



**APPLIED
GRAPHENE
MATERIALS**

Leading innovation with graphene dispersions

Preliminary results

Twelve months ended 31 July 2021

13 October 2021

[appliedgraphenematerials.com](https://www.appliedgraphenematerials.com)

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*Proud to be a leading innovator in graphene dispersion
and application technology*



WE ARE GRAPHENE.

Disclaimer



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It should be noted that past performance cannot be relied on as a guide to future performance.

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

Presenting 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, Cytec Industrial

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

Based in Tulsa, Oklahoma, USA; works between USA and UK



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

Investment Summary

Ready to deliver the potential of Graphene nanoplatelet (GNP) materials technology



Commercializing market-leading graphene dispersion know-how and application technology in our core markets.



Good progress in core protective coatings market.

Car care sub-sector strong using our graphene dispersion additives to bring products to market.



Distributor reach expanded. Strong global platform of sales representation. Further distributors anticipated.



Increased pipeline of customers testing our products. Growth in customer products launched containing our graphene dispersions.



Technology and product development roadmap delivering demonstrable performance advantages. Developing next stage of technical development in green energy sector.



AGM product range growing. Expanded scope for engagement with increased product portfolio. New eco-friendly products launched.



Deep know-how on how to disperse a wider range of graphenes and how to use them. Platform technology enables broad customer engagement.



Strong cash position to support innovation and commercialization.

Operational highlights

Positive momentum despite COVID-19



Substantial technology development progress – New eco-friendly dispersions launched. Exfoliated graphenes incorporated into product mix. Coatings technology projects dissemination. New green energy roadmap developed.



Sales growth - 48% increase year on year.



New customer product launches – 8 new products in Car Care sector. 11 total in the period.



Car care sector – innovative & fast-to-market. Strong customer momentum with 40 engagements. Further new products anticipated with customers completing testing. 3 already announced.



Pipeline - Increased total number of engagements actively testing our materials to 181.



Distribution – 2 new distributors added. More anticipated.



Sustainable technology – Water based and eco-friendly products help sustainable formulating.



Collaboration for commercialization – Graphene Engineering Innovation Centre (GEIC) association.

Financial and strategic highlights for the period



Positive progress despite COVID-19

○ Revenue	£123,000 (2020: £83,000)
○ Operating expenses	reduced by £0.2 million to £3.3 million (2020: £3.5 million)
○ EBITDA*	loss of £3.1 million (2020: loss of £3.1 million)
○ Cash at bank	£6.3 million (2020: £3.7 million)
○ Basic EPS	loss of 5.6 pence per share (2020: loss of 6.4 pence)

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



Successful fundraise of £5.5 million (net) completed in February 2021, extending the Group's cash runway well into 2023. R&D tax credit of £461,000 received in February 2021.



REACH Graphene Consortium achieved **ECHA accreditation** for EU volume supply of graphene powder; overcomes significant barrier to deployment at scale. EPA engagement for USA market.



Branding update completed to reflect our ambition for global sales development through an enhanced distributor network.



Building-block technology platform enabling read-across to new applications areas.



Cross-trading of shares in USA on **OTCQX** from July 2021.

Customer engagement

Increased distributor coverage backed by regulatory approvals



- Two new distributors added:-
 - GoBarr in Turkey
 - ManHo Polymer in South Korea
- Regulatory approval to support product sales in each region.
- 42% of engagements through distribution.
- Product range expansion gives further customer engagement – broader range of graphenes plus green products.
- Intent to extend distribution further.



