

Interim Results



April 2019

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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.*

New Executive Leadership

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Dr Adrian Potts - CEO



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

Lives in USA - spends his time 50:50 USA:UK to ensure widest commercial focus

David Blain - CFO



Joined AGM in October 2018 from Nanoco Group PLC

Substantial experience in PLCs and the nanomaterials industry

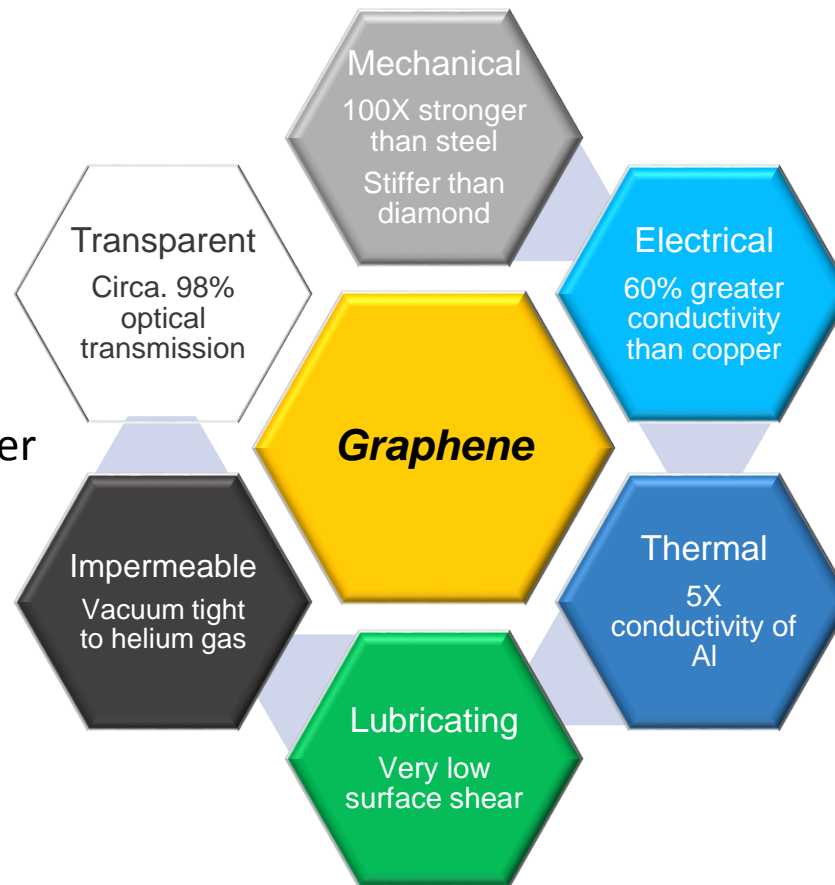
Experienced at delivering successful commercialisation of technology startups

What is Graphene? The potential

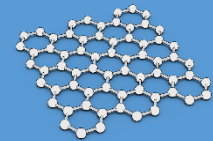
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Graphene has the potential to be the most **disruptive** material of the 21st Century

Isolated in 2004 at
University of Manchester
Nobel prize in 2010



Simplest form – a single atomic layer of carbon.

