Annual report and financial statements
2018

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Chairman's overview

I am pleased to present our 2018 annual report and financial statements.

IQE is the world's leading supplier of advanced semiconductor materials solutions that enable global innovation. We develop and manufacture compound semiconductor wafers and complementary materials technologies that are at the heart of the digital electronic revolution.

Our compound semiconductor technology plays an increasingly important role in shaping the way we live, work and spend our leisure time. We are playing a key role in developing and bringing to market, a range of new, world leading technologies that will see our materials embedded across a very large range of new and emerging applications including 5G communications, next generation smartphones and tablets, hyperscale datacentres, global internet connectivity via low earth orbit satellites and UAVs, advanced healthcare including wearable sensors, defence and aerospace and in electrically powered and driverless vehicles.

IQE is a global technology leader operating in a dynamic and competitive market. Our compound semiconductor materials offer significant performance advantages and functionality over silicon-based semiconductors in terms of speed, power and light.

During 2018 our wireless materials continued to enjoy a large market share for the power-amplifier modules in mobile devices, including smartphones and tablets. Market share for our photonic materials also significantly increased in mobile devices across a number of sensing applications including proximity sensing, structured light and time-of-flight cameras, particularly for 3D sensing for facial recognition applications.

IQE established and maintained a highly significant technological and process advantage in the high-volume manufacture of large diameter (150mm) wafers for vertical cavity surface emitting laser (VCSEL) products that form the heart of a rapidly growing trend for optical sensing applications, such as face ID, where we command a significant global market share of these fast-growing sensing markets.

Our 2018 revenues were achieved with a similar manufacturing capacity compared with 2017, and ahead of additional investment in new capacity coming online. Our significant two-year investment program across our global operations will be complete by the end of the first-half of 2019 with the commissioning of our new mega epi foundry in Newport, Wales, UK, which is dedicated to photonics applications. Our expansion program also includes the installation of additional wireless capacity in Taiwan, expansion of our gallium nitride (GaN) capacity in Massachusetts and additional capacity for our infrared production in Milton Keynes.

Whilst face recognition represents the first application for advanced 3D sensing and is being adopted across many leading mobile device OEMs, the opportunities for the technology extend far beyond basic security applications into areas such as augmented reality, machine vision and LiDAR. It is across this range of sensing applications where we have made a considerable investment during 2018 in engaging with more than 25 VCSEL chip companies underscoring IQE's exceptional leadership position in the emerging VCSEL supply chains based on our technical excellence, our proven ability to ramp and commitment to install production capacity. We will bring additional photonics capacity into production with the first phase of ten new production tools at the Newport epi foundry during the first half of 2019. We are in final design stage with more than twelve photonics customers who are at various stages of active qualification of this new facility.

During the year, IQE announced the exercise of an exclusive option to acquire the cREO™ IP portfolio from Translucent, Inc, technology. The Group also completed a key production qualification milestone for its proprietary NanoImprint Lithography (NIL) Technology for Distributed Feedback (DFB) lasers and the renewal of a major contract with a Tier 1 wireless customer.

Board changes

The untimely and tragic death in April 2018 of Phil Rasmussen, IQE's Chief Financial Officer, was a devastating blow for his family and to everyone who knew and worked with him. Phil had held the role of CFO for more than ten years and he made an immeasurable contribution to the growth and development of the business during that time. We are supporting his wife Elissa in the formation of a charitable foundation in his name with the aim of providing scholarships for students from disadvantaged backgrounds in South Wales to study at University.

Tim Pullen joined IQE as Chief Financial Officer on 4th February 2019. Tim, whose appointment was announced on 15th October 2018, was most recently Chief Financial Officer of ARM Limited, a global semiconductor and software design company owned by Softbank Group. Tim's appointment as CFO is strongly aligned with the aim of having a Board with the appropriate balance of skills and expertise to steer the Company through the next exciting phase in its evolution. To this end, I am also delighted to confirm that Phil Smith, the former CEO and Chairman of Cisco, who joined the Board in December 2016 will take up the position of Non-Executive Chairman on my retirement before our AGM on 25 June 2019.

Summary

I remain very excited about the growth prospects for our industry, and IQE's positioning to take advantage of this growth. Whilst a substantial inventory correction in the first half of 2018 followed by the sudden disruption in November of a significant supply chain severely reduced the short-term demand for VCSEL wafers which materially impacted our full year revenues and profitability, I firmly believe that the position and prospects of IQE will not be defined by our 2018 financial performance. We look forward to enjoying the benefit from the significant investment programmes that we will complete this year.

I would like to thank my fellow Directors and all the management and staff of IQE for the achievements of the past year in preparing the Group to take full advantage of the exciting market and technological opportunities that lay ahead.

The skills, experience and talent of our people is at the very heart of our business. My sincere thanks go out for the hard work and professional expertise of the whole IQE team for their commitment and dedication; they continue to be the foundation of our achievements.

Finally, as always, I would like to thank you, my fellow shareholders, for your support. I trust that you share our excitement about the role we are destined to play in what promises to be an exciting future for IQE and for our industry.

Dr Godfrey H H Ainsworth
Executive Chairman, IQE plc.
20 March 2019

Strategic report

IQE's core business is the design and manufacture of compound semiconductor wafers or "epiwafers" using a process called epitaxy.

Epitaxy 101

Epitaxy is the process of growing structures in a specific crystalline orientation on top of another crystalline layer or substrate, where the orientation is determined by the underlying crystal.

> The word *epitaxy* derives from the Greek prefix *epi* meaning "upon" and *taxis* meaning "arrangement" or "order." The atoms in an epitaxial layer have a specific registry relative to the underlying crystal.

The elements

The periodic table, first published in 1869 by Dmitri Mendeleev, shows the 118 currently known chemical elements arranged in eight groups according to their properties.

Of particular interest in electronics and photonics is the fact that the elements up to and including those in group III are in general, known as metals and tend to be good conductors of electricity, whilst those from group V and above are generally non-metals and tend to be poor conductors of electricity.

Between the metals and non-metals, those in group IV are elements whose electrical properties are somewhere between conducting and non-conducting (insulating). These elements, which include silicon and germanium, are known as semiconductors.

The behaviour of semiconducting elements was discovered during the 19th century and it later became known through experimentation that their electrical properties could be altered by adding very small amounts of different impurities and that by placing together two pieces of material with different impurities, an electrical current could be controlled by allowing it to flow in one direction but not the other.

The semiconductor age is born

It was in 1947 that William Shockley, John Bardeen and Walter Brattain, working at Bell Labs, built the World's first transistor using the element germanium.

During the two decades that followed, the ability to control electrical currents using semiconductors allowed engineers to develop a range of new electronic technologies.

The evolution of silicon

Whilst germanium is a very efficient semiconductor material, the ready availability of silicon made for a compelling low-cost alternative and hence a new industry was born that has, for the last five-decades, transformed our lives in so many ways.

Silicon has been the backbone of the electronics revolution from the 1960s, largely by virtue of continuous miniaturisation which has led to an exponential increase in technological performance - a concept notably observed by one of the founders of Intel, Gordon Moore, and known as "Moore's Law".

Introducing compound semiconductors

Impressive as the impact of silicon has been on our lives, being a single element, it has a very basic and limited set of properties that restricts its application in many new and emerging technology areas that demand ultra-high performance levels along with sensing and other capabilities.

By atomically engineering crystal structures that combine elements either side of those in group IV of the periodic table (e.g. groups III and V), a set of new semiconductor materials has emerged whose enhanced properties offer significant capability and performance improvements over those of silicon alone.

Compound semiconductors provide significant performance advantages that are absolutely essential for a growing range of technology applications. In general terms, these advantages fall into three categories: speed, light and power.

SPEED - Compound semiconductors such as GaAs and InP can operate at speeds that are several orders of magnitudes higher than is possible using silicon alone.

LIGHT – Unlike silicon, compound semiconductors can generate and receive a broad range of the electromagnetic spectrum from high frequency ultraviolet through the visible spectrum to long wavelength infrared light.

POWER – Compound semiconductors including silicon carbide (SiC) and GaN are capable of operating at high powers (high voltages and current levels) and are highly efficient at converting different types of power and at high frequencies.

Today, Semiconductors in the form of both silicon and compound semiconductors, form the heart of many technology applications that have an everyday impact on the way we live, work and spend our leisure time. Without semiconductors, many devices and applications that we rely on simply would not exist.