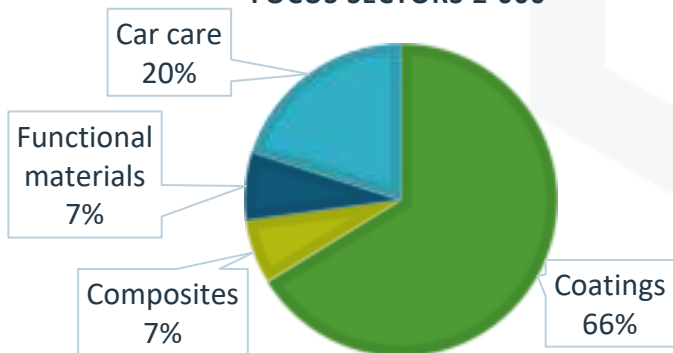
Opportunity pipeline

Increase in pipeline engagements testing our products

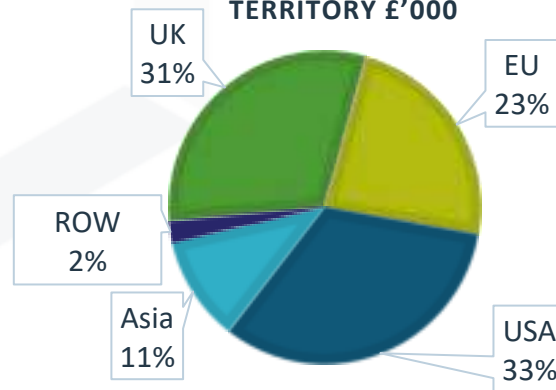


Pipeline Category	Number	£ Value*	Factored £ Value**
Valuation of current opportunity pipeline	181	£7.3m	£2.9m
Completed developments	19	£0.8m	£0.8m

VALUE OF SALES OPPORTUNITIES IN AGM'S FOUR FOCUS SECTORS £'000



VALUE OF SALES OPPORTUNITIES BY TERRITORY £'000



Engagement

Collaboration to further expand commercialisation



- High technology readiness with dispersion products.
- Strong application knowledge.
- Wider scope of graphene types used.
- Supporting:-
 - Direct sales
 - Distribution
 - Collaboration