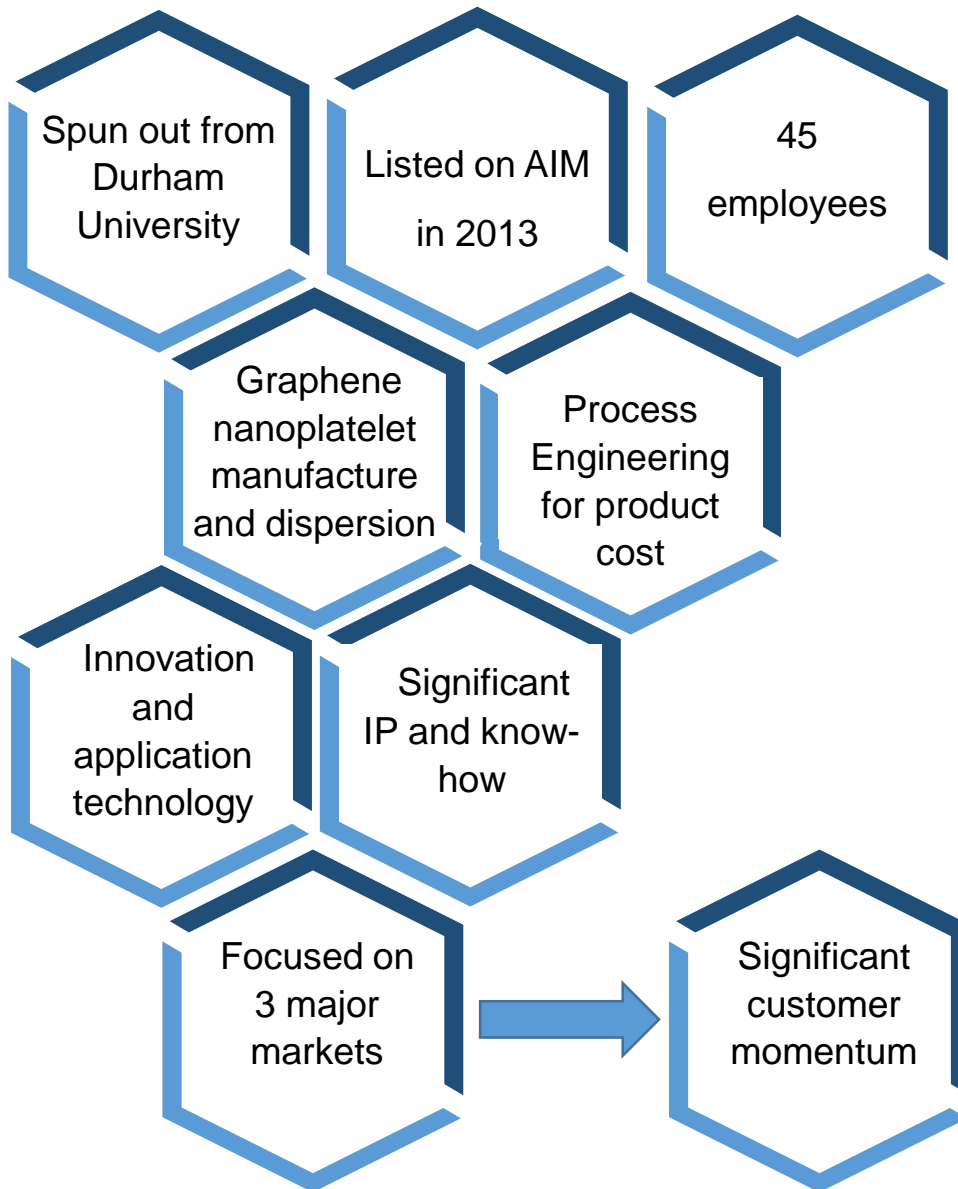


In practice – “platelets” of a few atomic layers of carbon that can be used to enhance other materials

*Remarkable performance potential. Challenge is **how to realise it**. Industry has faced significant barriers to successfully transferring the property enhancements that graphene brings into product materials*

About AGM

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Developments in the last six months

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Commercial

- Over 120 programs in sales pipeline - opportunities maturing towards revenue
- New distributors to give more routes to market for standard products
- Focused technical support to customers for application technology to enable success

Management

- New CEO and CFO appointed
- Detailed review of strategy
- Focus on accelerating commercial momentum

R&D

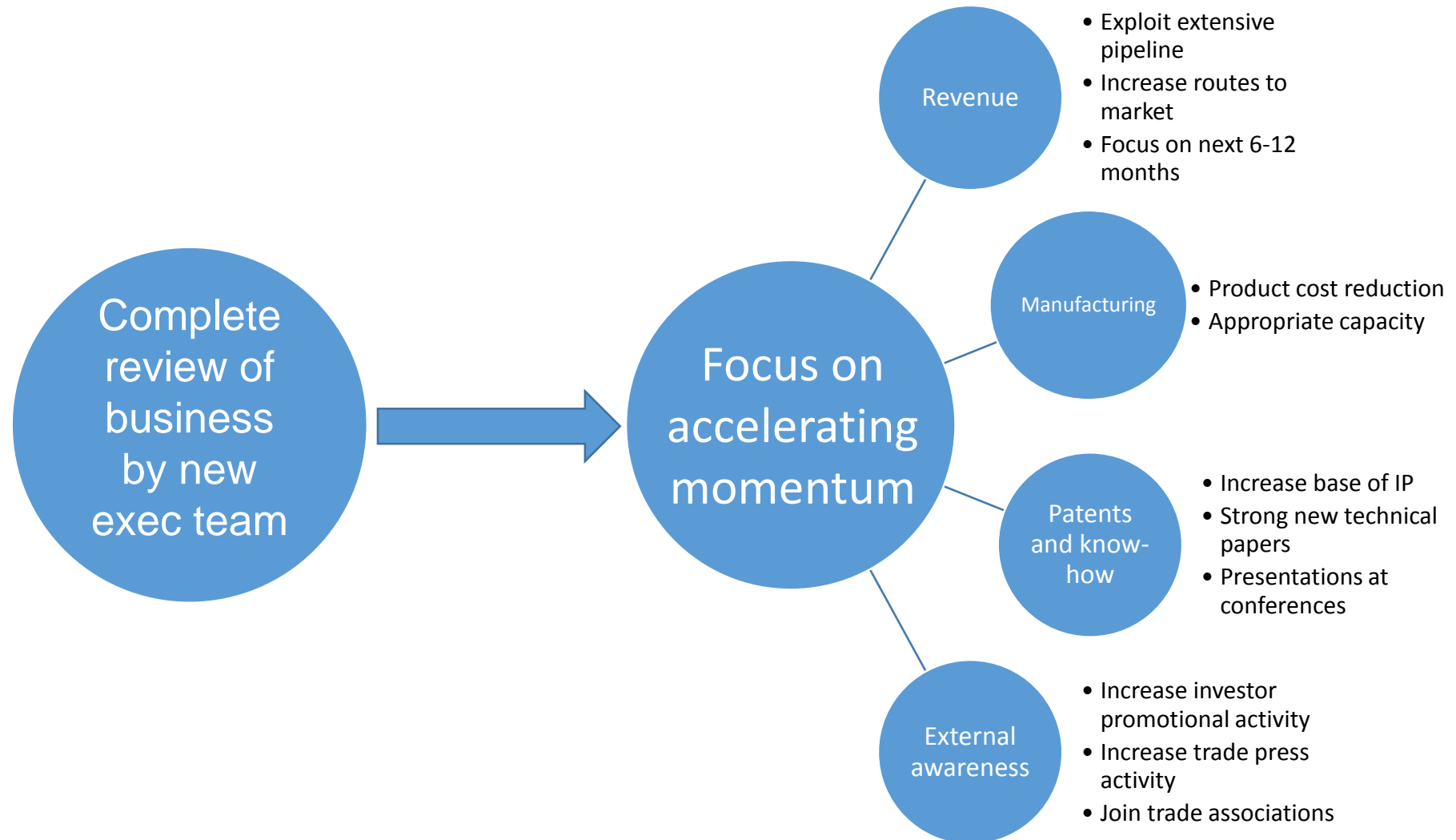
- Core expertise is knowing how to get graphene into dispersion and final application
- New technical data announced at recent conferences to support engagement
- Primary focus on paints and coatings

