GRAFT POLYMER (UK) PLC (LON:GPL)

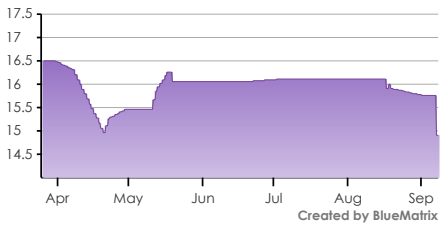
20 September 2022

proactive research

Specialty Chemicals

52-WEEK HIGH	**22.20p**
52-WEEK LOW	**14.50p**
PRICE	**14.90p**
MARKET CAP MLN	£15.51

Share Price



Major Shareholders

Victor Bolduev 29.26%
Alba Capital Limited 13.39%
Roby Zomer 6.08%*
Platypus Assets Pty Ltd 6.00%
Premier Miton 5.81%
*Roby Zomer holds these shares in an entity called Chitta Lu in which he has a beneficial ownership

Shares in issue	104,097,299
Avg Three-month trading volume	35,811
Primary Index	LSE
Next Key Announcement	Interim results - September

Company Information

Address: Emonska cesta 8,
1000 Ljubljana,
Slovenia
info@graftpolymer.com
Website: www.graftpolymer.com

Analyst Details

Richard Jeans
rjeans@proactiveinvestors.com

Unique opportunity in polymer modification

Building a strong EU operational niche from Slovenia

Graft Polymer (UK) PLC (LON:GPL) is focused on the development and commercial production of modified polymers, biological supplements and nano-drug delivery systems. The group was founded in 2017 to commercialise the accumulated technological experience gained through previously implemented projects. The focus is on exploiting opportunities that large participants in the market are less capable of delivering.

It has been a busy year for the group, starting with its listing on the Main Market of the LSE in January that raised £4.15mln (net) in the process. Five patents have been granted to the company across different jurisdictions and Graft Polymer has gained the requisite certification in Slovenia which will enable it to enter the B2C market. Graft Polymer's IP was effectively showcased in successful clinical trials by MGC Pharmaceuticals. Pre-payments have made on tailor-made equipment which will double Graft Polymer's production capacities. Finally, the company has recently announced it is now cash flow positive at its facility in Slovenia.

We highlight the following points on the investment case:

- **Highly experienced management team. CEO has more than 20 years working in the polymer industry while CFO has more than 20 years experience ranging from global blue-chip companies to hands on implementation in SMEs/start-ups and CMO has 10+ years of experience in project management and markets analysis.**
- **Expanding capacity. The maximum production capacity of the company's plant in Slovenia is 2,400 tonnes per annum. Following the capital investment, which was financed by the funds raised in the initial public offering (IPO), it will rise to around 4,500 metric tonnes. Current revenues reflect a small fraction of capacity. Hence, this will very significantly increase the revenue potential of the business.**
- **Operational base in Slovenia. The EU country is attractive for business. It has a good availability of skilled workers while transport networks provide excellent access to clients in mainland Europe and beyond.**
- **Expansion into bio/pharma. This move expands the opportunity into both drug delivery system (DDS) developments for pharmaceutical markets and the nutritional supplements in the lucrative B2C (business-to-consumer) sector.**

Financials and valuation

The company has shown solid growth trend since it was established in 2017, and it has a strong balance sheet position, with proforma net cash of around £3.8mln. We have created an illustrative income statement (see page 17) to give an indication of what the financials could potentially look like in the near-term and medium-term. On our assumptions, the stock trades on around four-times earnings in the medium-term. If management can successfully scale the business, particularly in higher-value niches including the B2C space, we believe there could be further significant revenue and earnings upside.

£000's. *7 months	2018	2019	2020	2021	2021*
Year end	31-May	31-May	31-May	31-May	31-Dec
Group revenue	0	29	330	520	219
Gross profit	0	16	284	490	101
Gross margin	N/A	55.2	86.1	94.2	46.1
Adjusted EBITDA	(486)	(618)	(352)	(335)	(900)
Adjusted EPS (p)	(1.0)	(1.0)	(0.8)	(0.7)	(1.4)

Victor Bolduev, chief executive officer, is the founder of the group. He has over 20 years of international polymer industry experience, particularly in polymer modification. Bolduev is the author of 11 patents in the polymer modification and pharmaceutical sectors and has developed several products brands for various polymer projects.

Yifat Steuer, chief financial officer, is an experienced CFO with 20+ years' experience ranging from global blue chip companies to hands on implementation in SMEs/start-ups. Steuer is a qualified CPA, with a proven track record in pharmaceuticals, manufacturing, logistics, distribution, medical technology, and digital health SMEs.

Pavel Kobzev, chief marketing officer, has more than 10 years experience in project management and markets analysis. He served in the Israeli Defence Forces Elite Intelligence 8200 Unit as Managing Operations Leader and has specific expertise in the security solutions and design industries.

Company background

Graft Polymer's core business comprises the development and production of polymer modifiers and drug delivery systems. The group was established in 2017 with its parent company incorporated in the UK while its operations, consisting of research and a manufacturing facility, are in Slovenia. The group has to date introduced more than 50 products to the market, and it has been generating sales since late 2018. These products include grafted polymer modifiers, nano-structured and cross-linking polymer alloys and a variety of delivery vehicles for pharma and bio applications.

The business is building a strong intellectual property (IP) base, which is essentially an accumulation of previous proven technology. In addition, Graft Polymer has recently been awarded patents which take the company's patent portfolio to seven -- four in Slovenia and three in Russia.

The group has developed a proprietary set of polymer modification technologies, which can improve existing products and processing methodologies by enhancing performance, simplifying manufacturing, reducing material consumption, widening the choice of feedstock and reducing costs. In particular, the group's techniques allow the combination of otherwise incompatible polymers, facilitating the creation of polymer composites engineered at a molecular level, that combine the attractive properties of different input materials. This enables customers to receive synergism of properties in polymer composites. The solutions and products offered by the group are designed to improve performance, reduce raw materials consumption and enhance the physical characteristic values of finished products or improve or modify their chemical interaction. In the past several years, there has been increased emphasis by the industry as a whole on applications of grafted polymers, which are produced by monomers being covalently bonded and polymerised as side chains onto the main polymer chain (the backbone).

In 2020, the group launched a new division named GraftBio, to develop intellectual property for Bio/Pharma applications. This includes a drug delivery system (DDS) to support and provide solutions to the market, which had been heavily impacted by the COVID-19 pandemic. The GraftBio division has recently obtained Hazard Analysis and Critical Control Point (HACCP) certification for its small-scale production facility in Slovenia which will enable Graft Polymer to enter the B2C market and thereby introduce a further revenue stream to its business. GraftBio has developed a set of drug delivery platforms which can be licensed to third parties. The group's initial customer for these platforms is MGC Pharmaceuticals in relation to MGC's CimetrA and CannEpil/CogniCan products. The group expects to receive royalty payments resulting from the sale of CimetrA and CannEpil products.