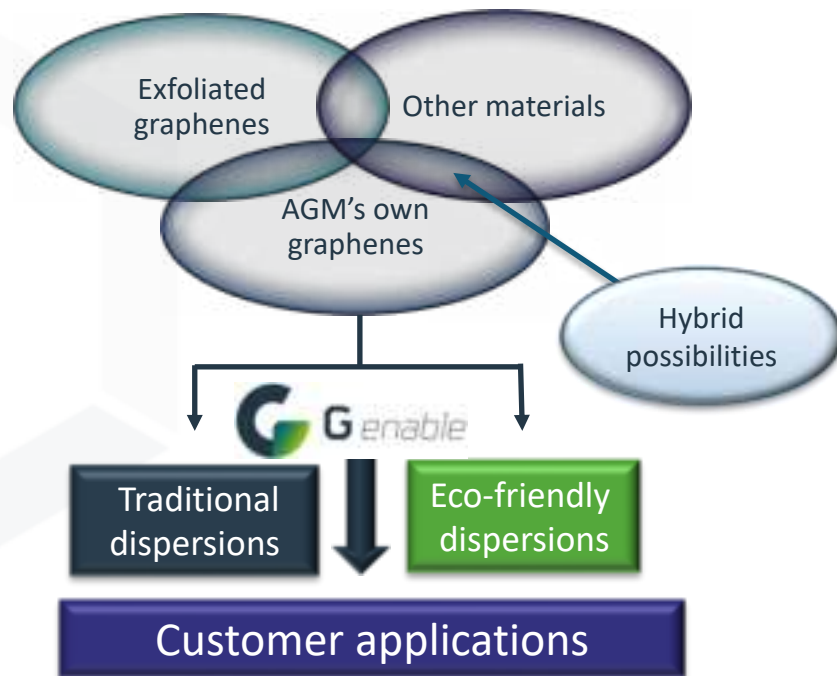
**The
Graphene
Council**

Market-leading dispersion package

Dispersions - enabling customers to use graphenes effectively, easily, safely

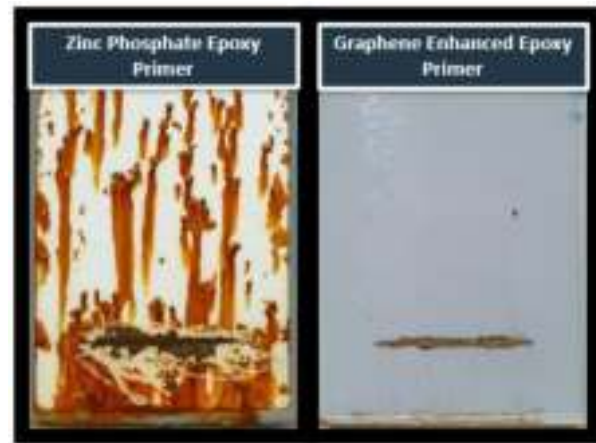
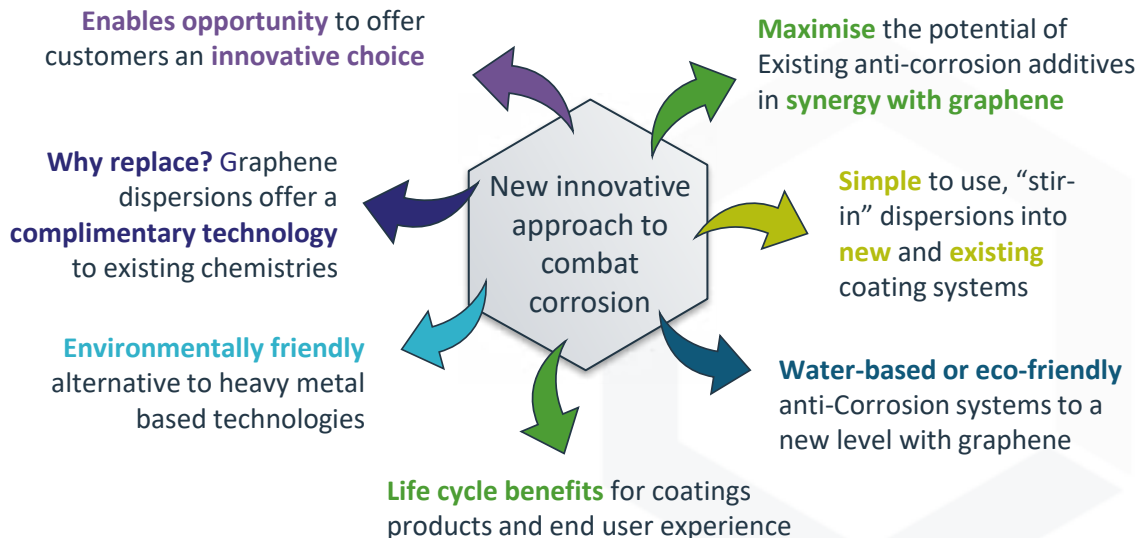


- Know-how on correctly dispersing graphene nanoplatelets.
- Expanded range includes exfoliated graphenes.
 - Range expansion -> broader application opportunity.
 - 39 standard dispersed products
- New eco-friendly products launched.
- Proven performance gains in exemplar systems backed with practical data and use advice. Now expanded to real-time environmental testing.
- Customer support through their integration process.
- Paid-for Innovation Accelerator package available to customers to fast-track development.



Graphene in core protective coatings market

Innovating with GNP dispersions – Real anti-corrosion potential



Corrosion performance after salt spray test



**ANTI-CORROSION &
BARRIER PERFORMANCE**



**ELECTRICAL
CONDUCTIVITY**



UV PROTECTION



**CHEMICAL
RESISTANCE**




**SYNERGIES WITH EXISTING
ACTIVE INGREDIENTS**

Protective coatings - successful engagement

Bringing together the power of graphene and coatings customers



New
primer
launched

- Strong **innovation partnership** with  anti-corrosion primer launched.
- Outstanding performance of graphene enhanced coatings; warranty of their coating is **extended by 25%.**
- The addition of graphene to coating systems...
 - **Reduces corrosion repair requirements.**
 - **Increases the service life of the coating.**
 - **Reduces lifetime coating costs.**

