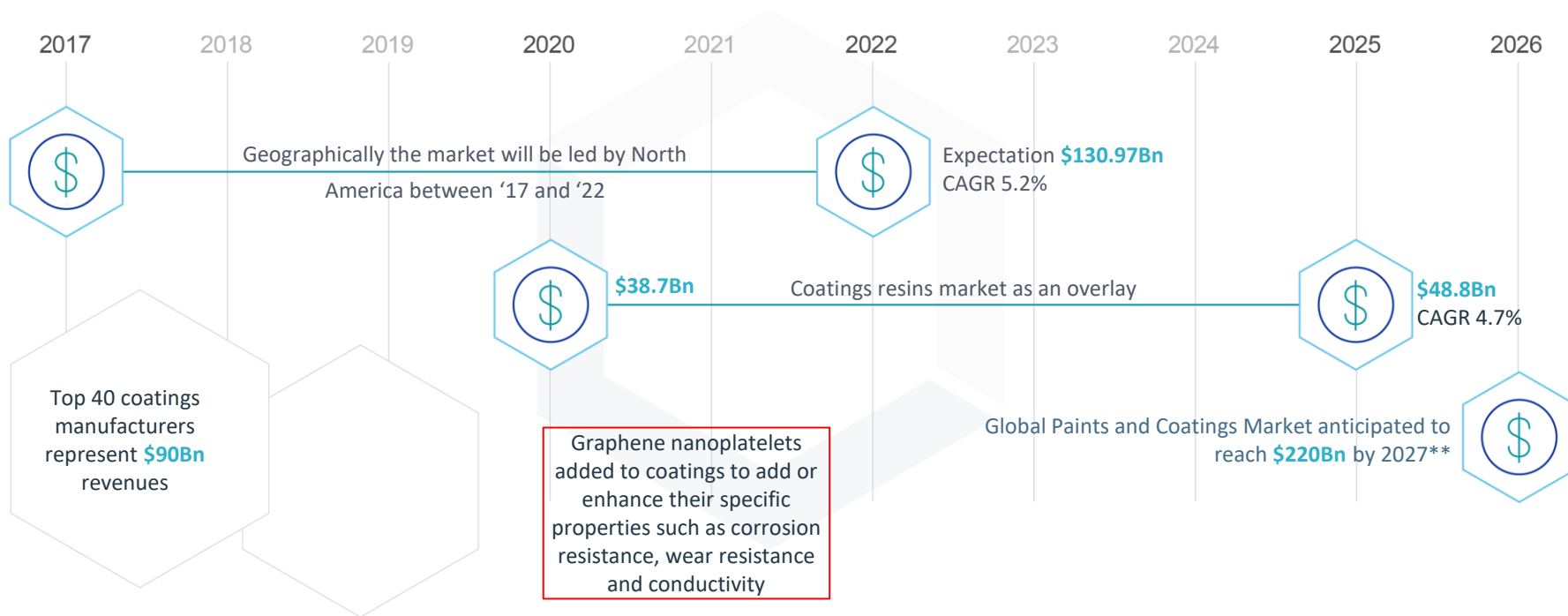


Infrastructure –
better coatings for
roof, cladding,
building structure



Market Opportunities

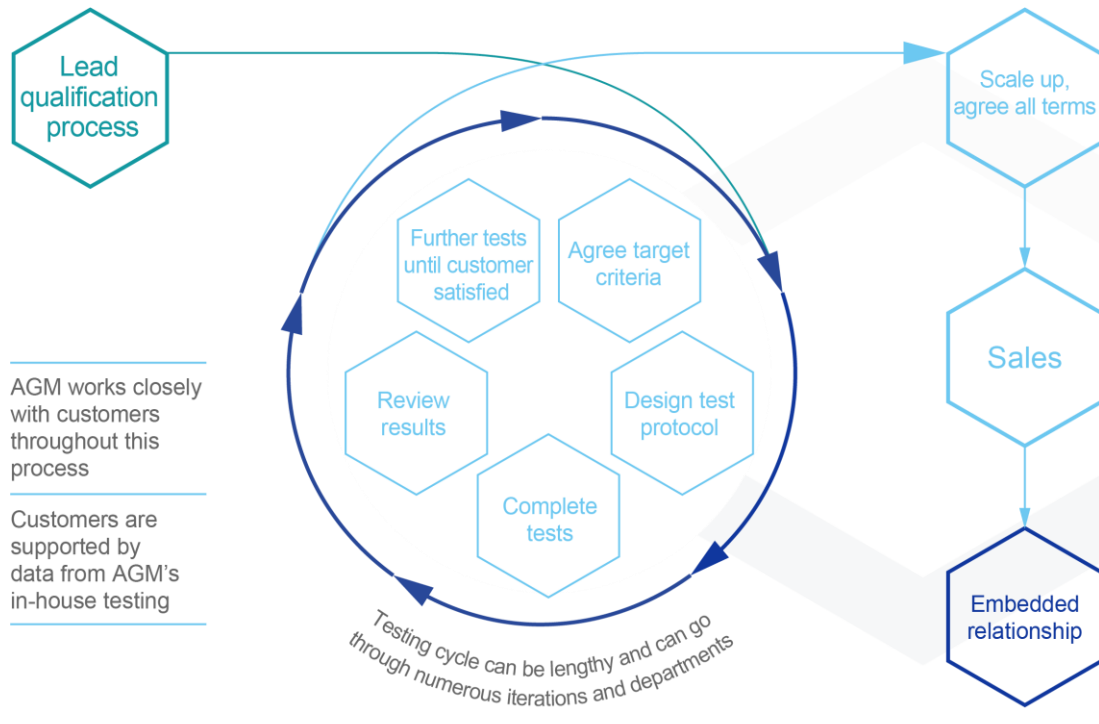
Paints and Coatings Industry



* Source: Coatings World July 2020

** Source: https://www.coatingsworld.com/contents/view_market-research/2020-10-12/coherent-market-insights-paint-and-coatings-market-to-surpass-220-billion-by-2027/

AGM Standard Sales Cycle



AGM works closely with customers throughout this process

Customers are supported by data from AGM's in-house testing

Case Study

- Engagement on potential of GNPs as a product enhancer for construction coatings
- Aspirational targets agreed; Testing work and formulation carried out at AGM using extensive facilities
- Results **exceed expectations** for anti-corrosion performance for infrastructure applications; Warranty extension increased by Alltimes from **20 to 30 years**
- Blocksil materials approved for use by Avanti and RTE for communications network refurbishment
- Alltimes CPD proving valuable for specifier approvals
- Revenue bearing applications expected to start with coronavirus lockdown easing
- Partnership engaged for further product development



Dispersion

Commercial Pipeline



Stage of Development

Approval Time

Total

Pipeline of activity evaluating materials for performance and commercial benefits



Aerospace corrosion, Industrial protective coatings, Aerospace and mass transit composites