Research and development is key for the company - Graft Polymer is determined to be creative and provide new solutions for its clients. Indeed, the group it is often asked to provide new formulae and approaches that clients are prepared to put through trials and adopt.

The company has around 20 employees (including consultants) as follows:

- Two in the polymer laboratory
- Two in the bio laboratory
- Three in the technical department
- Four in the machinery hall
- Two sales and marketing employees
- Six directors (including a company secretary)

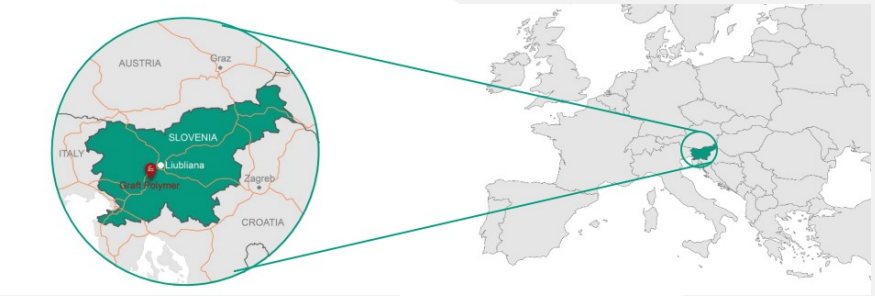
In addition, the company is in the process of hiring a head of sales to the polymer and bio department, based in Slovenia, to accelerate the sales process.

Slovenia is business friendly

Why did management choose to base its operations in Slovenia?

The group's core research and manufacturing operations is in Borovnica, Slovenia, which is about 20 kilometres southwest of the national capital Ljubljana. Slovenia is an extremely supportive business friendly jurisdiction within the European Union and has a highly skilled workforce operating at competitive wage levels. The country is a European centre for injection moulding, particularly in the vehicle industry, which extends its technical competency.

Slovenia has excellent transport infrastructure including road and rail connections and an international seaport, Koper, on the Adriatic Sea. Transportation/logistics is an important consideration as products are shipped to customers in Europe and globally.



What is a polymer?

A polymer is composed of very large molecules, called macromolecules, that are multiples of simpler chemical units called monomers. Polymers make up many of the materials in living organisms, including proteins, cellulose, and nucleic acids. Further, they constitute the basis of such minerals as diamond, quartz, and feldspar and man-made materials such as concrete, glass, paper, plastics, and rubbers. Polymer's have unique physical properties including toughness, high elasticity, viscoelasticity, and a tendency to form amorphous and semi-crystalline structures.

Polymers can be either naturally occurring or synthetic (man made). Both types are very wide-ranging.

- Natural polymeric materials include hemp, shellac, amber, wool, silk, natural rubber and cellulose, which is the main constituent of wood and paper
- Synthetic polymers include polyethylene, polypropylene, polystyrene, polyvinyl chloride, synthetic rubber, phenol formaldehyde resin (or Bakelite), neoprene, nylon, polyacrylonitrile, PVB and silicone

An indispensable process

What is polymer modification and why is it necessary?

The global demand for polymer materials, which is driven by cost reduction, improved performance and environmental advantages can be satisfied by two solutions:

- Synthesis of new polymers
- Modification of existing polymers (hybrid approach)

However, it is virtually impossible to synthesise a new polymer that fully meets international market requirements for 'synergism of properties'. Consequently, the only viable and cost-effective industrial route to address this challenge is through the modification of existing polymers. Many polymers are immiscible and incompatible by nature. Polymer modification can meet such challenges by delivering, through a range of techniques, properties that finish and enhance the commodity product, frequently resulting in an entirely new molecular architecture.

Market challenges in the field of composite materials include:

- Finished product weight reduction
- Finished product cost reduction

- Synergistic mix of the best properties of composite components
- Environmentally responsible production process of the composite material
- Industrial scalability of modification technologies
- Finished product durability and recyclable characteristics to increase lifespan and reduce plastic waste

Many polymers are immiscible and incompatible by nature. Polymer modification can solve this problem. As a result, it is possible to develop new composite products which, due to the materials being previously incompatible, have the following physical and chemical features:

- Impact resistant
- Fire retardant
- Low/high temperature resistant
- Abrasive resistant
- Chemical resistant
- Controlled barrier properties

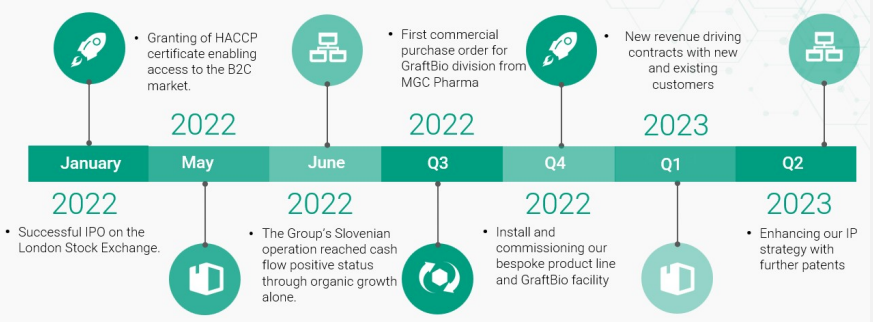
Develop IP, collaborate and build relationships to grow market share

Strategy

Key components of the group's strategy are outlined below:

- Develop intellectual property and new technologies to provide novel products and new solutions for new market challenges and protect the group's key intellectual property including through patenting
- Grow the group's share in its core polymer modifier market using key distributors around the world
- Collaborate with a few big players/refiners for mutual development and production of grafted products and
- Focus on being intimately involved in product development with clients using the group's base materials to secure long-term orders

Key milestones timeline 2022-2023



Source: Graft Polymer presentation

Sits between refiners, compounders and processors

The group's position in the manufacturing chain

As a commercial supplier of polymer modifiers, the group sells products to refiners, compounders and processors. Graft Polymer sits in the middle (see chart below) and works closely with all three categories.