Product
in use

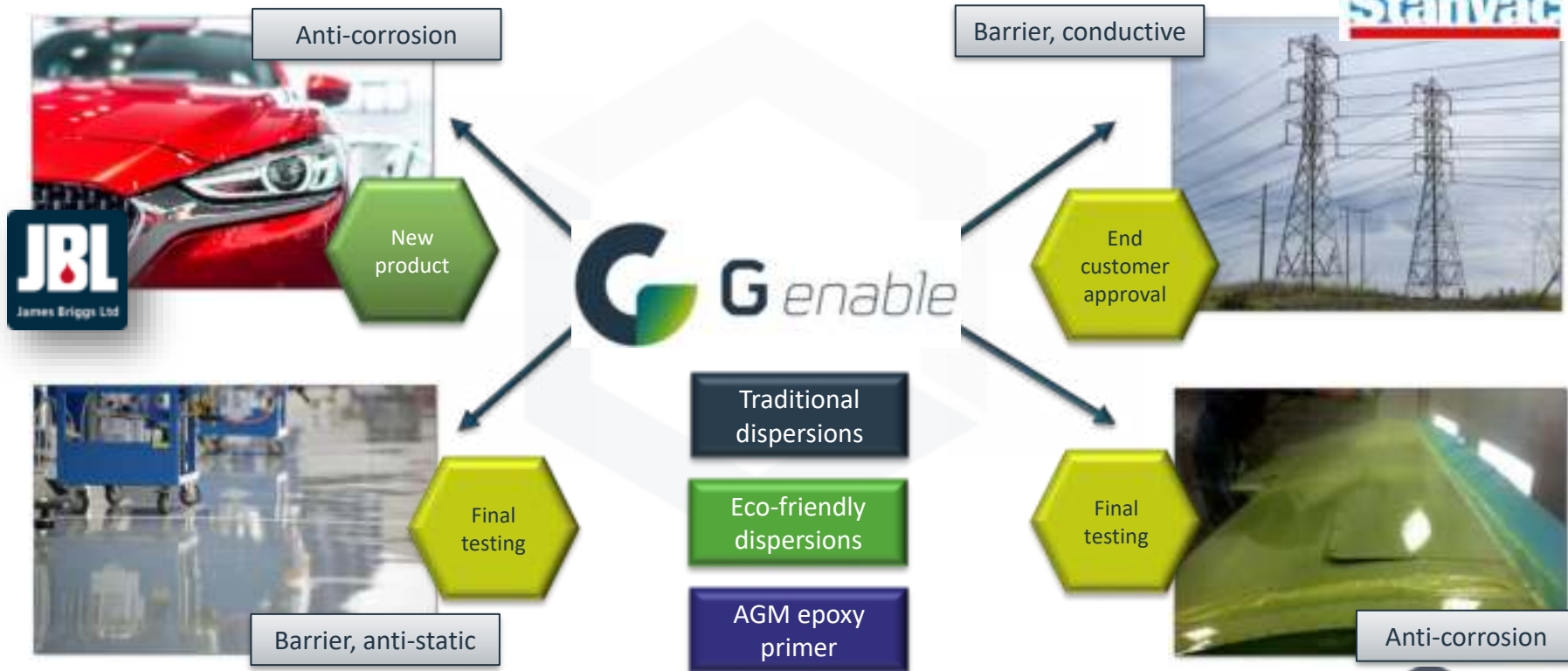


Protective coatings applications

Dispersions - enabling customers to use graphenes effectively, easily, safely



Stanvac



Car care sector

Faster to market innovation

What does graphene enhance....



Water Shedding



Barrier Performance



Thermal Performance



UV Protection

8 new
products
launched



Commercial car care products

- Dispersions well suited to this market.
- 8 new customer products in this sector with AGM dispersions.
- Waxes for car care.
- Detailers for car care.
- Formats for aerosolised materials.
- Retail and professional.

Composites sector

Longer term innovation

What does graphene enhance....



Fracture Behaviour



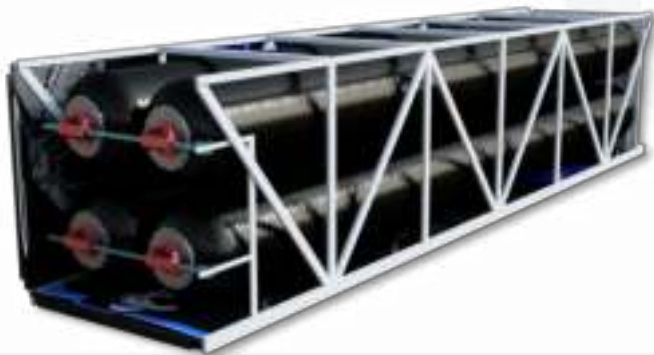
Permeability & Barrier



Mechanical Performance



Conductivity



INFINITE
COMPOSITES TECHNOLOGIES

Products
in use



Composites applications

- Pressure vessel innovation
 - Space
 - Aerospace
 - Hydrogen potential for aerospace and transportation
 - High performance composites products
- Dispersions used in commercial composites



Functional applications

Building block innovation for roadmap

What does graphene enhance....