Financial

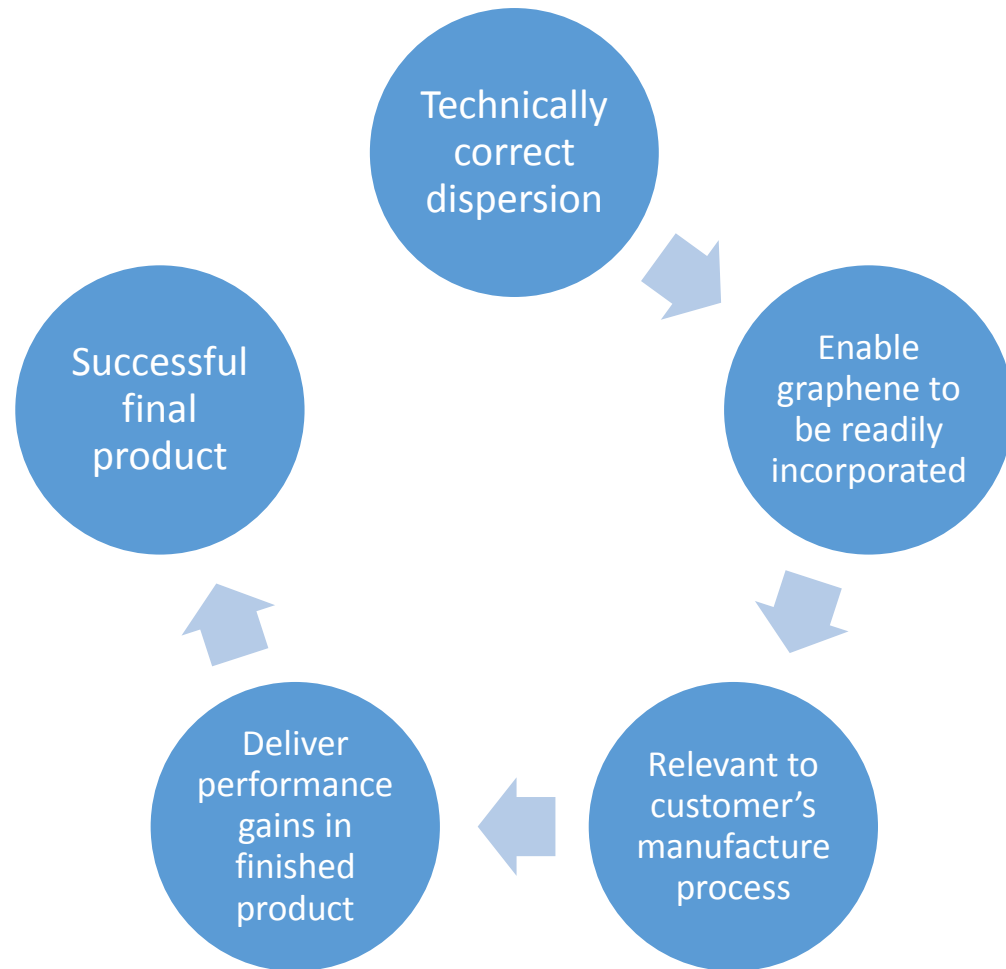
- Cash at 31 January 2019 was £8.2m (2018: (12.0m))
- Loss before tax for the period was £2.4m (2018: £2.3m)

Focus on accelerating momentum

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AGM's expertise is in incorporating graphene...



AGM's Business model

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Modular
manufacturing
process