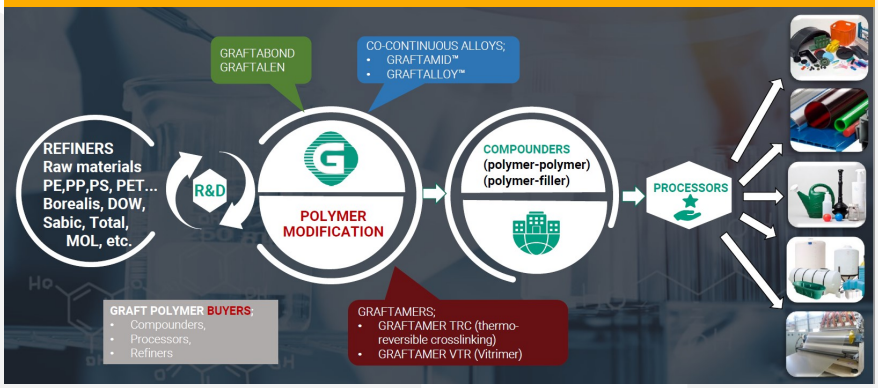
- **Refiners** are typically large enterprises that produce virgin polymers as commodities, including polyethylene, polypropylene, polyamide. They often seek to upgrade their existing product portfolio or develop some innovative grades. Graft Polymer provides them with modifiers or master batches to add during their process to increase monomer content, raise modulus, increase MFI (melt flow index, which is relevant in processing), or improve other properties.
- **Compounders** are the direct customers of Graft Polymer and produce composites, mixtures of virgin polymers, modifiers and/or fillers. These composites are then supplied by the compounders to processors who produce finished or intermediate products, such as injection or compression moulded structures, pipes, blown films and packaging.

- **Processors**. The group can also produce final composites, generally focused on polymer-polymer alloys. In these cases, the group's products go directly to processors.

As shown in the diagram below, polymer modification involves entirely business-to-business (B2B) sales. Furthermore, modifiers add commercially critical properties to finished products, which introduces some conservatism with customers in their willingness to use alternative products. Typically, the process from first introduction of a potential new polymer modification technique to commercial sales is in the range of one to five years.

As the company provides a broad range of services, it is able to work across many sectors, such as automotive, packaging and medical.

Graft Polymer's role in the manufacturing chain



Source: Graft Polymer

IPO helps fund expansion

Initial public offering

The company floated on the Main Market of the London Stock Exchange in January 2022. As a result of the flotation, the company issued 2.32mln news shares at 21.5p in a placing and subscription, raising approximately £5.0mln gross (£4.15mln net).

The company's use of the proceeds is as follows:

- Additional production line and further expansion – £2.0mln
- Investment relating to HACCP and GMP certification – £0.6mln
- Lab upgrades, research and development costs and future IP registration – £0.7mln (patent grants have already been announced)
- Sales and marketing and general corporate working capital purposes – £0.85mln

In connection with the placing, 1,255,814 warrants have been issued to Turner Pope (the company's broker), with an exercise price of 21.5 pence, and a term of 3 years from the flotation.

Patents

Patenting is a critical element in its intellectual property strategy. The company has been granted seven patents, while other patents have been, and will continue to be, applied for across multiple jurisdictions.

Capital expenditure

The company recently announced the extra production line equipment while additional manufacturing capacity is expected to be announced by the end of the year. The recent equipment purchased include:

- **A microwave dryer tunnel for porous granules drying process.** This equipment is pivotal to the optimisation and commercialisation of the group's high value, low competition, GRAFTAPOR and GRAFTAKIT products.

The microwave dryer increases the capacity from 150kg per shift to 350kg per shift by significantly reducing the drying time of porous granules, therefore, reducing the cost of the product to customers by up to 30% and widening the market for these two products.

- **Custom-made equipment for manufacturing of high-quality nanoemulsions** for drug delivery systems and bio supplements. The equipment will allow the group's GraftBio Division to deliver higher-level advanced Bio/Pharma manufacturing solutions based on Graft Polymer drug delivery systems developments.
- **An ozone/plasma polymer modification module.** This equipment offers the potential to transform current methods of fluoropolymer modification which can be expensive, unsafe, and environmentally unfriendly. Once proven, the ozone/ polymer modification module will revolutionise the fluoropolymer sector, due to its industrial scalability and efficient production. It is currently anticipated that two major classes of products can be modified, the first being powder coatings for use in responsible applications where high chemical resistance is a priority and the second in (nano)alloys to increase abrasion resistance, temperature resistance, impact strength and reduce the friction coefficient.

Significant upscaling of capacity

Production capacity

The maximum production capacity of the company's manufacturing facility in Slovenia is 2,400 metric tonnes per annum, which is based on the assumption of 1.5-2 working shifts per day. Following the capital investment, financed by the IPO, it will rise to 4,500 metric tonnes. These numbers would rise to 4,000 and 6,000 respectively, based on three full shifts per day. Clearly these numbers are estimates as Graft Polymer is a multi-product production plant and different products require different materials and a different scope of working.

Five new patents takes total to seven

Intellectual property

The company continues to develop multiple products for pharmaceutical, industrial and other customers, focusing on improved polymer performance and addressing customers' specific manufacturing and commercial challenges. The group is committed to protecting its IP and patenting is an important element of the group's intellectual property strategy. Graft Polymer has to date been granted seven patents that apply to Slovenia and Russia.

Recently Graft Polymer was granted four patents from the Slovenian Intellectual Property Office (SIPO) and one from the Federal Intellectual Property Office (FIPO) of Russia. These patents cover the company's proprietary self-nano-emulsifying drug delivery system (SNEDDS) as well as other products.

The patents granted are outlined below:

- SIPO 26056, covering self-emulsifying concentrate of cannabinoid-ionic complex and method for its preparation - we note the related announcement by MGC Pharmaceuticals (LSE:MXC, ASX:MXC) in April
- FIPO 2765946, covering supersaturated self-nano-emulsifying drug delivery system for slightly water-soluble pharmaceutical compositions and method for its preparation
- SIPO 26054, covering super-saturable oil-free self-nano-emulsifying drug delivery system for poorly water-soluble pharmaceuticals composition and procedure of preparation thereof
- SIPO 26070, covering the method for industrial production of modified polymers and device for its realisation, and
- SIPO 26071, covering the method for production of a modified polymer.

In addition, the company has been awarded two further patents by the FIPO. All these patents are held by, or are in the process of being transferred to, Graft Polymer UK IP, a wholly-owned subsidiary of the company.

Investing for growth in 2022

Final fiscal year 2021 results

The company reported its maiden results as a listed company in late June, which are for a seven-month period ending December 2021. The group generated revenue of £219k in the seven months along with an operating loss of £946k. This compared with £520k revenue in the twelve months to May 2021, along with an operating loss of £444k. The group finished the period with net debt of£360k. The company did not declare a dividend.

More important than the numbers is the progress being made to drive the business forward. After the period end the group raised net proceeds of £4.15mln in the IPO. Progress since the IPO, which is supported by the fundraising, include:

- **Manufacturing capacity.** The group is on target to double the manufacturing capacity at its research and production facility in Slovenia by the end of the year
- **GraftBio progress.** Investment has been made in a HACCP and food grade 'GMP' certification at the group's facility in Slovenia. The division has already received its first material commercial purchase order for an anti-inflammatory supplement to be sold in the United States
- **Lab upgrades and research and development costs and future IP registration.** The group expects to upgrade a number of its production lines to meet specific customer production and research and development needs, and
- **Sales and marketing and general corporate purposes.** The expected increase in the group's sales over the course of the next two years is likely to lead to an increase in both inventory and marketing opportunities

A cumulation of previous expertise

Company history

The group evolved through the cumulation of previous expertise gained in Thailand and Russia, along with industry contacts, through projects implemented over some 25 years. The Graft Polymer parent company was incorporated as a UK company in 2017 and an innovative research manufacturing facility was constructed and commissioned in Slovenia during 2018.