Thermal
Conductivity



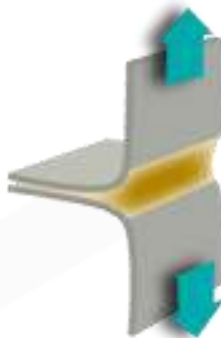
Barrier Properties



Electrical Conductivity



Printable



Functional applications

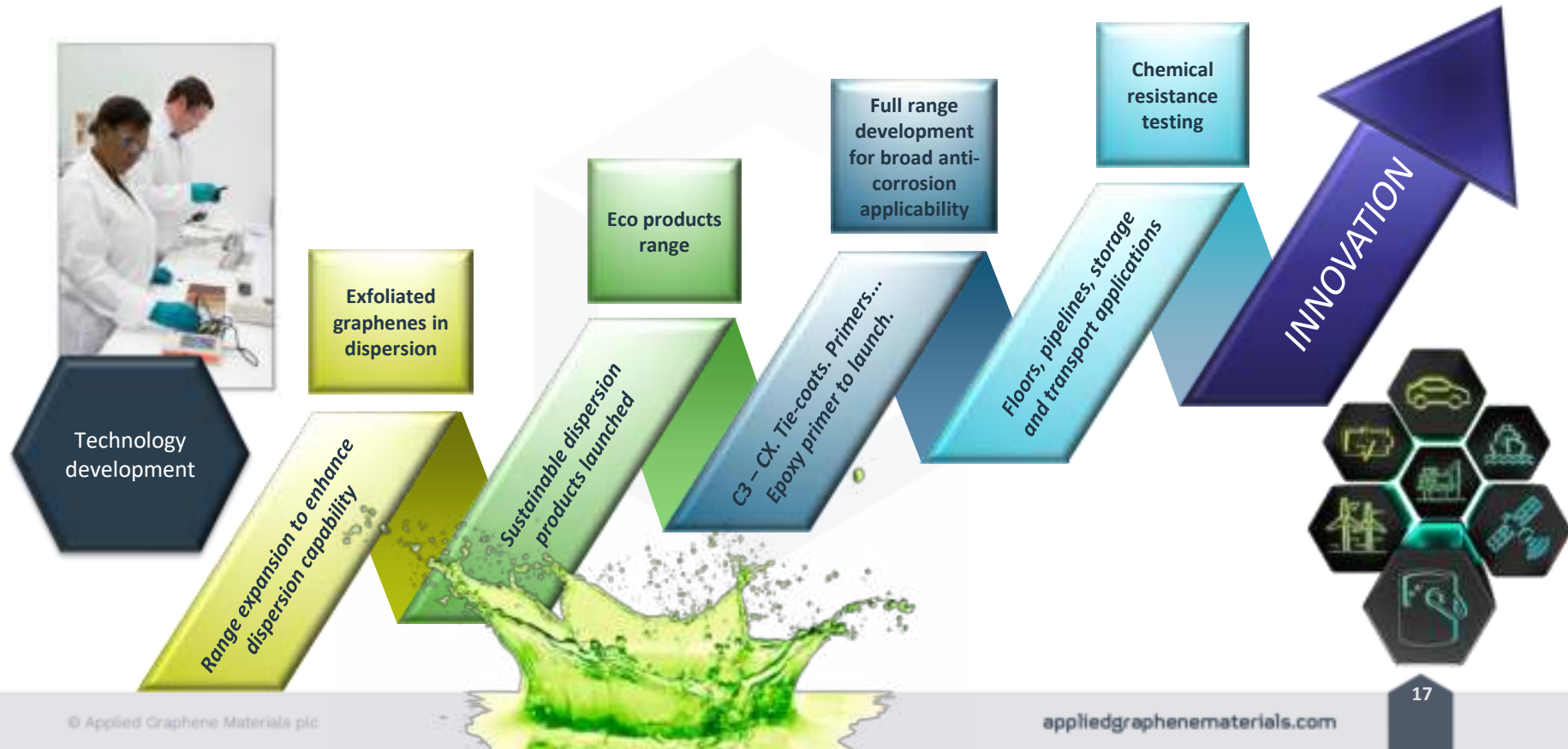
- Thermal paste adhesives
- Printable conductive products



Technology platform development

Innovation accelerating

Innovate. Perform. Stand out.