Semiconductors are a key enabling technology that feed into multiple supply chains feeding a wide range of market sectors including: communications and connected devices (5G), healthcare technologies, electrically powered connected autonomous vehicles, aerospace technologies, safety & security systems, efficient energy generation and consumption, robotics and AI.

Compound semiconductors have already complimented silicon in areas such as wireless communications, where chips made from material combinations such as gallium and arsenic (gallium arsenide, or GaAs) are found in virtually every smartphone where they enable high speed, high efficiency wireless communications in cellular and WiFi networks.

Other properties offered by compound semiconductor materials include the ability to emit and sense light in the form of general lighting (LEDs) and communications (lasers and receivers for fibre-optics).

The photonic and power efficiency properties offered by compound semiconductors that could not be achieved with silicon alone, will enable technologies essential in areas such as safety and security systems, healthcare technologies, aerospace and automotive applications including electrically powered and autonomous vehicles.

It is our ability to harness the advanced properties of the full range of semiconducting materials that will drive the digital revolution for generations to come. Welcome to the world of advanced, compound semiconductors. Compound semiconductors are the DNA of next generation technologies.

IQE's Epiwafers

IQE manufactures compound semiconductor material in the form of a wafer or "epiwafer" by growing complex atomic structures on the surface of a substrate (a disc of pure crystalline material) using a process called epitaxy.

Epitaxial growth is a process whereby complex atomic structures are produced under precisely controlled conditions. The end product is a pure, crystalline, semiconductor wafer upon which complex structures comprising many individual atomic layers have been grown.

These epitaxial layers uniquely define the wireless, photonic and electronic performance of our epiwafers which are then processed by our customers to produce the "chips" that are found in virtually all of today's technology devices and gadgets.

Epitaxy is the first key stage in the process of manufacturing the critical components in a wide range of devices from mobile handsets to solar cells, lasers and LEDs, and it requires high specification cleanrooms, sophisticated production tools and high levels of process knowhow and intellectual property.

IQE produces atomically engineered layers of crystalline materials containing a variety of semiconductor materials such as gallium, arsenic, aluminium, indium and phosphorous. The layers are grown onto a crystal substrate or wafer and the finished product containing the wafer and its atomically modified surface is known as an epiwafer. It is the number of layers, their atomic composition and the order in which they are grown that determines the precise physical, electronic and optical properties of the material. An epiwafer can include hundreds of individual layers, each of which may be as thin as two or three atoms.

IQE's IP and process know-how is the science and technology behind the materials and the way in which the atomic structures can be manufactured to yield the wide range of wireless, photonic and electronic properties that are essential in today's electronically enabled age.

IQE's vision strategy and delivery

Our vision

It is IQE's vision to maintain and grow our established position as the leading global provider of advanced semiconductor materials – the global "go to" compound semiconductor materials specialist.

Our strategy

To realise this vision requires the ability to deliver "enabling technology", which meets the performance and price points needed for adoption, and which can be delivered reliably, on-time, every-time with the ability to scale rapidly.

Our delivery

IQE is extremely well positioned to rise to this challenge, having built the broadest portfolio of materials IP in the industry, and developed a unique platform for a secure low-cost supply. Moreover, IQE has developed a reputation to match – for excellence and reliability.

We have established a global manufacturing platform and a breadth of IP and know how relating to the design and manufacture of advanced materials that is second to none. We have been unwavering in our vision and have developed a robust strategy which gives us confidence over the growth prospects of the business and our ability to create shareholder value.

Our business model

The pioneer in outsourcing

The first industrial revolution ushered in an era of large, vertically integrated enterprises. During the middle of the 20th century, process specialisation became a major competitive advantage and saw the introduction of outsourcing.

New industry sectors may adopt vertically integrated business models out of necessity, but as those industries mature, specialisation becomes a key strategic advantage.

Smart specialisation

Early silicon chip manufacturers found it necessary to set up complete vertically integrated supply chains to source each part of the production process from raw materials through to a final packaged product.

As the silicon chip industry matured, the sector saw the emergence of businesses specialising in different parts of the process to the extent that there now exist a large number of "fabless" companies who outsource the entire production process to large specialists such as TSMC and Global Foundries.

Pioneering specialisation within the compound semiconductor industry

The compound semiconductor industry shares similar attributes with the silicon chip industry. Some of the processes such as epitaxy require large scale investment, complex infrastructure support in the form of cleanrooms, environmental controls and most importantly, highly specialised skills and expertise.

In 1988, IQE, then EPI, became the first compound semiconductor materials company to recognise the potential value in offering specialised outsourcing of compound semiconductor wafers and has witnessed an increasing trend towards this model over its thirty-year history.

By specialising in the complex epitaxy process, IQE offers its customers economies of scale, access to leading edge technology at the same time as leaving them with the ability to do what they do best: design and refine their products.

The high level of investment means that IQE's business is highly operationally geared which facilitates significant scope for profitability once sales contribution exceeds fixed costs. The last decade has demonstrated an unprecedented number of key industry suppliers selecting outsourcing as a key business advantage.

Competitive Advantage

IQE operates in a highly competitive, fast-moving environment at the leading edge of technology.

IQE has established a strong leadership position in the market for compound semiconductor materials. Our leadership has been built around an unparalleled breadth of IP, in contrast to IQE's competitors who operate within the constraints of narrow IP portfolios and inferior research and development capabilities. Uniquely, this makes IQE a "one stop shop" for our products at a time when the market is increasingly seeking multiple material solutions to meet expanding and diverse end markets.

We believe that our broad product portfolio across multi-site operations represents a powerful competitive advantage in a market where qualification barriers are high, and microscopic variations in wafer crystals can have dramatic adverse operational and financial implications downstream.

Breadth of technology

As a pioneer of compound semiconductor technology, IQE has developed an unparalleled and comprehensive breadth of technology and advanced production platforms.

During our thirty-year history, we have also developed an unparalleled depth of specialised process know-how and expertise in the development and manufacture of highly advanced semiconductor materials technologies.

Technology leadership

In addition to our process know-how, we add further value by offering innovative new products and technologies that enhance our customers' competitive advantages. This is represented in our increasing intellectual property portfolio and widely recognised technology leadership.

Through both organic growth and acquisition, IQE has established clear technology leadership and created a virtuous circle, which continues to attract the brightest and best talent in our industry.

Process qualification

Semiconductor devices operate at atomic and even sub-atomic levels, often carrying out billions of operations per second which means that reliability is absolutely essential.

The global semiconductor industry operates to exacting standards, requiring the ultimate product quality with uncompromising reproducibility and repeatability. In order to meet customers' requirements, it is usual to go through a thorough qualification process to prove that production quality is optimised, reliable and repeatable with 100% accuracy. Any failures at the start of the process (the epitaxy) can have a catastrophic impact further along the supply chain which means that quality must be guaranteed.

Each epitaxial tool has to be individually qualified in order to be released for production in any supply chain. This is because the complexity of the technology creates an inherent risk of microscopic variations between wafers in the same production run, as well as from run-to-run. These variations can have dramatic and costly implications downstream. Whilst there is a significant IP barrier in being able to produce these materials, there is an equally challenging IP barrier of controlling variations to be able to repeatedly and reliably produce high quality materials in high volume which enable high yields down stream. Accordingly, customers are "sticky", which reflects why IQE had to use M&A to consolidate the wireless supply chain. Moreover, in simple terms, IQE has shipped more wafers in mass production than any other epi foundry, giving it an unparalleled pedigree in the mass market.

For each new product, it is necessary to qualify the raw materials, the equipment and all processes and procedures and each qualification process can take many months to complete, with products being fully tested across multiple processes.

The qualification processes require significant investment from all parties including IQE and our customers, but once proven, the process is fixed for the life of that product and becomes a major barrier to entry for competitors.

Quality

As the largest outsource epi foundry IQE has created a competitive advantage through specialism and scale. Achieving low cost chip production necessitates high quality wafers, because wafer defects translate into lost capacity and low yields for chip makers. As a materials specialist, IQE has developed the IP to make materials of the highest quality, and it has the accolades and market share to prove it. As the materials specialist with the largest scale it has inherent economies of scale, a feature which IQE is about to intensify with its new foundry which will house up to 100 tools. This is why the outsource model is prevalent in the more mature silicon industry, why the wireless market shifted from a horizontal to vertical model, and why the winner in the initial mass market ramp of VCSELs adopted an outsource strategy.

Customer relations

Our direct and OEM customers operate in highly competitive consumer, industrial and business markets where protection of their know-how and IP is absolutely essential. Our customers provide us with their product designs, forecasts and business plans and need to be certain that we can be trusted to protect their valuable information. IQE has a proven track-record for our integrity, business ethics and the protection of confidential information.