In late 2018, the group began its first commercial sales to various polymer compounders in the automotive, packaging, construction, consumer products, clothing, aerospace, healthcare and medical markets. Since then, the group has introduced more than 50 products to the market.

Company history



Source: Graft Polymer

In 2020 Graft Polymer launched a new BIO division to develop intellectual property in the therapeutic field, including a nanotech drug delivery system. The COVID-19 pandemic held back growth, with many customers suffering from the economic fallout, and the focus during the period was on product development and expansion of the distribution network. The company also signed agreements

with MGC Pharmaceuticals and an unnamed Swiss biotech company, with the latter generating initial revenues in 2021.

The company floated on the Main Market of London Stock Exchange in January 2022 raising gross proceeds of £5mln in the process.

Bio division creates new revenue streams

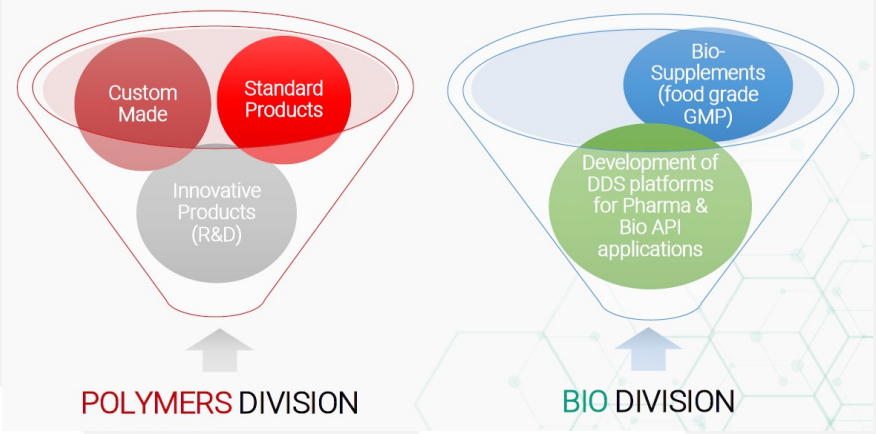
Two divisions

The group consists of two divisions - the core polymers unit and the new bio division, GraftBio. The core polymers unit sells modifiers to companies, and as such is a B2B operation. In contrast, GraftBio will primarily be a B2C operation.

GraftBio is expected to be more profitable than the polymers division, given the high profit margins in the pharmaceutical industry which is less competitive than the manufacturing industry. Management believes that GraftBio is capable of generating gross margins of around 60%, compared with approximately 55% for the core polymer division.

The polymer market is quiet during summer holidays and client's activity restarts after the holidays. In the bio division, management anticipates there could be increased activity during the summer holiday season, which is useful for counterbalancing workloads.

Two divisions



Source: Graft Polymer

Three main types of modification solutions

Polymers division

The group's polymers division offers a diverse range of modification technologies to combine immiscible and incompatible components within polymer composites. The polymer modification process is the key to creating cutting-edge polymer composite materials. The group provides its customers with three main types of modification solutions, as follows:

- Graft/Block copolymers used as compatibilisers to combine various immiscible components (polymers, fillers) allowing the creation of high quality polymeric composite materials for multiply applications
- Polymeric Nano-Structured Alloys used to modify virgin polymers or as stand-alone compounds, and
- Crosslinking Masterbatches or Alloys used to modify virgin polymers or as stand-alone compounds

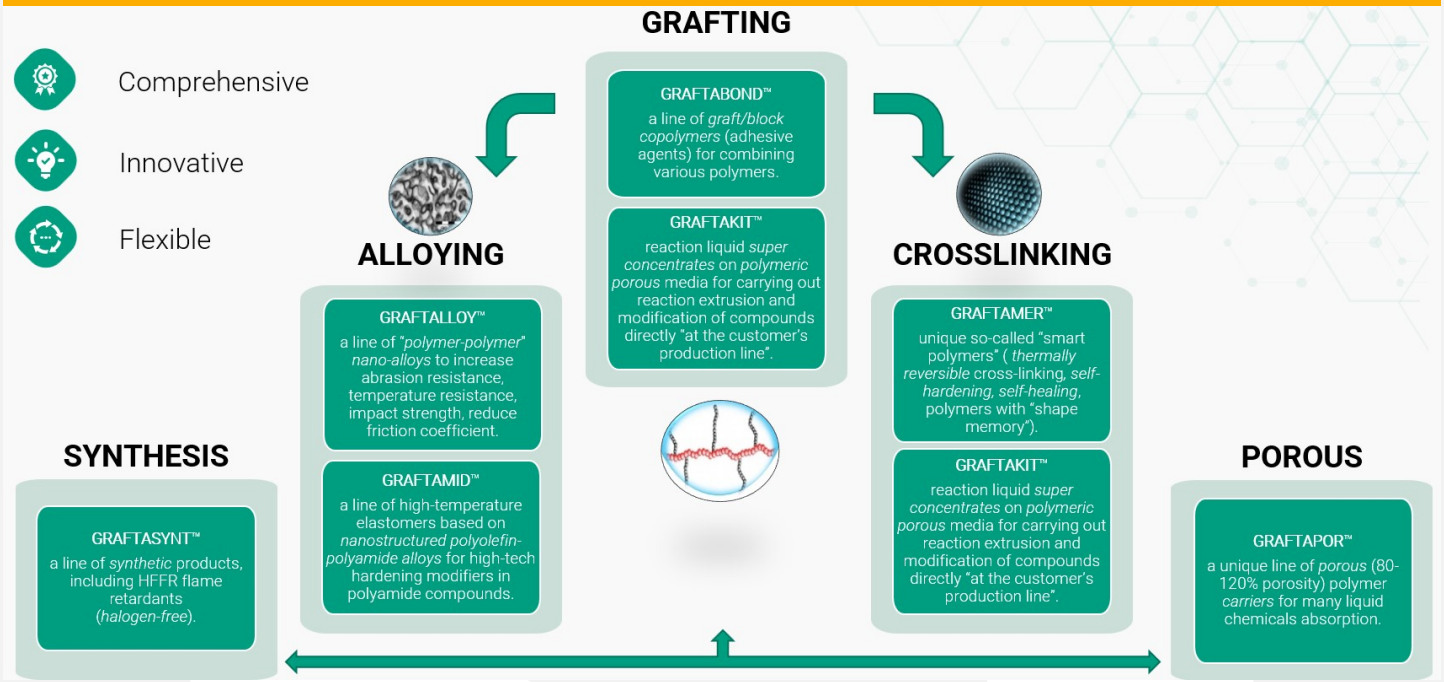
The products offered by the group fall into the following categories:

- Standard products – these are products that the consumer market is familiar with, for use in the most developed polymer sectors such as Polypropylene-based composites (which account for approximately 70 per cent of the polymer market) and Polyamide-based composites (which account for approximately 20 per cent of polymer market), as well as other composites (including styrene, polyesters and peroxide masterbatches). These products

are available on demand and are distributed via the group's distribution networks.