Aerospace thermal adhesives, Car care paint protection project

Agreement on scope of sampling and engagement

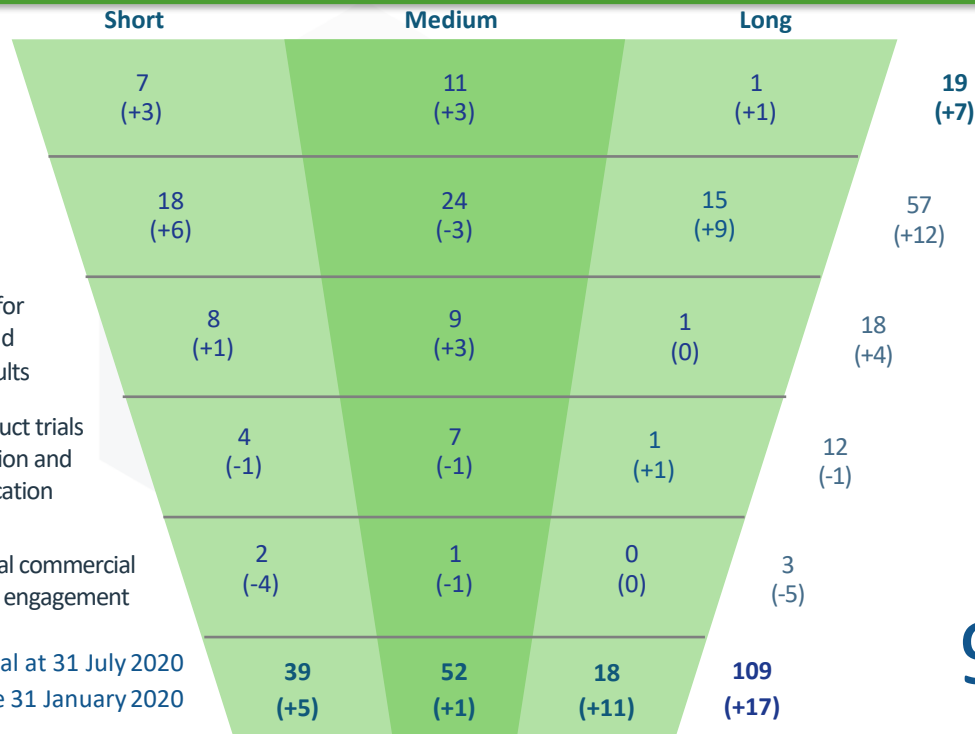
Initial testing and interpretation of results

Repeat testing for consistency and review of results

Final product trials formulation and specification

Final commercial engagement

Total at 31 July 2020
Movement since 31 January 2020



9 Customer projects completed since 31 January 2020 and transitioned from pipeline

Sales Team and Geographical Expansion



AGM has **60+** salespeople focused on selling our products worldwide

Building on a platform of product maturity and demonstrable performance advantages, AGM continues to sign new distributors in key geographies – **Maroon LLC** (USA), **Arpadis Benelux NV** (Belgium), and **Will & Co** and established agreements with – **Inabata** (Japan), **CAME** (Italy), **Carst and Walker** (South Africa) and **Dichem** (Greece).



M MAROON GROUP

- North America coatings market.
- Strengthens AGM's presence in the United States and Canada
- Maroon Group has decades of experience and leading expertise in additive sales and customer service
- Well placed to grow sales at this early stage of the graphene market development
- Exclusive agreement



ARPADIS

- Strengthens supply position across the United Kingdom, Germany, Spain, France, Portugal and Scandinavia
- Exclusive agreement in all regions apart from the United Kingdom
- Work in parallel with AGM's UK sales team to further strengthen existing relationships and develop the sales pipeline



will&co®

- Supply position across The Netherlands, Belgium, and Luxembourg
- Exclusive agreement

Current Highlights



Commercial progress - a number of major customer projects advancing towards completion and product launch



Conduit to Market - Major expansion of sales network with global distribution partners:

- Maroon Chemicals Group – The USA and Canada
- Arpadis – UK, Germany, France, Spain, Portugal and Scandinavia
- Will & Co – Benelux
- Dichem – Greece
- Gobarr - Turkey



IP Portfolio - Continues to grow with progress of several graphene dispersion technology based patents



Product Range - **Genable**® 1400 series of dispersions - a cost-effective range of products offering outstanding barrier performance



Focus - A realignment of our resources was completed in December 2019; focus on graphene dispersions capacity and capability



Scaling - Production scaling for dispersions manufacture



COVID-19 - Limited impact from on collaborations, and customer pipeline continues to grow

Current Highlights



Financial overview as at Year End 31 July 2020

- Revenue Pre-Revenue £0.08 million (2019: £0.05 million)
- EBITDA* Loss of £3.08 million (2019: loss of £4.56 million)
- Cash at bank £3.68 million (2019: £6.13 million)
- Basic EPS Loss of 6.4 pence per share (2019: loss of 7.9 pence)
- Adjusted EPS Loss of 6.1 pence per share (2019: loss of 7.9 pence)

* EBITDA comprises loss before interest, tax, exceptional costs, depreciation and amortisation.