A global footprint

IQE's operations span the US, Asia and Europe which reflects the geographical diversity of our customer base. This allows IQE to be positioned close to its customers and to build and maintain strong, long-term relationships and partnerships.

Process flexibility

It is common practice to qualify multiple products from multiple customers across a number of tools at multiple sites. This allows for a reasonable degree of production flexibility to help manage any fluctuations in market demand.

There are some product groups that cannot be mixed on a single tool but in general, it is possible to serve multiple end markets using various combinations of tools with minimal reconfiguration. For example, it is perfectly feasible to run wireless products on the same tool as some photonics products. However, IQE's epitaxy production operates in process batches and we employ sophisticated methods to optimise our production to maximise efficiency and minimise costs.

Security of supply

Confidence in a secure supply is critical to the supply chains in which IQE operates. IQE offers its customers the opportunity of multi-sourcing qualified products from multiple locations across all its core technologies, allowing it to be a primary and trusted supplier to its customers.

Cost leadership

In the electronics industry, cost leadership is achieved through advanced technology and economies of scale. IQE has developed leadership in both.

Our dedication and specialisation in advanced semiconductor materials technologies provides our customers with unrivalled product and service quality whilst delivering highly attractive pricing through unparalleled economies of scale across the industry's most comprehensive product portfolio.

Intellectual property

Intellectual property relating to advanced materials is playing an increasingly important role in the evolution of the semiconductor industry, it is widely accepted that advanced materials are needed to overcome the challenges and realise the opportunities facing the electronics industry.

Technology leadership through process know-how and IP has been at the heart of IQE's strategy over our thirty-year history. In recent years, our technology leadership has enabled the Group to offer additional value to customers through our unique IP portfolio of new product solutions.

IQE has built an enviable global reputation in the industry for the breadth and depth of its materials technologies and capabilities. It is evident from IQE's many engagements with leading universities, start-ups, leading chip makers and established global electronics giants, that IQE has succeeded in establishing itself as the 'go to' place for advanced materials, supporting its customers from research and development through to high-volume manufacturing. The growing strength of IQE's IP is reflected in how its relationships within the supply chain have evolved. Historically, IQE was primarily engaged with chip makers, whereas it now regularly engages directly with a number of Tier 1 OEMs.

IQE has and continues to develop a world leading IP portfolio through a combination of innovative development programmes as well as by acquisition. Our IP is becoming increasingly attractive to customers wishing to access IQE's vast technical experience and expertise to develop and exploit new opportunities in new and emerging markets. Our IP continues to add significant value to our product and service offering for both existing customers and the large number of new entrants to global technology markets and will become even more significant as we transition from a "materials solutions company", in to an "innovative enabler."

However, we are not resting on our laurels. IQE is leveraging the strength and depth of its IP portfolio to transition its business model from an "outsource epi wafer company", where we develop bespoke wafer solutions to customer defined specifications, to a "materials solutions provider "where IQE provides innovative material solutions to chip designers, enabling them to develop new chip designs which push the boundaries of performance and reduce the barriers of cost. A couple of examples illustrate the power of this strategy:

Wireless "Front End Modules" – The Front End Module (FEM) refers to the communications module in a smartphone. It is the FEM that performs all of the wireless communications. The FEM is made up of many individual chips, which can essentially be grouped into Filters (for filtering out undesired wireless frequencies), Switches (for high speed, high efficiency switches), and Power Amplifiers (for high efficiency amplification of wireless signals). Each of these three types of chips is made from different semiconductor materials technology. The sweet spot for IQE has historically been the Power Amplifier, but it has also developed the technologies for Switches (SOI) and for Filters (AlN). Armed with its patented cREO™ technology, IQE has a clear route to combining these three material systems on a single wafer, which paves the way for the complete integration of the FEM on a single chip. This would be highly disruptive. A FEM solution on a single chip would be more efficient, with a smaller footprint at a dramatically lower cost of production.

3D sensing solutions require a combination of technologies in a complex module: a VCSEL light source, optical components, and silicon sensing components. Again, IQE has the underlying materials technologies for these components, and the benefit of several patents including Quasi Photonic Crystals and Nanoimprint Lithography for wafer level optics. So again, with its cREO technology, IQE has a route to integrating these technologies on a single wafer. This would be highly disruptive as it would result in a 3D sensing solution on a single chip which would again be more efficient, with a smaller footprint at a dramatically lower cost of production.

Key Business Inputs

Our business relies on four key inputs: customers, people, equipment and materials

CUSTOMERS - Our customers traditionally share with IQE their detailed technical specifications, business plans and product forecasts. IQE designs its processes and allocates production capacity to meet those requirements, adding value by offering additional support with IQE's own technology and innovation.

PEOPLE - Our highly skilled, trained and experienced people provide their expertise to deliver outstanding product quality and unparalleled customer service.

EQUIPMENT - IQE works with its supply partners to utilise the best available equipment which it modifies to meet its own exacting standards and to preserve and protect its own know-how and IP.

MATERIALS - IQE works closely with its supply-chain partners to ensure the highest quality raw materials in terms of substrates, source-gases and other raw materials.

Business units

The Group has established external market facing Business Units within the organisation. The three primary business units are: *wireless, photonics and infrared*. We also have an Emerging Technologies unit that includes Solar, Power, Silicon and advanced Compound Semiconductor on Silicon technologies.

Each of our business units has a clear product and customer focus, but continues to benefit from the production and technology synergies of the whole Group.

Business units

The wireless market covers radio-frequency (RF) devices that enable wireless communications. Our markets include, but are not limited to, mobile communications (smartphones), base stations, mobile networks, WiFi, smart metering, satellite navigation, and a plethora of other connected devices.

WIRELESS (5G)

Our products will play an increasingly important role in enabling 5G systems and connected devices globally.

For over a decade, compound semiconductors have been the key enabling technology for mass market applications such as smartphones, wifi and wirelessly connected devices thanks to their high-speed and high-performance capabilities.

IQE is the clear market leader in compound semiconductor wafers for wireless applications with an estimated 55%-60% share of this global market.

After the first smartphone was launched in 2007, the wireless market enjoyed several years of double-digit organic growth, as the launch of newer, faster and more powerful devices enticing consumers to upgrade to the latest models. However, since 2013 the innovation cycle appears to have slowed and market growth has cooled. According to industry analyst IDC, overall smartphone shipments had stagnated since 2016 with sales in 2018 showing a 3% decline but expected to return to growth in 2019.

Whilst smartphone sales volumes may have declined, the relentless increase in data traffic continues to drive the need for more sophisticated wireless chip solutions in handsets. It is anticipated that this will drive the market towards 5G connectivity sooner rather than later, which provides significant upside potential for IQE's wireless business as the transition will require much more complex material technologies.

Furthermore, infrastructure applications such as base stations, radar and CATV are likely to become an increasingly important part of IQE's wireless business as the superior performance of our materials technology continues to displace the incumbent silicon LDMOS technology.

The fastest growing segment of the wireless chip market over the past few years has been for high performance filters. Although the primary materials technology for filters (aluminium nitride AlN) is made from compound semiconductor elements, the wafers have been fabricated using a much less sophisticated "sputtering" process.

Employing its new cREO process, IQE has overcome some challenges to produce prototypes of single crystal AlN wafers for 5G filter applications and are engaged with multiple potential customers with this potentially disruptive high-performance solution.

Wireless sales grew 6.6% year-on-year and the sector accounted for 62.5% of the Group's sales in 2018.

PHOTONICS

The photonics market covers applications that either transmit or sense light. A number of optical communications and sensing applications depend on the ability to emit or detect light.

Emitters include laser and LED based devices that transmit light. Lasers broadly further sub-divide into edge emitters and surface emitters. Edge-emitting lasers represent the base technology that has been traditionally used in applications such as optical communications and CD/DVD storage devices. Surface emitting lasers are highly complex epitaxial structures that allow light to be emitted vertically rather than horizontally.

Photonics products made using IQE's advanced semiconductor materials enable a wide range of end markets in consumer, communications and industrial applications.

IQE is a world leader in photonics technologies generally, but two in particular have been at the heart of IQE's growth in recent years: VCSELs and Indium Phosphide (InP) products.

Vertical Cavity Surface Emitting Lasers ("VCSEL") are the key enabling technology behind a number of high growth markets including 3D sensing, data communications, data centres, gesture recognition, health, cosmetics, illumination and heating applications.