- Custom-made products – these are 'standard' products with slight modifications made to satisfy specific requests from customers. The group works directly with its customers to enhance their existing products, or produce new products that complement their product range.
- Innovative products – these products are usually the result of the group's R&D projects. Research and development of these products is either initiated by the group based on its market research, or as a result of a specific brief from a customer.

Polymers business model - structures and features



Source: Graft Polymer

Clients generally become sticky

Business model

Having liaised with a client and assessed the customer's requirements, the team will conduct an internal analysis. Once an initial solution has been determined, the client will proceed to run internal trials, with support from Graft Polymer's technical support team, and this will involve adjusting formulas.

The deployment of a new polymer mix for a specific application can take several months. However, occasionally the company gets complex requests and the process can run into years, when there is an extensive investigation of the impact of the additive on the manufacturing process as well as on the properties of the finished product. The ongoing energy crisis has been inducing clients to be more flexible and creative and to use alternative products and adjust their final products.

Sales are typically in the form of renewed purchase orders. While this has been the preferred choice for customers in the current market environment, the company is hoping to secure long-term contracts with clients once it has a second manufacturing line for its polymer production which will give it a backup line.

Once a client selects a modifier for its product, it is difficult to change it, so there is an excellent chance of repeat business. This is because it is costly to change the formulation, especially in the automotive sector. Consequently, clients generally become sticky, ordering the same product and client retention is high. However, it can also be a challenge to encourage potential clients to change suppliers.

Products volumes are generally in small and the client will arrange the pickup of the product from the group's facility in Slovenia.

Cash flow

The company typically receives an upfront prepayment of at least 50% with the balance depending on the client profile. Some payments are made on the delivery day while others are 30 days after delivery. The company generally does not hold stock, but will hold small amount of standard materials if there is a particular demand in the market.

Target markets

The group has a broad range of target markets, as indicated by the chart below. Initial areas of focus include automotive and pharmaceutical sectors.

Target markets



Source: Graft Polymer prospectus

A growing distribution channel

Routes to market

There are three key sales channels:

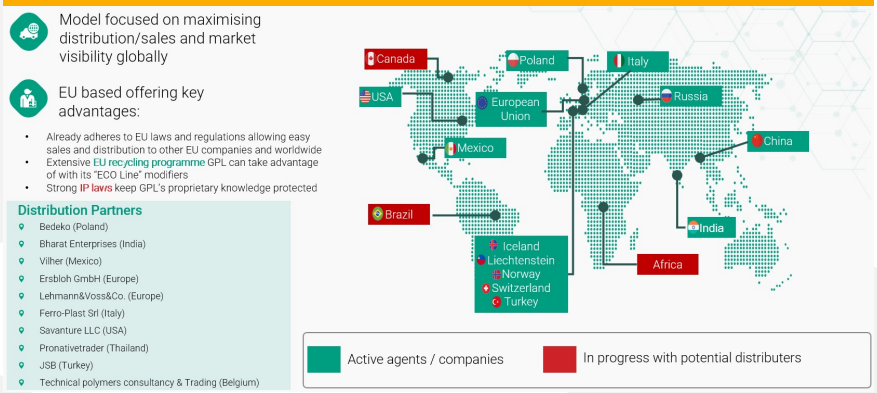
- Graft Polymer website;
- Agents in the distribution network as explained below
- Direct conversations with clients. The company will speak to a potential client about their requirements and make recommendations and in some cases the client is already using some form of polymer and requires a replacement

Graft Polymer offers small free samples for trials (2-3kg). Once the potential client is happy with the product, the company will process a full order which can range from 50kg up to a tonne, depending on the customer requirements.

Distribution channel

The company utilises a distribution network that it is constantly exploring and expanding. These partners / local agents work alongside the group's direct sales team. Graft Polymer is building relationships with a range of people across Europe. Given that its solutions are speciality materials and products, it seeks to work with people who are knowledgeable and are happy to promote the company. The company visits relevant trade shows and also presents its products to partners, eg, Graft Polymer recently presented at a local event in Mexico.

Distribution Partners



Source: Graft Polymer

Strong commercial sales pipeline

Pipeline

The largest projects in the commercial sales pipeline, as at the time of the IPO, are summarised in the following table. Pricing in the table reflects the different products on order and in negotiation with existing and potential customers. As at the time of the IPO, these projects represented nearly 90 per cent of the group's risked sales pipeline. This pipeline excludes any licensing arrangements where the group makes its technology available for third party manufacture. Customers who have executed a letter-of-intent typically begin regular orders within twelve months, and a substantial proportion of such letters of intent convert to regular orders. Customers who have requested the group's products for trials typically execute a letter of intent within twelve months and a large proportion of such trials convert to a letter of intent.

Largest projects in the pipeline

Customer	Region	Status	Expected volume (tons/ month)	Product price range (€/kg)
Automotive Tier 1 A	Eastern Europe	Letter-of-intent	75+	3 – 5
Automotive Tier 1 B	USA	Customer trials	20 – 50	10+
Global Chemical Major A	USA	Customer trials	15 – 25	10+
Global Chemical Major B	Central Europe	Customer trials	20 – 50	5 – 8
Manufacturer A	Centre Europe	Trials (for IM product)	40 – 80	3 – 4
Manufacturer B	Russia	Customer trials /still on the process	15 – 25	10+
Chemical Major A	West Europe	Customer trials	15 – 25	5 – 8
Manufacturer C	West Europe	The project in delay due	40 – 80	1 – 2.5
Manufacturer D	Germany	Customer trials	15 – 25	5 – 8
Manufacturer E	UK	Regular orders	2 – 7	10+

Source: Graft Polymer prospectus

Drug delivery systems (B2B basis) and bio-supplements (B2C basis)

GraftBio division

The group's new division is targeting pharmaceutical companies (B2B basis) with its drug delivery systems (DDS). Consequently, the division introduces a new revenue stream to its business. The new unit has initial orders already underway, including new samples provided using its previous production office.