Post year end



Sustainability review, roadmapping plan and intent to sign up to the UN Global Compact in the near future



Recent customer product launches

- Kent Europe GmbH - launch of aerosol anti-corrosion primer
- Infinity Wax - launch of Graphene QDX detailing polish for the car care market
- Halo Automotive Ltd / EZ Car Care - launch of Graphene Wax - enhanced product for car care market

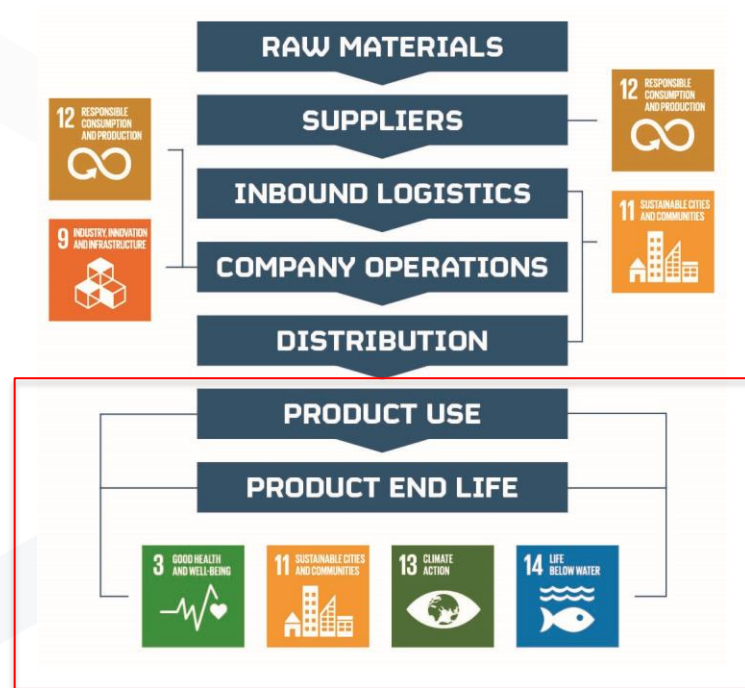


AGM launched commercial R&D partnership service for customer product development - Innovation Accelerator



AGM shares trading on the OTCQB Venture Market in the United States

Sustainability



Near-Term Drivers



Sales team expansion; substantially increased salesforce over FY20, with a particular focus on the liquid resins market, as a result of the appointment of 4 additional distributors across multiple geographies



Accelerated product development; dispersion innovations available to be commercialized in the next 12 months



Early commercial agreements reaching **product sales stage**; ability to cross-sell into existing customer base



OTCQB listing completed – Access to stock for US investors. Listed on AIM in UK



Technology development platform bringing new product iterations to market; continual focus on ability to **customize product** for different end-users



New products already launched with customers validating the coatings technology and product roadmap to market



Introduction of **Innovation Accelerator** – opportunity for end-users to fast track their product development using AGM facilities and expertise



Commitment to **UN Global Compact** – roadmap for end to end engagement and compelling benefits of graphene use

Why we will succeed



Meeting market and customer needs – Application focused



Commercial and execution expertise - sales and distribution network to accelerate commercial pipeline



Engaged, agile and responsive



COVID-19 effect managed well in-house. Working with customers to maximise opportunity