IQE is the market leader for outsourced VCSEL materials, which has been achieved by virtue of its technology leadership. This includes the demonstration of VCSELs with record speeds, efficiencies and temperature performance. In addition, with its 6-inch / 150mm wafer capability IQE has been successful at enabling its customers to reduce significantly the unit cost of chips which is accelerating the adoption of this technology.

Advanced sensing technologies, from face recognition, to gesture recognition, LIDAR and machine vision, will represent a major growth area in the near term and extending into the future.

IQE has built a strong technical lead in this market, which combined with its unparalleled track record for mass market delivery, positions IQE well for strong growth.

Whilst VCSEL has been the centre of attention, our InP business continues to provide solid performance, being driven by the need for higher speed, higher capacity fibre optic systems to address continuing growth in data traffic.

Our InP technologies enables fibre to the premises (FTTX). The deployment of this technology to achieve higher performance at lower costs, coupled with the continuing growth in data traffic is leading to the extension of the fibre optic network "to the premises" (also known as "the last mile"). IQE's advanced laser technologies with differentiated IP underpins its high growth expectations for this business.

The proportion of sales generated from photonics products accounted for 28.0% of the Group's wafer sales in 2018.

INFRARED

Although similar in nature to our photonics business, infrared applications tend to specialise in safety, security and defence applications that deploy indium antimonide (InSb) and gallium antimonide (GaSb) engineered materials that enable high resolution, long wavelength infrared systems.

IQE is the undisputed global leader in the supply of indium antimonide and gallium antimonide wafers for advanced infrared technology - primarily "see in the dark" defence applications.

Whilst key markets are currently limited to defence applications, IQE is actively engaged with tier 1 OEMs working on major new opportunities to migrate mid to far infrared technologies into consumer markets.

We are the technology leader with the launch of the industry's first 6-inch / 150mm indium antimonide wafers, a major milestone in reducing the overall cost of chips to drive increasing adoption. This has enabled the business to secure several contract wins and drive sales growth.

Beyond defence, the InfraRed division has been successful in broadening its customer engagements into product development for mass market consumer applications. Indeed, we are now engaged with major OEM and device companies in developing InfraRed products for consumer applications including sensing. This provides potential for higher growth rates, and we will highlight these new applications as these reach commercial adoption.

Infrared sales accounted for 8.4% of the Group's sales in 2018.

EMERGING TECHNOLOGIES

Solar

Compound semiconductor technologies provide a route to highly efficient solar energy harvesting. The prevalent solar technology is based on silicon which typically achieves a conversion of less than 18% of the sun's energy into electricity.

IQE has been at the centre of developing solar materials using compound semiconductors, which can deliver much higher levels of efficiency. This technology, which is also known as Concentrating Photovoltaics, or "CPV", can already deliver efficiencies in excess of 45% and has a route map to much higher levels of efficiency. Although this offers a lower overall cost of energy generation in sunny territories, the challenge in mass adoption is in reducing the end system install costs, which has been hampered by global macroeconomics.

The terrestrial market remains an exciting market opportunity, but as a result of the shifting macroeconomics, focus has shifted to the space market, where these advanced materials are used to power satellites where the higher efficiency has a dramatic cost benefit on payload. Product qualifications are underway with leading satellite manufacturers, paving the way for commercial revenues, and we will highlight these new technologies as they reach commercial adoption.

Power

Gallium Nitride on Silicon (GaN on Si) is driving a technology shift in the multi-billion dollar power switching and LED markets. IQE has continued to push the technology boundaries and is making rapid progress both technically and in developing commercial relationships in the supply chain. The power switching market alone is approximately 3-4 times the size of the current wireless power amplifier chip market, and represents a major growth opportunity for IQE. IQE's patented technology, cREO, provides a significant competitive advantage in this space.

CMOS++

The CMOS++ business unit focusses on advanced semiconductor materials related to silicon including the combination of the advanced properties of compound semiconductors with those of lower cost of silicon technologies.

The key advantages of compound semiconductors are that they:

- **are much more efficient at emitting and processing high-speed wireless signals**
- **are much more efficient at emitting and sensing light**
- **operate at much higher speeds and lower power consumption**

It is these advanced properties which determine the top level high margin markets for our materials.

Future semiconductor technology architectures are moving strongly toward hybrid integrated chips using a combination of traditional CMOS based chips with compound semiconductor chips, all built on a silicon base wafer. This provides the market with the significant technical advantages of compound semiconductors at the cost point of silicon, and allows the CS industry to utilise the huge investment already made into large scale Silicon chip manufacturing. As a result, this greatly increases the available market for compound semiconductors. IQE has developed multiple routes to delivering this powerful new hybrid, and the addition of cREO and other IP provides unique solutions to achieving the end goal. IQE is involved in multiple programmes across the globe, which are developing the core technologies from which we expect highly significant revenue streams to emerge over the next 3-5 years.

As advanced materials technologies enter mass adoption across multiple markets, we are approaching a paradigm shift with the merging of compound semiconductor and silicon technologies on the horizon. IQE is well positioned to be a pioneer of the compound materials on silicon (CMOS) generation.

Research, development and innovation

IQE's core business is the design and manufacture of compound semiconductor wafers or "epiwafers" using a process called epitaxy.

R&D activity

Technology leadership lies at the heart of IQE's strategy. This is supported by a culture of innovation and constant improvement.

The Group is engaged in a number of research and development programmes in collaboration with customers, academia, research organisations and government agencies.

These programmes are funded through a combination of internal cash generation, customer funding, and government support.

Development programmes are geared towards next generation applications as well as process improvements leading to greater throughput, higher-quality products, better manufacturing yield, increased production uptime and new product development.

Whilst many R&D programmes are subject to non-disclosure agreements and confidentiality, there are some programmes in the public domain, examples of which include:

- **Integration of III-V with Si**
- **Sb-based materials**
- **Quantum Technologies**
- **Quantum Dot VCSELs**
- **Dilute nitrides for lasers and SWIR detectors**
- **Multi junction CPV solar cells**
- **Mixed nitride-antimonide-based detectors**
- **High power InP-based quantum cascade lasers**
- **Graphene for RF electronics**

A list of technical publications is available on the research pages of the IQE website at www.iqep.com.

IQE's dedicated Technology Group manages the business' rapidly expanding IP and patent portfolio.

Innovation through collaboration

Building high-tech clusters

Collaboration is a powerful tool in accelerating innovation. The benefits are even greater when whole ecosystems "cluster" in geographically close locations, breaking down the barriers created by geography and time zones. Indeed, Silicon Valley in California is a prime example of how the benefit of clustering can propel an industry to a global platform.

It is the benefits of collaboration and clustering that underpin IQE's strategic rationale for its joint ventures in the UK and Singapore, and its highly successful Open Innovation Programme (openiqe.com). Moreover, IQE has been at the heart of establishing a new CS Cluster in South Wales, UK, which is the first of its kind globally. This new cluster is accelerating research into novel technologies, product development, innovation and prototyping. The CS cluster, which is branded as CSconnected (csconnected.com), follows considerable high-level thinking across government, industry and academia, as well as significant private and public sector investment to establish top-class facilities and infrastructure to support activities along the technology development chain from blue-sky research to high-volume production.

The journey started in 2015, when Cardiff University announced an investment of around £75 million in the Institute of Compound Semiconductors (ICS). The announcement was followed by a £24 million joint venture between IQE Plc and Cardiff University to form the Compound Semiconductor Centre (CSC), allowing businesses and academics to demonstrate production-ready CS materials reducing time-to-market and cost. The facilities at the CSC are being complemented by new materials research, fabrication and testing at the ICS.

2016 saw the announcement by Innovate UK of a £50 million investment to establish the Compound Semiconductor Applications Catapult (CSAC), located in South East Wales; a world-class, open-access R&D facility to support businesses across the UK in exploiting novel CS technologies in key application areas.

In addition to IQE, other organisations in the region include Newport Wafer Fab (an open access chip foundry), and SPTS who design, manufacture and support a range of wafer processing tools for the semiconductor and microelectronics industries. Downstream capabilities include Microsemi's Advanced Packaging business, delivering novel solutions for miniaturised electronic circuits with wireless connectivity.

High-volume manufacturing is also certainly on the agenda for the cluster; in September 2017, IQE, Welsh and UK Governments and the Cardiff Capital Region City Deal ratified the development agreement for building a Compound Semiconductor Foundry in Newport, South Wales.