DDS platforms

The group is developing smart nanostructured materials to deliver drugs to the target sites. The main aim is to reduce dosage frequency and mitigate the side effects experienced with traditional therapies. The group is licensing its DDS's to third parties via royalty arrangements and currently has two contracts in place, with the following companies:

- An un-named Swiss pharmaceutical company
- MGC Pharmaceuticals (LON: MXC, ASX: MXC)

Bio-Supplements

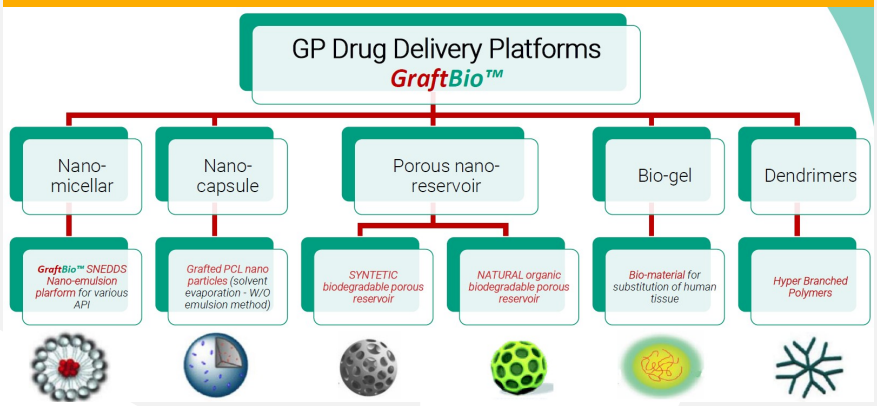
In addition, the company is in the process of creating a new website for the supplement division which will sell products, such as zinc, globally on a B2C basis. Several ranges of products are in the development pipeline with plans for commercial production following the grant of a certificate:

- GraftBio Q10 (water soluble co-enzyme)
- GraftBio Gold (water soluble curcumin)
- GraftBio Immune (water soluble Cu+ vitamin c)
- GraftBio BSO (water soluble black seed)
- GraftBio Pro (water soluble propolis)
- GraftBio GS (water soluble ginseng)
- GraftBio Gin (water soluble ginger)

In May, the group's research and development (R&D) facility in Slovenia was granted a Hazard Analysis and Critical Control Point (HACCP) certificate. The grant was a major milestone for the company as it is a prerequisite for entering the B2C market.

Management is confident it can achieve strong demand for its B2C products as there is a growing public awareness for the value of food/bio supplements that are based on an effective drug delivery system.

Bio business model



Source: Graft Polymer

Polymer market remains very active

Market environment

Management says the polymer market remains very active, in spite of the war in Ukraine and the energy crises, but with a degree of variability across different segments. We note that the polymer raw materials market is cyclical and prone to shortages of standard raw materials.

According to the group's listing prospectus, the global impact modifier market was estimated to have a value of US$3.9bn in 2020. The coupling agent market is projected to reach US$614.1mln by 2023, resulting in a compound annual growth rate (CAGR) of 3.5 per cent. In 2019, the market size for global hot melt adhesives was valued at US$6.7bn. The global polypropylene (PP) non-woven fabrics market size in 2020 was estimated at US$40bn. In 2020, the market size of global cross-linked polyethylene (PEX) was estimated at US$5.5bn, the global roto-moulding powder market size was estimated at US$1bn, and the global halogen free flame retardant (HFFR) market size was estimated at US$4.1bn. The global DDS market size was estimated to be US$26.08bn in 2019 and is projected to reach US$45.20bn by 2027.

Up against the divisions of large chemicals companies

Competition

The main competition in the polymers space is the polymer modification divisions of large chemicals companies, such as Polyram (Israel); Ruser Polimeri (Italy); BYK

(Germany); ExxonMobil, Dow and Dupont (USA); Arkema (France); Silon (Czech Republic); Pluss (India); and Fine-Blend (China). Graft Polymer is not going to compete in the market for "general purpose modifiers" with the large players. However, Graft Polymer argues that it can offer a much broader range of specialist solutions (see table below).

Graft Polymer claims that as a smaller and more agile player it can potentially source parts more effectively than the larger players. Graft Polymer does not have long-term contracts with any one supplier. Hence, whilst there have been cost increases relating to the economic backdrop, they are not as high as competitors. Graft Polymer also currently has smaller overheads, allowing it to be more competitive in an already competitive market.

Competitive analysis

TECHNOLOGIES	Slovenia	Israel	Italy	Germany	USA		France	Czech	India	China
Flow induced crystallization	✔									
Solid Phase Grafting	✔			✔						
Solution Grafting	✔				✔	✔	✔			✔
Fillers Treatments	✔									
Powders Hybridization	✔						✔			
Hot ozonolysis/plasma mod.	✔									
Nitroxide Mediated Polymerization	✔						✔			
Reactive extrusion	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
Alloying	✔	✔				✔	✔		✔	
Crosslinking	✔					✔		✔		
Micro/Nano Porous polymer	✔									

Source: Graft Polymer

Bio division is expected to have higher gross margins

Financials

The group's current gross margin is around 50%. Management believes the Bio side will be much more profitable and have a 60% gross margin in the medium term. The gross margin for the B2B business is around 55% and for the B2C is around 60%. The Graftbio division will be more profitable as the pharmaceutical industry has greater profit potential and is less competitive than the manufacturing industry.

Other revenue predominantly relates to the interest that was waived on the convertible loan notes (approximately £80k in 2020) which is non-repeatable. The convertible loans were all converted as part of the flotation.

The group leases its production facility in Slovenia which is contracted on a 12-month rolling basis. Hence, IFRS 16 capitalisation does not apply.

The group has accumulated tax losses that we will utilised against future profits.

On 21 December 2021, the company entered into a profit share agreement (PSA) with Victor Bolduev. The PSA has been entered into as a result of the fact that the subscription and shareholders' agreement (SSA) terminated following the flotation in January, in order that the founder will retain his right to the royalty. Under the terms of the PSA, conditional on admission to the LSE, the company has agreed to pay a royalty of 7 per cent of the profit (being EBITDA less the administration costs and expenses of the company for the relevant financial year as determined in the audited financial accounts of the company from year to year) from sales or licence income of the company, on a monthly basis up to an aggregate amount of €3,500,000, which will commence upon the company achieving monthly profit of €20,000. To date, no royalty has been paid or accrued.

FY21 results were for seven-month period

Final FY21 results

The group generated revenue of £219k in the seven months to December 2021, along with an operating loss of £946k. This compared with £520k revenue in the twelve months to May 2021, along with an operating loss of £444k. The

group finished the period with net debt of£360k. The company did not declare a dividend. After the period end the group raised net proceeds of £4.15mln in the IPO and in June the company announced that its facility in Slovenia had become cash flow positive.