Strength of technology platform, know-how and IP



Sustainability initiative advancing



Well placed to make strong progress in 2021

Further Info

Contact info



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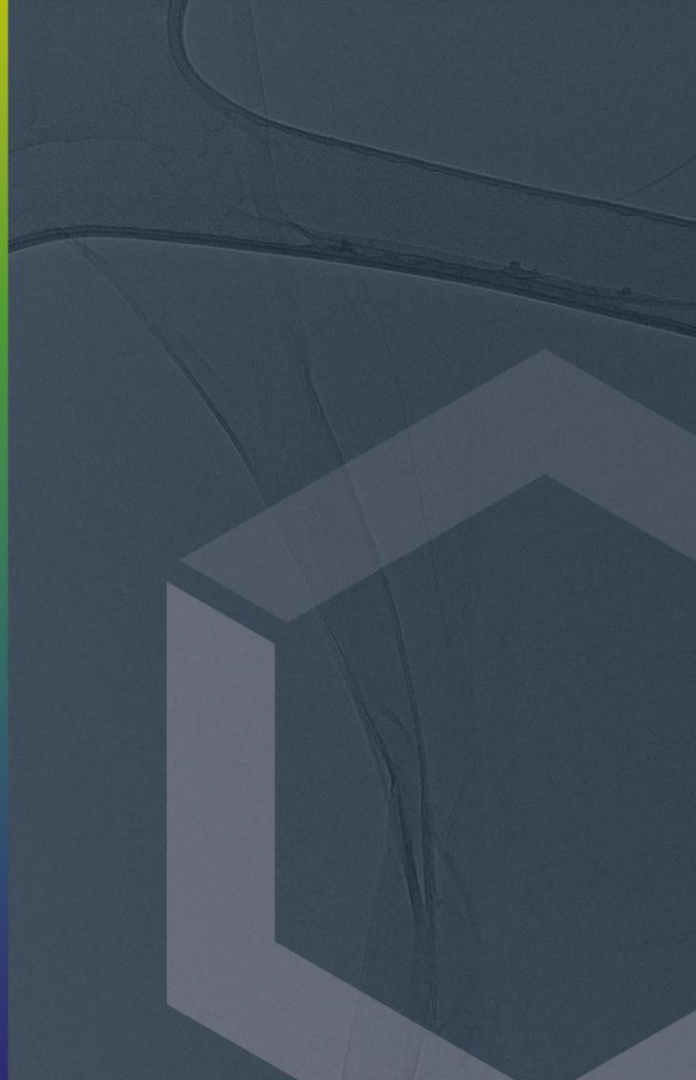


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Appendix

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Management Team



DR ADRIAN POTTS Chief Executive Officer

Joined AGM in January 2015, CEO from August 2018

Various senior roles in composites industry including UMECO

Experienced in strategy development, business turn-arounds and integrating new innovation

Based in Tulsa, Oklahoma



DAVID BLAIN Chief Financial Officer

Joined AGM in October 2018 from Nanoco Group PLC

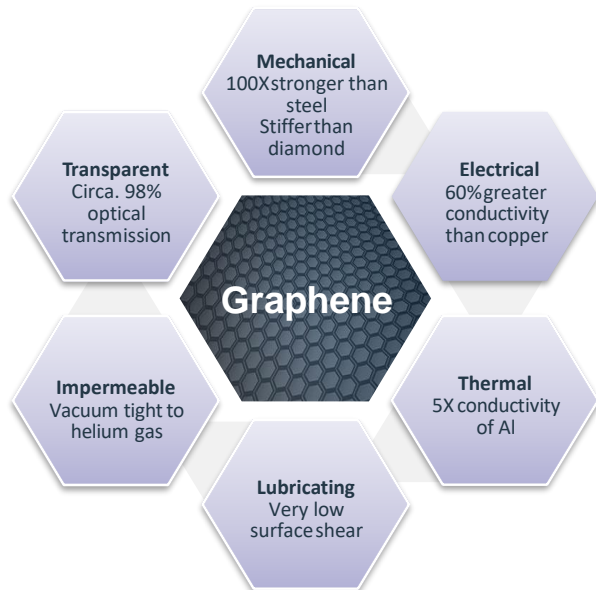
Substantial experience in PLCs and the nanomaterials industry

Experienced at delivering successful commercialisation of technology startups

Potential of Graphene



Key Properties



Brief history

- First isolated in 2004 by researchers at University of Manchester
- Nobel Prize 2010
- Following initial hype cycle, graphene has now reached a commercial reality, resulting in a sharp increase in customer projects and applications
- AGM AIM IPO 2013



AGM Application Technology – Potential to Reality

- The commercial value of graphene lies in the ability to **robustly transfer its intrinsic properties into other materials**, thus creating higher value materials and products which possess specifically enhanced characteristics
- AGM utilizes differentiated application technology to create both standardized and end-use specific customized solutions for a range of applications