The signing followed an agreement in May by the Cardiff Capital Region (CCR) Regional Cabinet to contribute £37.9 million from the CCR City Deal's Wider Investment Fund towards the establishment of a state-of-the-art foundry for high-end production of compound semiconductors. The CCR City Deal seeks to position the region as the global leader in CS-enabled applications, which was initiated by a £12 million investment from the Welsh Government.

In addition, Cardiff University was awarded £10 million by the Engineering and Physical Sciences Research Council (EPSRC) to lead the EPSRC Manufacturing Hub in Future Compound Semiconductors that will combine and connect the UK research excellence in compound semiconductors, with translational facilities at the new CSAC Catapult to provide a pathway from research through to device and application testing and qualification.

A number of projects are already underway within the CSconnected cluster, such as improving VCSEL manufacturing efficiencies, nanoimprint lithography for laser diodes and enabling miniaturised atomic clocks using VCSEL pump sources, with both the latter projects worth over £1m.

The collaborative environment fosters strong working relationships to encourage sharing of knowledge and ideas. The organisations involved are enthusiastic about the future. CSconnected is open for business.

In addition to generating new IP through collaborative partnership, IQE continues to build on its already broad IP portfolio in areas such as cREO™, whilst also acquiring strategic IP such as the purchase and assignment of a portfolio of patents relating to Quasi Photonic Crystal technologies.

Industry events

IQE actively participates in major industry events and frequently chairs, hosts and presents technical papers at international conferences.

Open Innovation

IQE is classified by the Welsh Government as an "Anchor Company" in acknowledgement of its status as an exemplar in terms of its global leadership.

As an Anchor Company, IQE was invited by the Welsh Government to run an Open Innovation pilot programme which has been highly successful in establishing new technology networks to identify long-term opportunities.

IQE's open innovation programme, 'OpenIQE' is actively helping to boost regional economies by collaborating with industrial and academic partners to identify supply chain opportunities within Wales and across Europe.

The Open IQE programme benefits IQE by raising the Company's profile throughout multiple supply chains and helps embed IQE's technology within new and emerging markets.
Further details about IQE's open innovation programme can be found on a dedicated website: www.openiqe.com

CoInnovate

A product of IQE's open innovation programme "CoInnovate" has become a major event in the Welsh conference calendar. The third CoInnovate conference was held in Cardiff, UK in January 2018 and attracted around 300 delegates from a mix of large businesses, SMEs and academics. The conference is organised by IQE and jointly sponsored by the Welsh Government, academic partners as well as IQE and industrial partners including Airbus, GE Healthcare and General Dynamics.

In May 2019, CoInnovateCS will be launched in the US and co-located with CS-Mantech in Minneapolis.

The CoInnovate conference website is at:
www.coinnovate.co.uk

The CoInnovateCS conference website is at:
www.coinnovatecs.com

Our people

Code of business conduct, ethics and anti- corruption

Our business conduct policy sets out the values and standards of behaviour expected from all employees. It addresses expectations relating to the day-to-day conduct of business as representatives of IQE. The policy also deals with how employees can report any concerns that may arise in confidence and if they wish, anonymously. When a worker does not wish to raise concerns with their line manager or with the HR Department, or they are concerned that matters they have previously raised have not been investigated or reported properly, they are encouraged to raise concerns with the Company Secretary, who will arrange for a further review, make necessary enquiries and report to the Board.

The policy actively promotes corporate social responsibility across our organisation. It addresses local, national and international initiatives and how we work with a wide range of third party organisations in areas such as ethical employment policies, educational and community work. How we invest in our people and our communities is discussed further below.

Our policy sets out the responsibilities of employees in ensuring that they carry out their business activities in a manner aligned with IQE's values and business principles and which attract the respect of colleagues and business partners. All staff are required to ensure that they comply with all relevant laws and regulations of the countries in which we operate and do business. The policy also clarifies behaviours that are unacceptable, and which could bring IQE's reputation into disrepute.

The policy contains guidance on avoiding conflicts of interest, confidentiality, adherence to export controls, our approach to gifts and hospitality, bribery and corruption and managing relationships with third parties.

Upholding the policy is the responsibility of all IQE employees. We encourage everyone to report any behaviour which may be in breach of the UK Corporate Governance Code, is unethical or illegal. This is achieved by fostering a culture of openness and accountability, and by providing a clear procedure that enables any individual to raise breaches of policy or malpractice directly at the highest level.

All those working for or on behalf of IQE are required to confirm that they have read and understood the business conduct policy, and a copy of the policy is readily available to all employees on the Group's intranet.

The opportunities and challenges we manage within our own business also extend to our global supply chain, which we view as an extension of our business. For this reason, we are committed to ensure the same responsible business standards and ethical behaviours we expect of ourselves are upheld by the hundreds of suppliers in our supply chain. In order to uphold our high standards of ethical procurement all our supply chain staff are regularly trained in the IQE Code of Business Ethics and Conduct. In 2018, training modules focussed on key topics for anti-bribery and corruption, conflicts of interest, corporate responsibility and respect in the workplace.

Commercial business practices

We are committed to acting professionally, fairly and with integrity in all our business dealings and relationships.

Every effort is made to ensure we adopt best business practice, which includes:

In our dealings with customers:

- **Being open and honest about our products and services and communicating with customers all appropriate information they need to make informed decisions;**
- **Ensuring that any issues or problems are dealt with efficiently, with fairness and in a timely manner;**
- **Working closely with customers and potential customers to help us improve the value of the products and services we offer them;**
- **Ensuring that we benchmark and evaluate what we do in order to continuously improve products and services in the marketplace.**

In our dealings with suppliers

- **Identifying and selecting suppliers using fair and reasonable methodologies;**
- **Identifying and using suppliers who operate to ethical business standards;**
- **Identifying and using local suppliers where possible;**
- **Working closely with suppliers to help us improve the value of the products and services we offer customers to the benefit of the supply chain.**

In our relationships with employees and other stakeholders

- **Ensuring employment practices throughout the Group are fair and in full compliance with employment legislation;**
- **Working with and supporting local and national charities;**
- **Encouraging volunteer work in community activities;**
- **Supporting local academic establishments; and**
- **Participating in voluntary business advisory services via professional bodies.**

Delivering IQE's vision of being the global number one provider of advanced semiconductor materials and improving our positive social impact is not something we can achieve on our own. Every day we are working with hundreds of suppliers who are helping us achieve success with our current and new technologies. Our suppliers help us innovate, create value, capacity and capability, deliver quality and service and drive market transformation with responsible and sustainable living. A significant portion of our growth comes from innovation, delivering leading-edge products into the marketplace. We anticipate that a large proportion of our innovations are linked to working with our strategic supply chains. That's why we invest in long-term mutually beneficial relationships with our key suppliers, so we can share capabilities and co-innovate for shared growth. Strategic supply chain partnerships are about shaping the next horizon together and is a unique opportunity to unlock value for IQE and our partners. It helps us strengthen supplier and customer collaboration, it enables improved overall end-to-end operational efficiency and mutual capability building and sharing.

In order to maintain our competitive advantage we regularly evaluate and feedback the performance of our key suppliers against three main criteria of Quality, Competitiveness and Technology Leadership. We firmly believe that having industry leading supply chain partners that continually strive to drive continuous improvement in these areas creates the differentiation that IQE offers to its customers.

As a company trading on AIM, a market operated by The London Stock Exchange plc, IQE is not eligible to participate in the London Stock Exchange FTSE4Good programme, but nevertheless maintains standards and applies the principles of this index. The Group also actively engages with a number of industry groups, educational bodies and charities to promote science and technology and to help contribute to community causes. How we invest in our people and our communities is discussed further below.

Confidentiality

Our business conduct policy emphasises the essential need for confidentiality in all of our dealings.

Maintaining confidentiality is engrained in our culture. Our policy and practice ensures that all staff fully understand what constitutes confidential information and restricts internal access on a need to know basis. Information relating to third parties is not disclosed without the third parties' written consent.

Data protection
Closely linked to our policies on confidentiality is the way that we treat personal data. IQE complies with the requirements of data protection legislation and continues to undertake a range of activities including group-wide training, data audits and risk assessments pursuant to the new General Data Protection Regulations (GDPR) that came into force on 25 May 2018 and the Data Protection Act 2018.

Bribery Act
We implement and enforce effective systems to uphold our zero tolerance approach to bribery and corruption. To ensure we only work with third parties whose standards are consistent with our own, all agents and third parties who act on behalf of the Group are obliged by written agreement to comply with such standards. A programme of supplier audits exists to ensure suppliers adhere to IQE's standards.