Technology platform development

Innovation accelerating



Benchmarking
against other
materials

Environment
testing &
validation

Technology
development

Further proof of performance.
France. EA. Freshwater.

Further guidance on fit
and function of graphene

Bringing together materials
technology for best fit

Hybrids,
dispersion
evolution

Improved protective
coatings platform

Wind
turbine,
electronics,
concrete
coatings

INNOVATION



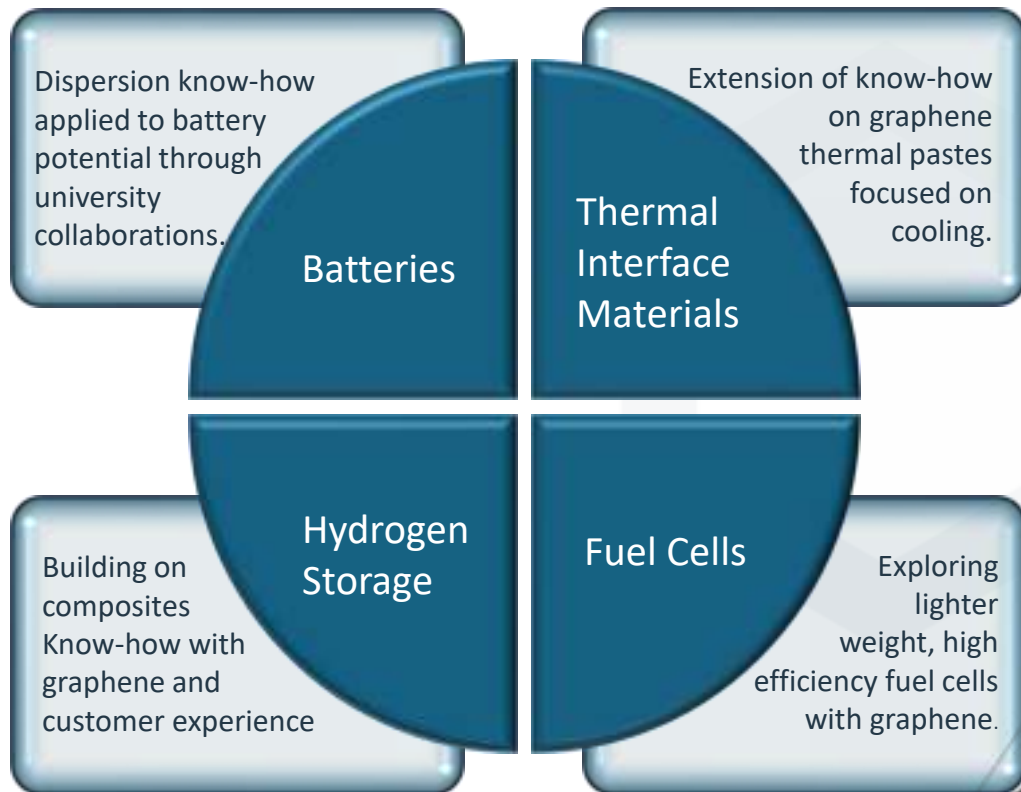
- ✓ Conductive Inks for printing applications
- ✓ Elastomers and textiles
- ✓ Composites testing through The Graphene Council at University of Maine

Technology development roadmap

Strategic application development



Innovate. Perform. Stand out.