AGM Commercial Focus – success underpinned by AGM's dispersion and application IP



Commercial value of graphene lies in the ability to **robustly transfer its intrinsic properties** into other materials, creating higher value materials and products which possess specifically enhanced characteristics



Graphene: A Performance Enhancer

Graphene has **significant anti-corrosion and chemical resistance benefits** which makes it useful in a number of end-markets

- Proven performance advantages open up nearer term commercial opportunities
- To make graphene effective, it needs to be dispersed into the host liquid
- **Effectively** – so that platelets are well separated to maximize utility
- **Safely** – key to new materials introduction

How does graphene improve materials performance?

- Chemical resistant coatings are designed to protect a substrate from degradation (chemical corrosion)
- **Graphene** possesses excellent impermeability
- **Graphene** dispersions added to coatings have been shown to substantially improve their **corrosion resistance**



Dispersion Technology: Key Highlights

AGM's patented dispersion technology

- Clear understanding of end-use need and how to achieve it
- AGM's "How-To" data enables easy use of graphene:
- Impressive technical data to support claims
- "How-To" knowledge to assist the customer practically
- Regulatory leadership for safe use of nano-materials

Customized end-to-end solutions

- Graphene is capable of delivering transformational improvements to a variety of materials
- Complex nature means successful integration is dependent upon highly collaborative relationship with customers
- Provide either standard dispersions (general purpose additives across a range of applications) or customized solutions

Financials & Operations



Cash Flow Summary

	Year ended 31 July 2020	Year ended 31 July 2019
	£'000	£'000
Operating activities		
Net cash used in operations	(3,465)	(4,184)
Net finance income	41	69
Tax received	1,316	–
Net cash used in operating activities	(2,108)	(4,115)
Investing activities		
Purchase of intangible assets	(121)	(77)
Purchase of property, plant and equipment	(221)	(116)
Net cash used in investing activities	(342)	(193)
Net decrease in net cash and cash deposits	(2,450)	(4,308)
Net cash and cash deposits at 31 July 2019	6,135	10,443
Net cash and cash deposits at 31 July 2020	3,685	6,135



Income Statement Summary

	Year ended 31 July 2020	Year ended 31 July 2019
	£'000	£'000
Revenue	83	50
Cost of sales	(215)	(472)
Other income	–	74
Gross loss	(132)	(348)
Operating expenses	(3,566)	(4,554)
EBITDA	(3,084)	(4,559)
Exceptional costs	(168)	–
Depreciation	(446)	(343)
Operating loss	(3,698)	(4,902)
Net finance income	33	67
Loss on ordinary activities before tax	(3,665)	(4,835)
Tax on loss on ordinary activities	476	908
Loss for period attributable to equity shareholders	(3,189)	(3,927)



Operations

Impact of COVID-19:

- Minimal impact on technology development though second half revenue slowed
- Company cash forecasts already based on very conservative revenue; funded to October 2021
- No impact on personnel count; did not need to downsize or lay any employees off
- Continued to sign new distributors and launch new products throughout 2020; working in accordance with all guidelines as we work to re-launch customers and increase sales
- Continue to work in accordance with government restrictions and guidelines

Patents granted and pending



	Number	No. of countries in which granted	Patents pending
Total granted	3	15	
Pending	9		Various stages throughout various territories

Major Shareholders



As of 30 October 2020, Applied Graphene Materials had in issue 49,704,292 Ordinary Shares of 2 pence each; No shares are held in treasury

Shareholder	% Holding
IP Group	14.83
Hargreaves Lansdown Stockbrokers	12.66
Herald Investment Management	9.35
Eden Tree Investment	7.54
Interactive Investor	5.40
HSDL Stockbrokers	4.41
North East Finance	4.16
University of Durham	2.48

Shareholder - Directors	% Holding
Professor Karl Coleman	3.58
Dr Bryan Dobson	0.27
Adrian Potts	0.14
Sean Christie	0.07
David Blain	0.07
Mike Townend	0.05



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