Human rights
IQE is committed to respecting the human rights of all those working with or for us. We do not accept any form of child or forced labour and we will not do business with anyone who fails to uphold these standards.

Modern Slavery
The Modern Slavery Act addresses the role of businesses in preventing modern slavery within their organisation and in their supply chains.

The Company has a zero-tolerance approach to modern slavery and is committed to acting ethically and with integrity in all of its business dealings and relationships and to implementing and enforcing effective systems and controls to ensure modern slavery is not taking place anywhere in its business or in any of its supply chains.

The company has developed and implemented policies to comply with the requirements of the UK's Modern Slavery Act. Reference to the policy may be found on the corporate website at www.iqep.com.

How we invest in our people and our communities

Our success depends on our people. The Group recognises the importance of its workforce and in effective teamwork in enabling us to achieve our corporate goals.

Our values
IQE has grown organically and through a number of successful acquisitions, which has brought together the best of the best in our industry. We believe that our teamwork and collaboration is a powerful competitive advantage that keeps us at the cutting edge of technology and drives constant improvement throughout our organisation. This is supported by our culture of integrity, accountability, excellence and valuing people.

As IQE continues to grow we believe now is the time to undertake the process of revisiting our vision and strategy, redefining our values and creating an overarching brand for our people strategy. After several workshops and much debate, during IQE's Leadership Conference in September 2018 we agreed that our unique culture was central to our success and captioned "One IQE". This is based on the concept of everyone across IQE's global operations working together as one organisation.

We underpinned this people concept with five key statements:

- **Commit, collaborate and communicate, all working as One IQE;**
- **Embrace change and recognise we need it to drive our business to new heights;**
- **Understand that each of us can make a difference and together we can achieve great things;**
- **Use the right metrics to inform data-driven decisions and to record and measure progress;**
- **Strive for excellence every day with a real focus on the task ahead.**

To build upon this we established a project known as 'EPIC' to further identify, review and define our values through consultation with our workforce. By June 2019, Project EPIC will have defined the values it has identified. Having redefined IQE's values, we will then work to embed them into every part of our organisation through a "Values in Action" strategy. This will support our goal of making IQE a great place to work where our values are demonstrated in our behaviours every day.

Personal and professional development and performance management

We recognise that our continuing commercial success is dependent upon our ability to attract, retain, motivate and nurture the best talent in our industry. As the foundation for this, we aim to support all employees to develop to their full potential and enjoy a rewarding and fulfilling career at IQE. We are committed to recognising, encouraging and developing talent across all aspects of our organisation. We believe in matching the right people to the right roles and in ensuring that they are appropriately trained and supported. We are committed to promoting an environment and culture that provides for agile and life-long learning. We aim to provide personal and professional development opportunities for all staff throughout their employment.

In June 2018, IQE established an internal forum and oversight body, 'Change 8' or 'C8', to provide a framework and governance to Group-wide change projects. One of the C8 projects, 'Talent', is tasked with building a world-class engineering and leadership Academy.

The Talent project has the following aims:

- **transform how we train, embracing digital training methods and agile learning;**
- **ensure our engineering and technical staff have defined training pathways to competence and we can demonstrate visibility around training execution and evaluation;**
- **shape the culture whilst embracing technology to simplify and create access for all to learn in an agile work environment;**
- **align our Learning Management System (which houses our leadership, management and engineering e-courses) with our Quality Management System to ensure compliance with all requirements on the management of competence.**

In implementing the Group's strategy, the Board and Executive Committee set clear Key Strategic Objectives for the Group. A framework for the continuous review and development of IQE's strategy is being driven through our C8 project, 'Foresight' and translated at department level through our C8 project, 'Cascade' - ensuring we translate and align objectives at strategic, department, team and individual levels. Our leaders ensure their teams have clear roles and responsibilities, reporting lines, and detailed action plans which form part of our employees' personal and company performance objectives. This ensures that each employee has clear objectives and understands how they contribute to the overall success of the team and the Group.

We believe in providing fair, balanced and constructive feedback in real-time. Through this we aim to bring personal development "to life" and promote a culture of learning and development. This is supported by an appraisal process, which provides the opportunity to take stock, recognise success and support areas for development. To ensure the effectiveness of our quarterly appraisals, we provide regular training and guidance to both reviewees and reviewers in their respective roles and responsibilities. The Learning Management System 'Vault' has a suite of e-courses around developing goals, giving feedback and conducting appraisals which are accessible to all staff.

Bonus plan

All IQE employees participate in our bonus plan, which is designed to reward high levels of performance. The plan rewards the achievement of clearly defined objectives. These objectives are agreed upfront based on the key strategic objectives set by the Board and create clarity for all staff of the "cause and effect" of their achievements with their reward.

Spot awards

'Spot awards' are modest awards issued monthly to any member of staff who has gone "above and beyond" their duties for the benefit of the company. They represent a means of providing timely recognition and a "thank you". They also promote a culture of "going the extra mile" to get the job done and achieve excellence. We will further utilise them to reward "values in action" as part of our culture and values project, EPIC explained further above.

Any member of staff can recommend a colleague for a spot award. These recommendations are moderated to ensure fairness and consistency of approach.

During 2018, across the Group, 147 spot awards were issued.

Share options

The Company operates a share incentive scheme that is open to all employees. The IQE Plc Share Option Scheme allows the Company to grant options over up to 15% of the issued share capital. Periodically the Remuneration Committee approves the award of options to employees within the rules of the share option scheme. These options are subject to performance conditions.

Employee wellness

As part of our employee welfare responsibilities, we aim to promote wellbeing and provide practical wellness support for our staff.

In 2016, we initiated an employee education programme to support our staff making healthy lifestyle choices. This programme offers healthy lifestyle support and advice, and encourages better health and wellbeing for all employees. It aims to support individuals in making small sustainable changes to improve wellbeing and to improve sustainability by working in groups and making events fun. A great example was our 'Walking Works Challenge'. Those employees taking part recorded **66,495,977** steps over 14 weeks. Our top walker recorded **3,427,623** steps and the winning team recorded **6,554,454** steps.

To assist our employees to be proactive about their health we also provide regular health checks, and offer access to medical assistance through a number of programmes.

Equality

We pursue equality of opportunity in all employment practices, policies and procedures regardless of race, nationality, gender, age, marital status, sexual orientation, disability and religious or political beliefs. As part of our policies, we set out our approach to diversity.

It is the Group's policy that there should be no discrimination in considering applications for employment including those from disabled persons. All employees, including the disabled, are given equal opportunities in terms of career development and promotion. Appropriate training is arranged for disabled persons, including retraining for alternative work of employees who become disabled, to promote their career development within the organisation.

Internal communication and engagement

We believe that effective and timely communication is an essential part of positive employee engagement.

We strive to ensure that our internal communication meets our needs as a diverse global business operating throughout the UK, US and Asia.

At the end of 2018, we launched a monthly global One IQE corporate newsletter, taking great care to ensure inclusiveness of the whole Group. One IQE leads with a message from our CEO, providing focus on priorities. It provides updates from our Customer Business Units and from our Operations, Technology, Global Supply Management, IT, Finance and Human Resources functions. The newsletter includes two feature sections including one dedicated to Quality and Continuous Improvement, detailing our roadmap and progress as we continue to focus on excellence. The second feature called 'Pulse' celebrates our staff achievements, awards and learning.

As well as a producing a digital newsletter on a monthly basis, 'Town Hall' meetings – face-to-face communication forums led by members of IQE's Senior Leadership Team – are being held at each IQE site on a quarterly basis. Our Chairman also has a rolling programme of factory visits, which enable him to engage in person with local management and employees. During these site visits, the Chairman can celebrate their successes and hear at first hand the issues and challenges they face.

Further to a review of internal communications, we have also put in place a weekly Executive Team Review, which brings together the Senior Leadership Team under the chairmanship of our CEO, to discuss priorities, risks and opportunities. The Leadership team then meet with their heads of departments on a weekly basis, who then cascade information to Team Leaders. Geography has minimal or no impact on attendance as leaders are well-skilled in managing remote teams and meetings include the option to join remotely by Skype.

These regular meetings are complemented and reinforced through IQE's annual Strategy Conference when the Executives and Senior Management come together to take stock of our markets, the competitive landscape, and how we can adapt our organisation to meet changing needs. This culminates in a common understanding of our strategy, the key goals that we need to achieve over the coming year, and our respective roles in the delivery of those plans. The Non- Executive Directors also attend sessions of the Conference.