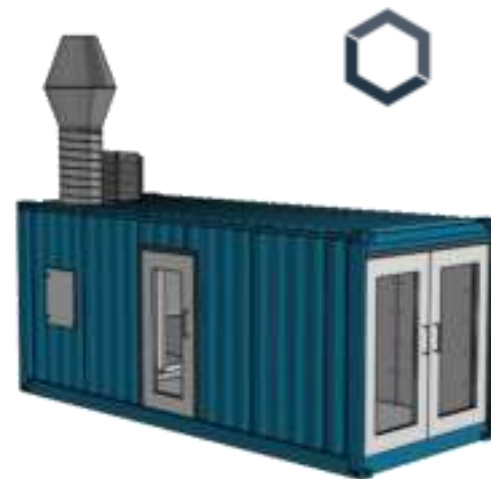


Future Innovation

Manufacturing and capacity

Investment in capability

- **Customer service & improved testing** – coatings spray booth.
- **Adding dispersion capacity** to serve expected demand.
- Optimised high speed dispersion.
- Dispersion types to cover expanded range of products for different types of graphenes.
- Leased new space on Wilton site added to house additional capacity.



Sustainability

Enabling sustainable technology solutions



○ Sustainable advantage from GNP additives.

○ Graphene

- Product life cycle advantage with graphene additives.
- Extended life.
- Higher performance.
- Toxic reduction potential – zinc, chromates etc. in coatings.

○ Alternative dispersion media – green range

- Water based dispersions. Patent anticipated.
- Bio-based materials – resins etc.
- Zero VOC.

○ Primary impact



○ Further benefits



ESG

Our approach to ESG gap review



Innovate. Perform. Stand out.



- ✓ Offset carbon emissions
- ✓ Initiatives to measure and to limit carbon footprint
- ✓ Plan for net zero carbon
- ✓ Supplier & distributor policy development
- ✓ Mental health & wellbeing policy
- ✓ Develop training further on Equality, Diversity & Inclusion
- ✓ ESG / Social Value Policy
- ✓ Regular Board discussion on Sustainability
- ✓ Gender pay gap

Regulatory

Regulatory work central to development of distributors and commercialization



- Scope - Regulatory approval for nanomaterials within regional frameworks.
- Major workstream in regulatory approval for our graphene dispersions to enable commercial volume sales.
- Central effort running in parallel with technology development programmes and distributor engagements.
 - EU and UK REACH.
 - EPA.
 - Regional in tandem with new distribution - Turkey and South Korea.
 - Nanotechnology Industries Association / The Graphene Council advocacy.



Financials and operations



Cash Flow Summary

	12 months ended 31 July 2021	12 months ended 31 July 2020
	£'000	£'000
Operating activities		
Net cash used in operations	(3,019)	(3,465)
Net finance (expense)/income	(6)	41
Tax received	461	1,316
Net cash used in operating activities	(2,564)	(2,108)
Investing activities		
Purchase of intangible assets	(151)	(121)
Purchase of property, plant and equipment	(67)	(221)
Net cash used in investing activities	(218)	(342)
Financing activities		
Issue of shares (net of costs)	5,552	-
Capital element of lease obligations	(147)	-
Net cash used in financing activities	5,405	-
Net increase/(decrease) in net cash and cash equivalents	2,623	(2,450)
Opening net cash and cash equivalents	3,685	6,135
Closing net cash and cash equivalents	6,308	3,685



Income Statement Summary

	12 months ended 31 July 2021	12 months ended 31 July 2020
	£'000	£'000
Revenue	123	83
Cost of sales	(363)	(215)
Gross loss	(240)	(132)
Operating expenses	(3,319)	(3,566)
LBITDA	(3,150)	(3,084)
Exceptional costs	-	(168)
Depreciation	(409)	(446)
Operating loss	(3,559)	(3,698)
Net finance expense	(6)	33
Loss on ordinary activities before tax	(3,565)	(3,665)
Tax on loss on ordinary activities	391	476
Loss for period attributable to equity shareholders	(3,174)	(3,189)



Operations

Impact of COVID-19:

- Minimal impact on technology development though revenues delayed .
- Our customers are still encountering difficulties with shortage of contractors.
- Continued to sign new distributors and launch new products throughout the financial year.
- Continued to work in accordance with government restrictions and guidelines.



Cash

Cash runway lasts well into 2023:

- £5.5 million (net) Fundraise announced in January 2021 and completed in February 2021.
- R&D tax credit of £461,000 received in February 2021.

Near-term success drivers

Innovate. Perform. Stand out



Innovate. Perform. Stand out.



Develop future roadmap based on **solid dispersion and application foundation**.