Matched
dispersion
capability

High specification
graphene
products

Experienced
tech support
group



Focused engagements in key
markets based on liquid resin
solutions



Coatings - barrier
performance &
anti-corrosion

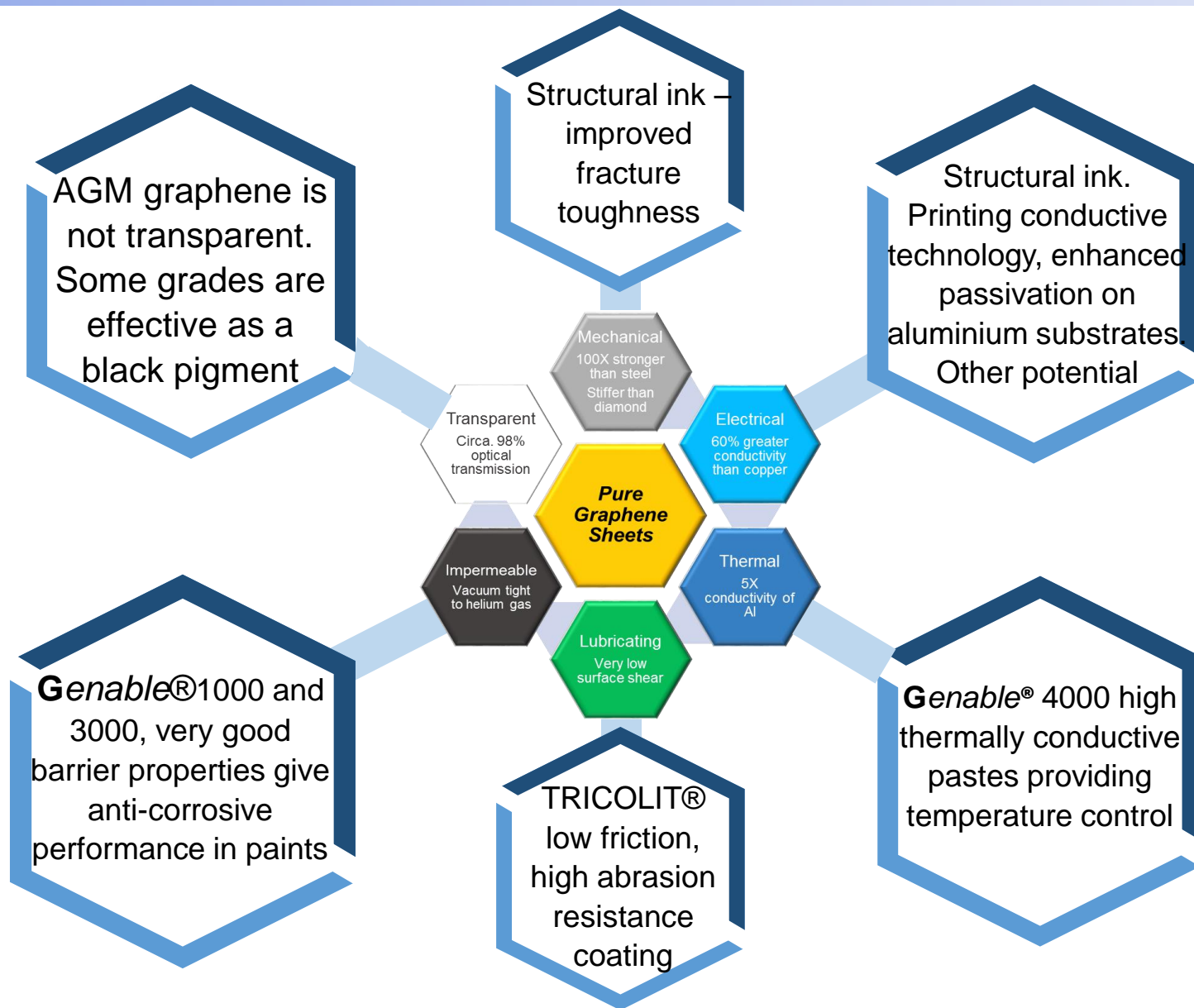
Composites,
adhesives,
elastomers

Functional
materials

Printing
platform
technology

How AGM applies the properties of Graphene

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Applications we are focused on

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Coatings - barrier
performance &
anti-corrosion