Income statement

£000's	2018	2019	2020	2021	2021
Year end	31-May	31-May	31-May	31-May	31-Dec
Revenue	0	29	330	520	219
Cost of sales	0	(13)	(46)	(30)	(118)
Gross profit	0	16	284	490	101
Gross Margin (%)	N/A	55.2	86.1	94.2	46.1
Other revenue	0	0	0	98	1
Operating & admin expenses	(486)	(634)	(636)	(923)	(1,002)
Adjusted EBITDA	(486)	(618)	(352)	(335)	(900)
Margin (% of sales)	N/A	(21.3)	(1.1)	(0.6)	(4.1)
EBITDA	(486)	(618)	(352)	(335)	(900)
Depreciation	(8)	(69)	(114)	(109)	(46)
Operating profit / (loss)	(494)	(687)	(466)	(444)	(946)
Net Finance costs	0	(16)	(72)	(7)	(8)
Earnings before tax	(494)	(703)	(538)	(451)	(954)
Income tax credit (expense)	0	0	0	0	0
Net Income	(494)	(703)	(538)	(451)	(954)
Other comprehensive income	(10)	0	(1)	(5)	19
Attributable net income	(504)	(703)	(539)	(456)	(935)
Basic EPS (dil., continuing ops) - GBp	(1.00)	(1.03)	(0.79)	(0.65)	(1.36)

Source: Company accounts

Financial position

£000's	2018	2019	2020	2021	2021
Year end	31-May	31-May	31-May	31-May	31-Dec
Cash and equivalents	339	90	25	39	598
Accounts Receivable	59	17	12	86	142
Inventories	0	0	0	0	0
Property, Plant and Equipment	518	510	448	364	310
Right of use asset	100	64	27	0	0
Intangibles & goodwill	2,068	2,068	2,068	2,068	2,068
Other	13	13	13	12	12
Total Assets	3,097	2,762	2,593	2,569	3,130
Short-term debt	0	343	534	654	958
Accounts payable	50	115	319	668	1,360
ST lease liability	31	38	37	0	0
LT lease liability	71	24	0	0	0
Total Liabilities	152	520	890	1,322	2,318
Share capital	7	7	7	7	7
Premium	3,442	3,442	3,442	942	942
Reserves	(10)	(10)	(11)	2,484	3,003
Retained earnings	(494)	(1,197)	(1,735)	(2,186)	(3,140)
Shareholders' equity	2,945	2,242	1,703	1,247	812
Liabilities and shareholders' equity	3,097	2,762	2,593	2,569	3,130

Source: Company accounts

Cash flow

£000's	2018	2019	2020	2021	2021
Year end	31-May	31-May	31-May	31-May	31-Dec
Profit before tax	(494)	(703)	(538)	(451)	(954)
Depreciation/amortisation	8	69	114	109	46
Other	89	16	2	(74)	0
Decrease/(increase) in inventories	0	0	0	0	0
Decrease/(Increase) in receivables	(59)	43	8	(29)	(56)
Increase/(decrease) in payables	43	(1)	150	272	702
Movement in working capital	(16)	42	158	243	646
Deduct P&L interest	0	16	72	7	8
Operating cash flow	(413)	(560)	(192)	(166)	(254)
Net interest payments	0	0	0	0	0
Net operating cash flow	(413)	(560)	(192)	(166)	(254)
Capital expenditure	(516)	(20)	(8)	(15)	(1)
Cash flow from investing	(516)	(20)	(8)	(15)	(1)
Proceed from subscription of shares	1,332	0	0	0	500
Proceeds from borrowings	0	328	128	0	300
Cash flow from financing	1,332	328	128	0	800
Increase (decrease) in cash	403	(252)	(72)	(181)	545
Foreign exchange impact on cash	(64)	3	7	(2)	14
Increase (decrease) in cash	339	(249)	(65)	(183)	559

Source: Company accounts

Highly experienced management team

Board of directors

Roby Zomer – non-executive chair

Roby Zomer has been involved in the business since its inception. Zomer brings more than two decades of experience in science, leadership, business creation and operations and global development strategies, all in cutting-edge industries, and at the highest governmental levels. His career has spanned multiple disciplines and areas of expertise, beginning with medical training at leading Israeli medical institutions and shifting to technological development and logistics of personnel deployment during his military service in the Israel Defence Force.

Zomer's first company, Green City, focused on the idea of promoting fuel alternatives and clean water technology. Green City rapidly became a global ambassador company for Israel and was purchased by Rafael, Israel's government-owned military technology hub, as it was determined to be a strategically significant asset.

He joined MGC Pharmaceuticals Limited as co-founder and chief technical officer, and now serves as its managing director and chief executive officer. MGC Pharmaceuticals is an emerging phyto-pharma company with a focus on phytocannabinoids, the therapeutic elements of the cannabis plant. This has led to a seven-year period where Zomer broadened his understanding of technological development and pharmaceutical regulation and has led to a return for Zomer to agroscience, on the path to shaping the company into a fully-fledged biopharmaceutical company with market-approved products.

Victor Bolduev – chief executive officer and chief technical officer

Bolduev is the founder, CEO and CTO of the group, with more than 30 years' experience in industrial sectors, more than 20 years working in the polymer industry. Bolduev brings expert experience in the polymer industry, leadership, value creation and cutting-edge innovation.

During this time, Bolduev has worked in various polymer modification companies in Russia, Thailand and Slovenia. Bolduev is a non-executive director for a number

of companies, including Victor Bolduev IP and Polymer Innovations Inc. He is the author of 11 patents relating to polymer modification and drug delivery systems.

Bolduev graduated from St Petersburg University and Tashkent Military's University (in each case with Honours). He is known as a polymer chemist who has developed multiple innovative technologies and product brands in the polymer modification and bio sectors.

Yifat Steuer – executive director and chief financial officer (CFO)

Steuer, qualified as a chartered accountant with Deloitte before moving into industry. She has over 20 years' experience as a well-versed CFO ranging from global blue-chip companies to hands-on implementation in SMEs and start-ups. She has worked internationally for the majority of her career at firms including Johnson & Johnson and GlaxoSmithKline. While at Marken, Steuer was the chief accounting officer heading the global shared services accounting and payable teams. She led vendor due diligence for the sale of Marken to UPS. As part of her community contribution, Steuer took a 9-month assignment as the CFO and Treasurer of the British Transport Police Authority. She has a proven track record in pharmaceuticals, manufacturing, logistics, distribution, medical technology, and digital health industries.

Pavel Kobzev – executive director and chief marketing officer (CMO)

Kobzev serves as the CMO of the group, with over 10 years' experience in project management and market analysis. He served in the Israeli Defence Forces Elite Intelligence 8200 unit as managing operations leader and has expertise in the security solutions and design solutions and design industries.

Kobzev began his career at Magal, an intelligent security company in Israel, where he served as a field engineer responsible for managing a team that designed innovative security solutions for products in the information technolomarketgy and physics fields, while carrying out analysis in connection with these solutions. The team was responsible for a number of multi-million-pound projects, including the implementation of the smart fence solution at the Israeli border, including software updates.

Alexander (Alex) Brooks – independent non-executive director

Brooks is an experienced capital markets professional, having worked in a range of roles primarily in public equity markets but also including exposure to private markets and to debt securities. Brooks has worked as a buy-side and sell-side analyst at a number of large financial institutions, including JPMorgan and UBS, and is currently a Senior Equity Analyst with Canaccord Genuity (UK). He focusses on industrial technology companies in several sectors, notably sustainability, energy and energy transition, and chemicals.