Another part of the communication framework is our employee feedback survey. This annual feedback survey gives employees the opportunity to give anonymous feedback to management, which is assessed and used to guide our improvement plans. The survey helps to ensure that we listen to our employees and strive for continuing improvement.

We have also set up internal committees to engage employees in decision-making. At the beginning of 2019 we established the Employee Pensions & Benefits Governance Committee 'EPBGC'. This Committee's members were chosen by IQE staff and represent the interests of the staff in all decisions concerning employee benefits. The Committee is chaired by IQE's independent Non-Executive Director and Chair of the Audit & Risk Committee, Sir Derek Jones.

Corporate Social Responsibility

Educational Institutions

IQE engages with a number of schools, colleges and universities around the world and is actively promoting and encouraging the take up of science, technology, engineering and maths (STEM) subjects through a number of initiatives. In the UK, IQE is engaged with STEMNET, where IQE STEM Ambassadors participate in a variety of educational events with a particular emphasis on addressing the gender imbalance in engineering disciplines.

IQE's Cardiff facility is also participating in a "Business in the Community (BITC)" Programme comprising a number of schools and businesses in a partnership cluster with the aim of building strong links between schools and local businesses. BITC activities include workshops and competitions with science and technology based themes as well as other business related sessions ranging from interview techniques to marketing and social media awareness.

Communities and Charity

As a significant employer in some of the locations in which we operate, we recognise the opportunity we have to make a positive contribution to our local communities. Therefore, we seek to contribute to the economic, social and environmental sustainability of our local communities through a range of activities and initiatives.

We encourage this to be driven "bottom-up", to ensure that our efforts are relevant to our employees and what is important to the local communities in which they operate. Through this approach, we are seeking to support our staff in their efforts to give something back to their communities.

IQE engages with local communities at each of its facilities in a wide variety of ways such as sponsoring charitable events and providing sports kits to schools. IQE's staff are also encouraged to participate in various events including through volunteering work at holiday soup kitchens, raising money for the Special Olympics and blood donations facilitated at IQE sites. During 2018, UK staff donated 93 units and our US staff donated over 150 units of blood. Our US staff also participated in the US Food Drive (20 + dinners); School Supply Drive (14 boxes); and the Holiday Angel Tree and Shoes for Kindness Drive, which helps pay off Community School Lunch Debt.

In 2019, we are in the process of establishing a charitable foundation in memory of our late CFO, Phillip Rasmussen. The foundation will support disadvantaged young people in South Wales. Developing people was a passion for Phil. He really believed that anyone regardless of their background or circumstances, if supported, could achieve anything. The PR Foundation will be a lasting and fitting legacy. Work is underway to formalise a constitution and to appoint a board of trustees and advisors as well as establish an internal events committee to begin fundraising.

Environment, Health & Safety

Health and Safety

IQE pays a great deal of attention to ensuring the health and safety of everyone involved in the business.

All employees are encouraged to take an active role in ensuring that our working environment is a safe place to work and visit, by reporting all safety observations and incidents, being involved in safety audits, risk assessments and regular awareness training sessions.

IQE's Environment, Health & Safety (EHS) group has a detailed and continuing professional development plan including training and accreditation of competent EHS professionals – in the form of Regional EHS Managers and Site Safety Managers, Engineers and Coordinators. The Regional EHS Manager appointments provide for high-level advisory roles, identification of global best-practice and adoption of strategic EHS initiatives for all applicable legislative requirements, wherever the Group operates. The Site-specific Safety Roles are directly responsible for localised EHS program implementation and operations at each IQE Site.

The Regional EHS Managers work directly with Site Safety roles, in order to implement those best practices identified from strategic initiatives to; minimise risks of injury at work; ensure legislative compliance; and assist in creating and monitoring safety practices. In addition, localised Safety Advisors, with the appropriate expertise to support in specific areas of activity such as Local Exhaust Ventilation (LEV) and pressure systems are also implemented at site level.

The EHS group continues to be actively involved in industry-wide initiatives, working with industry associations and proactively registering under regulatory directives such as REACH and GHS-based Hazard Communication. The group also monitors global chemical control activities (e.g. RoHS, TSCA) to ensure continued customer confidence and supply-chain compliance.

Safety and Environmental Teams & Reporting

The EHS Group is organised to effectively promote and increase the awareness of Safety and Environmental issues, directives and legal obligations - advising each Group subsidiary company and the Board accordingly.

Daily EHS activities and reporting at local sites, managed by the localised safety roles, are fed into general site management for effective control. Regular analysis and discussion is an agenda item at periodic site management meetings. Localised EHS roles prepare regular site performance metrics for dissemination to Group-level.

EHS Regional Managers oversee site trend analyses and undertake regular conference calls to discuss major issues and site developments. Regional face-to-face meetings and data collation culminate in Quarterly Board Reports, demonstrating major trends in EHS activities and comparisons with industry best practice and national statistical averages.

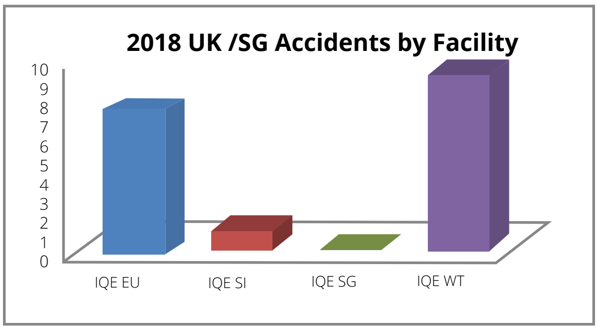
Regional Managers and the Director responsible for EHS drive strategic initiatives agreed at Board level through each organisation to promote best practice and ensure conformance to global, regional and local regulations and directives. Initiatives are designed to ensure the Group's objectives of maintaining its position at or beyond state-of-the-art EHS Management.

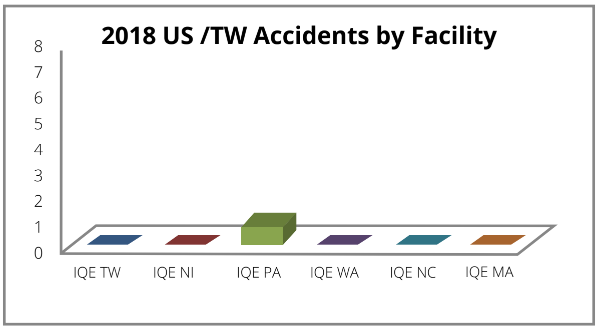
A full and comprehensive presentation of occupational trends, accidents, safety and environmental incidents, together with compliance with all regulatory requirements, Group and local objectives are published in the Annual EHS Report to the IQE Board of Directors.

Safety Performance 2018

As outlined above, IQE closely monitors Safety performance. In 2018, the UK Sites experienced no

RIDDOR reportable injures or dangerous occurrences, and the US-TW facilities experienced one employee injury accident that was recordable. Furthermore, no IQE sites experienced any work related employee injury that resulted in lost work days or restricted work activity. NB – UK sites report all minor accidents including minor cuts, slips etc. - not merely those that are reportable. US reports feature only OSHA 300 reportable incidents (c.f. RIDDOR in the UK).





The Environment

IQE is committed to protecting local and global environments and endeavours to ensure that our activities and manufacturing operations are conducted in an environmentally responsible manner.

We are committed to minimising the environmental impact of our operations by encouraging all employees to promote and adopt ways of modifying their behaviour to reduce the impact on the environment by for example, reducing waste, recycling, restricting unnecessary travel, saving water and by reducing energy usage.

IQE's policy for conducting business in an environmentally responsible manner states that we *"will ensure that:*

- **we fully integrate environmental considerations into the business planning and decision making processes;**
- **appropriate resources will be made available to ensure this policy can be implemented;**
- **compliance obligations are identified and our operations must be conducted in accordance with these obligations;**
- **we validate our fulfilment of compliance obligations by means of documented periodic review;**
- **we employ best practice to reduce the environmental impact of our operations, prevent pollution, minimise waste and maximise the efficient use of energy and resources to protect the environment;**
- **we will work with IQE supply chain to minimise their environmental impacts;**
- **we continually improve our environmental management system and its performance by setting measurable objectives and reviewing them on a regular basis;**
- **we provide suitable information and training to all employees, and interested parties to ensure that the aims of the environmental management system are achieved.**

In addition, each of our sites supplement this policy to meet local requirements.