Composites,
adhesives,
elastomers



Functional
materials



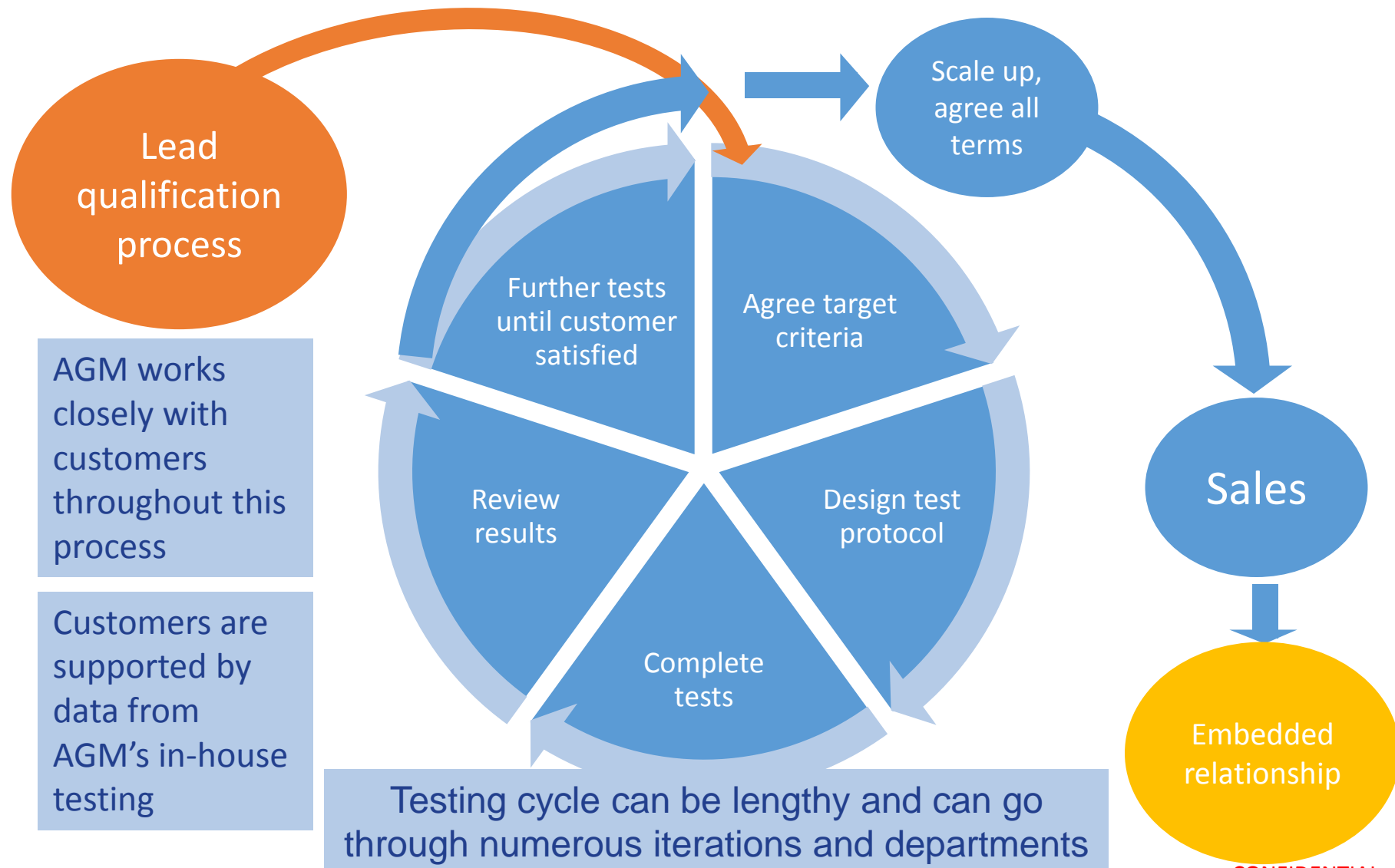
Printing
platform
technology



Our routes to market are through our UK, EU and US sales teams and distributors that have delivered a sales pipeline of over 120 ongoing programmes, 77% of which are in coatings

Sales cycle

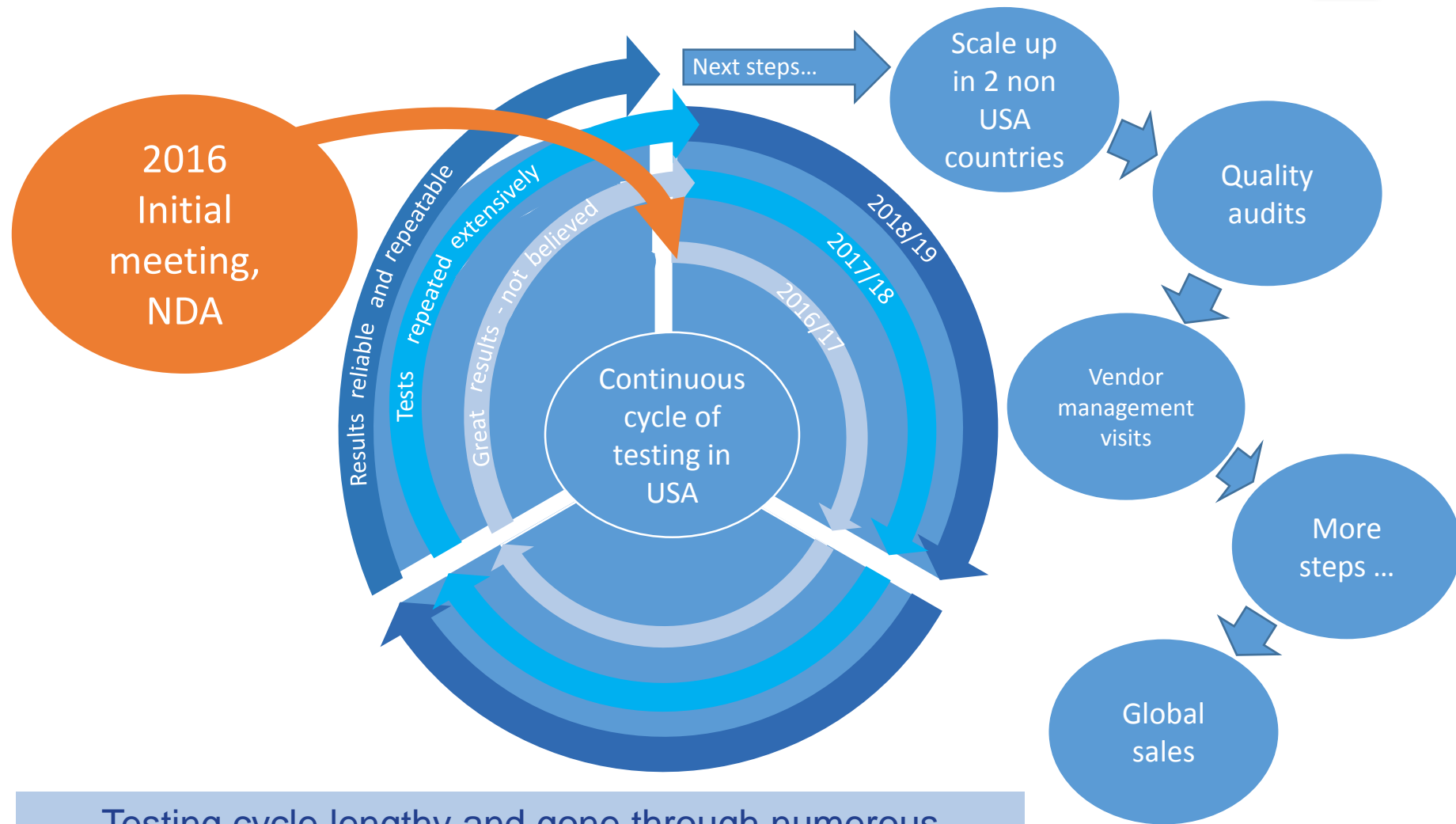
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Sales cycle case study – Coatings for Aero