Support distributor sales growth with standard innovative product range & solid data.



Disseminate technology bringing **new product adjacencies** to enable broader customer engagements.



Develop sustainability – water based product, bio-based materials to address environmental challenges in the coatings sector.



Customer product launches validating our coatings technology and product roadmap to market.



Expand sales team - additional distributors, more regions, larger sales force.



Guide customers to successful outcomes with exceptional **knowledge base and supporting data**.



Collaborate from a solid technology readiness level.



Develop product sales – arising from increased customer product testing and evaluation.



Regulatory success to support future sales growth.



Stand out - OTCQX listing completed – access to stock for US investors.

Summary



- Ready for sales growth
- New AGM products to market. Increasing number of customers testing our products. Growth in customer product launches. Adding new distributors.
- Graphene dispersion and application know-how – solid technology platform to guide customers well.
- Completion of core technology projects. Dissemination. Launch of AGM eco-friendly products. Broader product range with different graphene types. Growing IP. Technology roadmap for our graphene dispersions in hydrogen and battery applications.
- Regulatory engagement for nanomaterials underpinning commercial traction and supporting distributors.
- Product offerings to meet industry sustainability ambitions.
- Cash runway extended beyond January 2023.





**APPLIED
GRAPHENE
MATERIALS**

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Appendix

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Customer pipeline

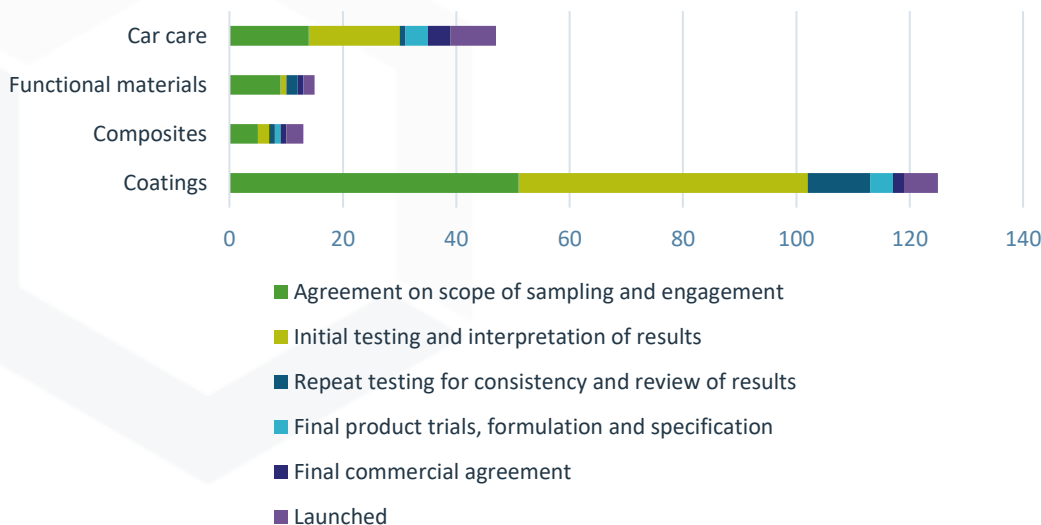
Growing list of engagements; strong car care sector; customer products launched



Pipeline

- 181 total ongoing engagements
- 40 in car care
- Distributors
 - Growing number of engagements
- Valuation
 - Around £3.7m weighted
- Total customer products launched 19

Sales opportunities at 31/7/21 by product and development stage



Customer engagement

Increased level of customers testing our products



Increased customer engagement



New customer products coming to market



Car care sector



8 new products in the year



Innovative and fast-moving



Protective coatings sector



Slower moving / more conservative
/ longer term testing



2 New products in the year



Longer term large potential



Graphene dispersion – The key to performance

Industry Leading Know-How in the Dispersion and application of GNPs



Technology to produce consistent and high quality standard **GNP** and **custom** dispersions to meet end user needs

- Easy to handle
- Simple to add
- Safe to use
- Optimised for performance
- Excellent in-can stability



39 Standard dispersions to match range of applications.
Eco-friendly products added to mix

Enabling industry to benefit from the **potential of graphene** in a **simple**, **safe** and **easy to formulate** way.