Polymers market is cyclical, bio division brings balance

Sensitivities

We highlight the following sensitivities:

Economic downturns/cyclicality. The group's main customers in the polymer space are industrial businesses which have a relatively high sensitivity to economic activity. Polymer raw materials market is cyclical and prone to shortages of standard raw materials. The new bio division balances this with its exposure to consumer healthcare (B2C) and pharmaceutical (B2B) customers - areas which are significantly less sensitive to economic downturns.

Operating costs. The increase in energy prices has had a massive impact on the group's raw materials and utilities used in the production process. However, management argues that the group is it still cheaper than its competitors. As the company is smaller it has fewer overheads so can maintain competitive pricing. Further, as the group does not have a primary polymer supplier it is able to switch to get the best deal enabling the company to be more competitive.

Impact of war in Ukraine. The group generated £23k of revenue in Russia in the seven months to December 31, 2020 and its clients and prospective clients in Russia are small in relation to overall opportunities for the group. The group does not have direct clients or activities in the Ukraine.

Environmental factors. The group's operations involve industrial manufacturing and are subject to numerous health, safety and environmental requirements of Slovenia, which are subject to change from time to time. We note that the extrusion process uses a closed-loop system so no risk of dangerous products leaking. The company's facility in Slovenia has recently been granted ISO 14001 accreditation in recognition of the environmental management systems in place to reduce waste, improve resource efficiency and reduce the operations' environmental impact.

Graft Polymer argues that it has robust ESG (environmental, social and governance) credentials. The company is green by reducing waste and the materials the company uses are recyclable which is a feature that potential clients are increasingly looking for.

Significant opportunity if management can grow and scale the business

Valuation

We have produced an illustrative income statement, below, to give an indication of what the financials could potentially look like in the near-term (two to three years) and medium-term (three to five-plus years).

The capacity estimates and assumed prices are dependent on the type of product produced and equipment used and hence are a guide only. In addition, prices are constantly changing and different products have different margins. Further, while Graft Polymer is currently working with medium-sized clients the aim is to work for the large players. In addition, we have not included higher-margin royalty revenues, such as though the MGC relationship.

We assume gross margins rise from 50% to 60% on the increased capacity and scaling of the higher margin GraftBio business. The royalty payment relates to profit share agreement as outlined in the financials section (see page 13).

Based on these numbers, the group could trade on a low single digit multiple in the medium term, while being debt free.

Illustrative income statement

	Near-term	Medium-term
Capacity (metric tonnes)	2400	4500
Assumed capacity utilisation	75%	75%
Average price per kg (euros)	5	5
£'000's		
Revenue	7,884	14,782
Gross profit	3,942	8,869
Gross margin	*50%*	*60%*
Royalty payment	(125)	(411)
Operating expenses	(2,160)	(3,000)
Operating profit	1,657	5,458
Operating margin	*21%*	*37%*
Tax at 20%	(331)	(1,092)
Net income	1,326	4,367
Market cap	15,510	15,510
Earnings multiple	11.7	3.6

Source: Proactive Research

General Disclaimer and copyright

LEGAL NOTICE – IMPORTANT – PLEASE READ

Proactive Research is a trading name of Proactive Investors Limited which is regulated and authorised by the Financial Conduct Authority (FCA) under firm registration number 559082. This document is published by Proactive Research and its contents have not been approved as a financial promotion by Proactive Investors Limited or any other FCA authorised person. This communication is made on the basis of the 'journalist exemption' provide for in Article 20 of The Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 and having regard to the FCA Rules, and in particular PERG 8.12.

This communication has been commissioned and paid for by the company and prepared and issued by Proactive Research for publication. All information used in the preparation of this communication has been compiled from publicly available sources that we believe to be reliable, however, we cannot, and do not, guarantee the accuracy or completeness of this communication.

The information and opinions expressed in this communication were produced by Proactive Research as at the date of writing and are subject to change without notice. This communication is intended for information purposes only and does not constitute an offer, recommendation, solicitation, inducement or an invitation by, or on behalf of, Proactive Research to make any investments whatsoever. Opinions of and commentary by the authors reflect their current views, but not necessarily of other affiliates of Proactive Research or any other third party. Services and/or products mentioned in this communication may not be suitable for all recipients and may not be available in all countries.

This communication has been prepared without taking account of the objectives, financial situation or needs of any particular investor. Before entering into any transaction, investors should consider the suitability of the transaction to their individual circumstance and objectives. Any investment or other decision should only be made by an investor after a thorough reading of the relevant product term sheet, subscription agreement, information memorandum, prospectus or other offering document relating to the issue of securities or other financial instruments.

Nothing in this communication constitutes investment, legal accounting or tax advice, or a representation that any investment or strategy is suitable or appropriate for individual circumstances or otherwise constitutes a personal recommendation for any specific investor. Proactive Research recommends that investors independently assess with an appropriately qualified professional adviser, the specific financial risks as well as legal, regulatory, credit, tax and accounting consequences.

Past performance is not a reliable indicator of future results. Performance forecasts are not a reliable indicator of future performance. The investor may not get back the amount invested or may be required to pay more.

Although the information and date in this communication are obtained from sources believed to be reliable, no representation is made that such information is accurate or complete. Proactive Research, its affiliates and subsidiaries do not accept liability for loss arising from the use of this communication. This communication is not directed to any person in any jurisdiction where, by reason of that person's nationality, residence or otherwise, such communications are prohibited.

This communication may contain information obtained from third parties, including ratings from rating agencies such as Standard & Poor's, Moody's, Fitch and other similar rating agencies. Reproduction and distribution of third-party content in any form is prohibited except with the prior written consent of the related third-party. Credit ratings are statements of opinion and are not statements of fact or recommendations to purchase, hold or sell securities. Such credit ratings do not address the market value of securities or the suitability of securities for investment purposes, and should not be relied upon as investment advice.

Persons dealing with Proactive Research or members of the Proactive Investors Limited group outside the UK are not covered by the rules and regulations made for the protection of investors in the UK.

Notwithstanding the foregoing, where this communication constitutes a financial promotion issued in the UK that is not exempt under the Financial Services and Markets Act 2000 or the Orders made thereunder or the rules of the FCA, it is issued or approved for distribution in the UK by Proactive Investors Limited.

London
+44 207 989 0813
The Business Centre
6 Wool House
74 Back Church Lane
London E1 1AF

New York
+1 347 449 0879
767 Third Avenue
Floor 17
New York
NY 10017

Vancouver
+1 604-688-8158
Suite 965
1055 West Georgia Street
Vancouver, B.C. Canada
V6E 3P3

Sydney
+61 (0) 2 9280 0700
Suite 102
55 Mountain Street
Ultimo, NSW 2007