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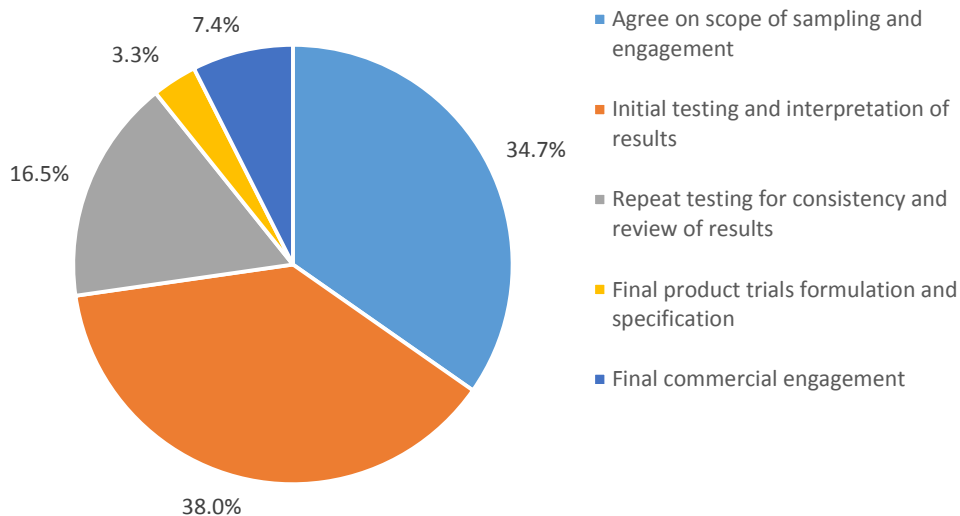
Testing cycle lengthy and gone through numerous iterations, departments and, in future, countries

Summary of sales pipeline

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Stage of development	Number of projects in pipeline			
	At 31 July 2018	Movement	At 31 January 2019	% movement
Agree on scope of sampling and engagement	33	9	42	27%
Initial testing and interpretation of results	54	(8)	46	(15%)
Repeat testing for consistency and review of results	23	(3)	20	(13%)
Final product trials formulation and specification	7	(1)	6	(14%)
Final commercial engagement	6	1	7	17%
Total	123	(2)	121	(2%)

Analysis of sales pipeline at 31/1/19



Pragmatic review of Pipeline to assess likelihood of success

The movement in the number of projects in the pipeline since 31 July 2018 is further analysed on the next slide

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Number of projects in pipeline vs July 2018

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Stage of development	Approval time				Total	
	Short	Medium	Long	Scouting/ unclear		
Agreement on scope of sampling and engagement	11 (+6)	18 (+1)	7 (-2)	6 (+4)	42 (+9)	
Initial testing and interpretation of results	8 (-5)	25 (-1)	12 (-3)	1 (+1)	46 (-8)	
Repeat testing for consistency and review of results	5 (-5)	13 (+3)	1 (-2)	1 (+1)	20 (-3)	
Final product trials formulation and specification		4 (+2)	2 (-3)		6 (-1)	
Final commercial engagement		4 (0)	3 (+1)		7 (+1)	
Totals at 31 January 2019		32	61	20	8	121
Movement since 31 July 2018		(-2)	(+1)	(-7)	(+6)	(-2)

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Specific developments - coatings

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James Briggs

- Finalising terms for Hycote launch in H2FY19
- Slightly delayed but longer term volume proposition remains strong

HMG

- HMG is to continue testing to better understand their opportunity with AGM
- A robust technology solution for HMG primer systems is expected towards the end of 2019

Steel coatings - barrier and anti-corrosion

- C3 mid-range anti-corrosion technology – multiple customer engagements
- Developing technology for harsh environment anti-corrosion technology well received

Specific developments - coatings

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Applied Nano systems

- The product offers clear advantages to the end user as a low-slip/low-friction coating
- Scale up trials are continuing with this customer

Genable

- Range of dispersions for ease of integration of graphene into a host material
- Facilitates the appointment of distributors

Aerospace

- Significant strides forwards in aerospace coating technology for undisclosed accounts
- Integration of graphenes into aluminium substrate coatings applications with a number of customers is starting to yield positive performance results

Specific developments - composites

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PFA/ Composites Evolution

- Positive progress in both performance testing and all-important manufacturability trials using prepreg methods
- Anticipation is high that this graphene-enhanced solution will result in a deliverable practical solution for this important market

Airbus

- Qualification with Airbus for use on satellite platform is approaching completion
- First orders expected in H2FY19/H1FY20

Structural ink

- The possibility to selectively deposit graphene materials in a composite structure to maximise performance, whilst minimising weight, continues to produce outstanding gains in a key parameter – fracture toughness

Functional materials

- Product launch of Genable 4400 thermal paste with independent distribution house in Q2 2019

Specific technical developments

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Manufacturing

- A key enabler is the transition from “development” to “standard” to “full production” dispersed materials
- Such activity enables a high level of production readiness

Anti-corrosion

- The launch of a truly environmentally friendly alternative to zinc-based additives for anti-corrosion primers represents a major achievement
- Moving towards CX hostile environments

Water based emulsions

- Environmentally friendly barrier performance enhancement
- Potentially faster to market as less onerous testing regimes

Specific technical developments

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Patents

- Patent portfolio expanded
- Principally in coating dispersions

NGI / GEIC

- MOU signed recently covering closer collaboration opportunities

Industry bodies

- Joined National Graphene Association and The Graphene Council
- Will present at the NGA Summit and engage in policy development

Applications – Paints and Coatings

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Benefits

Liquid resin based technology

Platelet materials resist moisture penetration

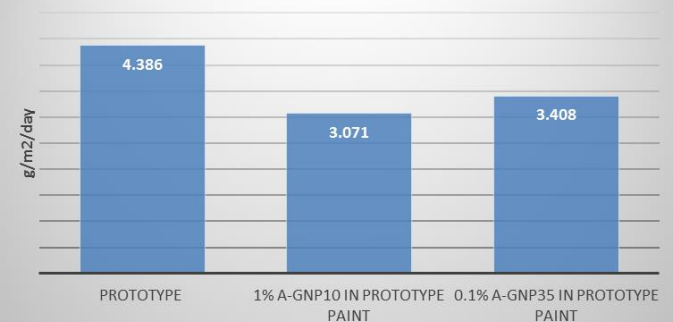
Barrier performance enhanced

Corrosion resistance enhanced

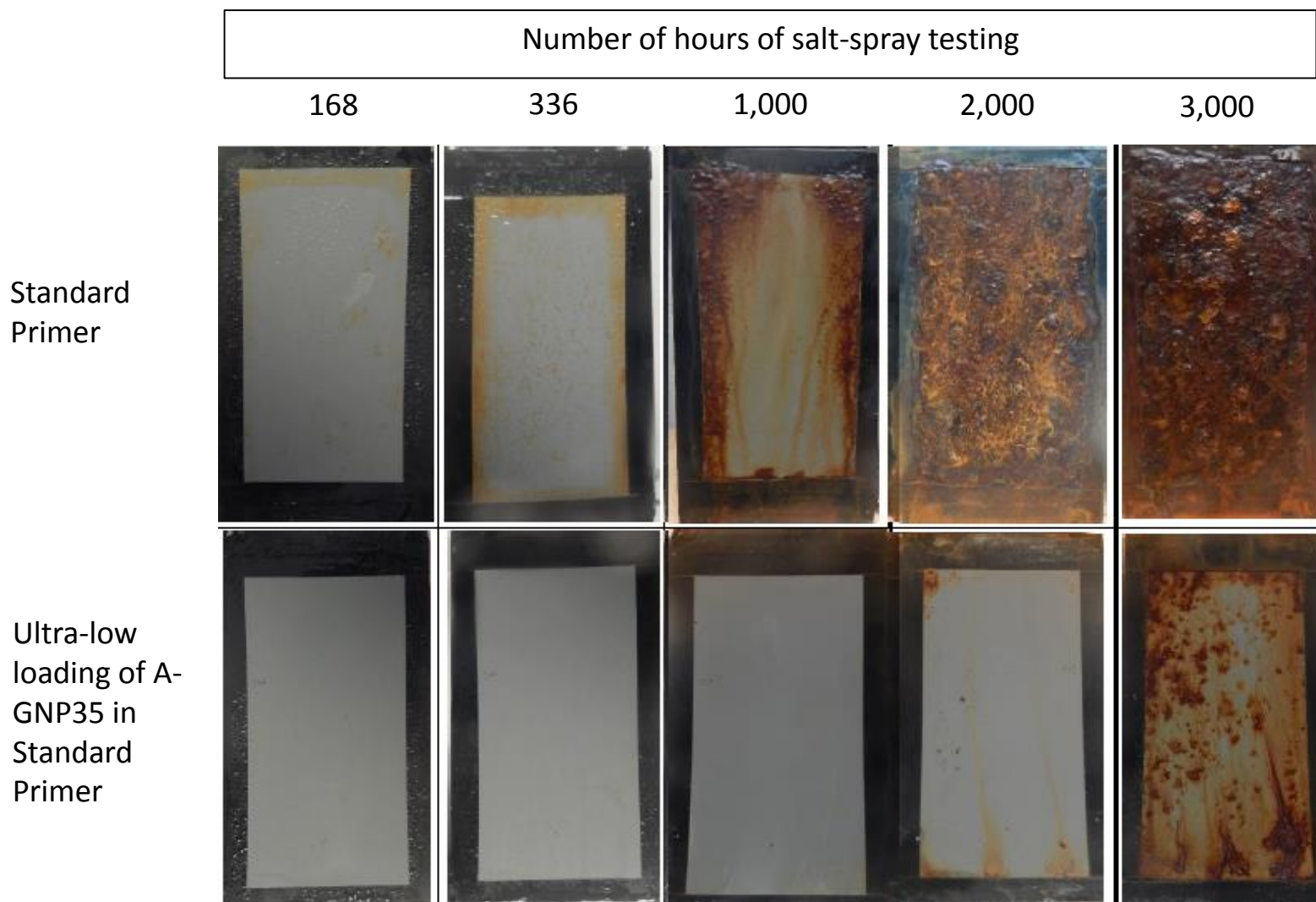
Potential side benefits



Water Vapour Transmission Rate



Substantial improvement to corrosion performance



A video showing the series of photos of another test to 3000 hours can be seen at:
<https://www.appliedgraphenematerials.com/news-events/archive/genable-anti-corrosion-technology-gains-further-recognition/>

Regulatory Compliance – ahead of the curve

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Engaged with SIEF consortium

Registration dossiers submitted in 2018 for Graphene

Graphene can now be used up to 10 tonne/annum without restriction in Europe.



Income Statement Summary

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Revenue arises from production and sample evaluation orders

Other income relates to grant income for composite developments

Cost of sales has increased as a result of increased rent, labour and materials used in preparing the plant for commercial production

Operating expenses (excluding exceptionals) increased due to additional labour costs

R&D tax credits for the current year are accrued on a monthly basis resulting in a credit of £200,000 for the period. In previous years the credit was recognised in full at the year end

	Unaudited		Audited
	6 months to 31 January		Year ended 31 July
	2019	2018	2018
	£'000	£'000	£'000
Revenue	26	54	77
Other income	23	30	126
	49	84	203
Cost of sales	(231)	(120)	(250)
Gross loss	(182)	(36)	(47)
Operating expenses	(2,226)	(2,275)	(4,555)
EBITDA	(2,233)	(1,952)	(3,984)
Exceptional costs	—	(205)	(307)
Depreciation of tangible fixed assets	(175)	(154)	(311)
Operating loss	(2,408)	(2,311)	(4,602)
Net finance income	34	20	57
PBTA	(2,474)	(2,086)	(4,238)
Exceptional costs	0	(205)	(307)
Loss on ordinary activities before tax	(2,374)	(2,291)	(4,545)
Tax on loss on ordinary activities	200	—	1,046
Loss for the period	(2,174)	(2,291)	(3,499)
Earnings per share (pence per share)			
Basic and diluted	(4.4)	(6.4)	(8.2)

Cashflow summary

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Cash balance of £8.2m is in line with Board expectations

Net cash utilised in operating activities shows an increase of £145k reflecting increases in operating costs compared to previous period

	Unaudited		Audited
	6 months to 31 January		Year ended 31 July
	2019	2018	2018
	£'000	£'000	£'000
Operating activities			
Net cash used in operations	(2,173)	(1,998)	(4,005)
Net finance income	45	15	53
Tax received	0	0	631
Net cash used in operating activities	(2,128)	(1,983)	(3,321)
Investing activities			
Purchase of intangible assets	(12)	(1)	(62)
Purchase of property, plant and equipment	(57)	(132)	(257)
Net cash used in investing activities	(69)	(133)	(319)
Financing activities			
Net proceeds from issue of Ordinary shares	0	9,369	9,375
Net cash generated from financing activities	0	9,369	9,375
Net increase/(decrease) in net cash and cash deposits	(2,197)	7,253	5,735
Net cash and cash deposits at 31 July 2018	10,443	4,708	4,708
Net cash and cash deposits at 31 January 2019	8,246	11,961	10,443

Summary

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Core Expertise

- Core technology of graphene manufacturing and dispersion know-how and application expertise sets us apart
- Patented process and application technology
- Strong technology base to develop coatings offering and continued opportunities with composites, ink and elastomers

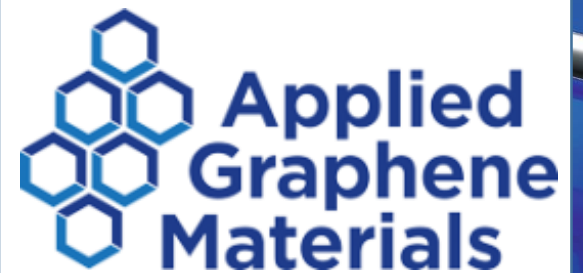
Commercial

- Growing industry recognition of anti-corrosion/barrier technology for coatings market
- Major opportunities in markets with higher barriers to entry where graphene could add substantial performance
- Early commercial engagements approaching product sales

Strategic

- Ahead of the curve on regulatory approval and EHS considerations for nanomaterials technology
- Focussed on accelerating momentum
- Strong cash position

Appendix



Major shareholders

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Shareholder	% holding
IP Group	19.09
Insight Investment	9.98
Herald Investment Management	9.61
Hargreaves Lansdown Stockbrokers	8.68
Eden Tree Investment	7.59
Ruffer	7.11
Baillie Gifford	4.84
Interactive Investor	3.01
HSDL Stockbrokers	2.82
University of Durham	2.49
Directors	
Professor Karl Coleman	3.60
Dr Bryan Dobson	0.27
Sean Christie	0.07
Mike Townend	0.05
Adrian Potts	0.04
David Blain	0.04

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AGM technical capabilities

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<i>Analysis</i>	<i>Information Gathered</i>
<i>Raman Spectroscopy</i>	<i>Composition, Degree of Graphitization</i>
<i>Electron Microscopy SEM/TEM</i>	<i>Morphology, Fracture surface analysis</i>
<i>Light Scattering</i>	<i>Particle Size Distribution</i>
<i>Thermogravimetric Analysis</i>	<i>Thermal Stability, moisture content, non-carbon residue</i>
<i>Turbidity Monitoring</i>	<i>Short and long term dispersion stability</i>
<i>Viscometry</i>	<i>Dispersion viscosity, rheology</i>
<i>UV Analysis</i>	<i>Dispersion characterisation</i>
<i>Mechanical Testing</i>	<i>Flexural modulus + strength, tensile modulus + strength</i>
<i>Electrical Testing</i>	<i>Sheet resistance, bulk resistivity</i>
<i>Thermal Analysis</i>	<i>Thermal conductivity</i>
<i>Electrical Impedance Spectroscopy</i>	<i>Corrosion potential, corrosion current, coating impedance</i>
<i>Synthetic Seawater Immersion Testing</i>	<i>Corrosion resistance</i>
<i>Salt Spray Testing</i>	<i>Corrosion resistance</i>
<i>Impact Testing</i>	<i>Coatings impact resistance</i>
<i>Abrasion Resistance Testing</i>	<i>Coatings performance</i>
<i>Chemical Resistance Analysis</i>	<i>Coatings performance</i>
<i>QUV</i>	<i>UV resistance</i>

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