Environmental Management

ISO 14001 is a global standard for environmental management that was developed to help organisations reduce their environmental impact.

It provides a framework for organisations to demonstrate their commitment to preserving and protecting the environment by:

- **reducing harmful effects on the environment; and**
- **providing evidence of continual improvement of environmental management.**

All IQE's continuously operating facilities have successfully completed independent third party audits of our compliance with ISO 14001:2015 - the new revised standard. These audits were very successful with no material deficiencies recorded.

All our plants clearly demonstrate commitment to environmental compliance, reducing waste, recycling materials, energy conservation, risk management and where appropriate, in ways that are complementary to our commercial objectives of reducing costs and improving operational efficiency.

Environmental Legislation Compliance

Compliance with environmental legislation is critical to our global businesses and is assured through the employment of appropriately qualified and competent managers, reporting through to the Chief Operating Officer. These managers have access to third party professional advisors as required.

IQE maintains membership of a number of professional bodies, which provide a good source of reference and support, enabling it to keep up-to-date with continually evolving legislation. This includes regular updates from the British Safety Council, British Standards Institution, Institute of Environmental Management and Assessment in the UK, and the US National Safety Council, US National Fire Protection Agency and US Federal Register.

As a Company trading on AIM, a market operated by The London Stock Exchange plc, the Companies Act 2006 (Strategic Report and Directors' Reports) Regulations 2013, relating to the disclosure of greenhouse gas emissions and other environmental matters, does not apply to IQE.

Environmental Performance 2018

IQE closely monitors environmental compliance. In 2018, we experienced no external environmental incidents or compliance concerns at any of our locations.

Recycling and Energy Conservation

At each of our global sites we operate continuous improvement programmes to reduce waste and to recycle and re-use wherever practicable. Currently, at each site we recycle plastics, steel, aluminium, paper, cardboard and process by-products where the opportunity to do so safely exists.

IQE also closely monitors the consumption of electricity, gas and water at all facilities and have targeted environmental improvement programs as part of ISO14001 to reduce carbon dioxide emissions and the depletion of natural resources.

Risk Management

IQE employs risk management techniques to identify, evaluate and prioritize Health, Safety & Environmental risks followed by application of resources to minimise, monitor, and control the probability or impact of unfortunate events. IQE's risks may be inherent to the business or come from a variety of sources including engineering or administrative control failures, accidents, incidents and/or natural causes.

IQE has performed risk management evaluations at its sites and identified the highest potential risks and opportunities. A summary of the mitigation, likelihood and impact of the risks identified is included below on pages 29.

Principal Risks and Uncertainties

The Group has an established process for the identification and management of risk as part of the governance framework. Management of risk is the responsibility of the Board of Directors.

The Board's role in risk management includes:

- **promoting a culture that emphasises integrity at all levels of business operations;**
- **embedding risk management within the core processes of the business;**
- **approving appetite for risk;**
- **determining the principal risks;**
- **setting the overall policies for risk management and control;**
- **ensuring that the above are communicated effectively across the business.**

The Board reviews and approves an Annual Business Plan prior to the start of each financial year. The Annual Business Plan sets out the key strategic, operational and financial objectives for the year, together with a detailed financial budget.
The Executive Committee is accountable to the Board for delivery of the Annual Business Plan. The Executives report performance against the plan on a monthly basis, which includes detailed analysis of budgetary variances and updated financial projections.
To provide a framework for the delivery the Group's strategy and plans, the Executive Committee has developed an organisational structure with clear roles and responsibilities, and clear lines of reporting. The Group's Senior Leadership Team are responsible to the Executive Directors for the development and delivery of the detailed action plans which underpin the Group's Annual Business Plan. As described further under the *internal communication and engagement* section at page 22, this team meets formally with the Executive Directors on a weekly basis to assess progress against their plans, and to put in place any countermeasures necessary to keep the business plan on track.
Each Executive Director is responsible for identifying and managing the risks relating to their respective areas of responsibility, including the risks relating to strategy, the Annual Business Plan, and day-to-day business.

Risk management within the business involves:

- identification and assessment of individual risks;
- design of controls and operational processes to mitigate the risks;
- testing of controls through internal review and audits;
- conclusion on the effectiveness of the control environment in place.

In addition to day-to-day risk management, the Executive Directors formally assess the major business risks and evaluate their potential impact on the Group. The principal risks affecting the Group are identified by the Group Executive team within their functional areas of responsibility and reviewed by the Audit & Risk Committee.

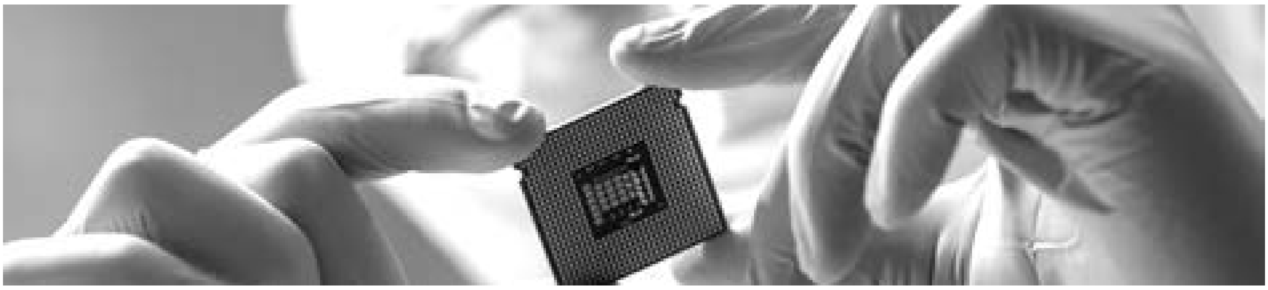
In identifying risks, we analyse risks across four key areas:

- strategic risk;
- commercial risk;
- operational risk; and
- financial risk.

The Board has put in place a framework of internal controls to manage the risks faced by the Group, and the Audit & Risk Committee has responsibility to review, monitor and make policy recommendations to the Board upon all such matters.

The principal risks identified below are listed in order of severity. Mitigation, where possible, is described next to each identified risk area.

Principal Risks & Uncertanties



Principal Risk: COMPETITION		
Business Risk	**Mitigation:**	**Year on year change in likelihood:**
Loss of dominant market share Loss of share with a significant customer Price erosion due to predatory pricing from a competitor Entry of a new competitor	IQE's leading market position depends upon proprietary technology, product quality and product diversification. IQE's competitive advantages are discussed further at page 6. We maintain close relationships with customers and suppliers to become the "materials partner of choice" by forming multilevel partnerships from material design stage to pilot and volume production. This helps us to monitor the activity of our competitors and show our customers the advantages offered by IQE. We also continue to invest in product development to ensure competitive advantage. Our focus is constantly on quality, value and customer service with technology leadership and complimentary value added solutions that enhance our customers' competitiveness. We continue to invest in product development and metrology to ensure competitive advantage. Our investment in capacity providing a credible option for mass production in any scenario. In some cases, customers seek second source supply arrangements to meet their own business continuity planning policies, but our multiple site capabilities provide some mitigation against this risk. Also, qualification times for customer products take several quarters and once a product and relationship are established, this becomes a significant barrier to entry for competitors. Given the lower margins on legacy Wireless products versus higher margins on newer Photonics products, there is less motivation for competitors to invest time to obtain additional share in these legacy products. Contractual commitments from customers are also utilised to maintain share.	Decreased **Potential impact:** High **Effect:** Loss of market share, reduced sales volumes and profitability

Principal Risk: TECHNOLOGICAL CHANGE		
Business Risk A disruptive technological change has not been anticipated as a result of a lack of investment in new products and materials We do not adequately identify and protect our IP	**Mitigation:** IQE actively engages with customers, educational institutions and government agencies on a range of research and development ("R&D") programmes. Where appropriate IQE has protected IP through patents. It is not always appropriate to protect "process know how" through patents. Rigorous controls over segregation of duties, data protection, and access controls are implemented to secure our "trade secrets".	**Year on year change in likelihood:** Unchanged **Potential impact:** High **Effect:** Sales volumes and profitability

Principal Risk: HEALTH, SAFETY AND ENVIRONMENT		
Business Risk Gas release to atmosphere Loss of ISO14001 registration at a production facility	**Mitigation:** IQE operates in a COMAH and PPC Regulated environment and employs the highest levels of technical and engineering control measures to prevent and reduce the possibility of a failure event occurring. Only trained and competent persons are permitted to work with potentially harmful materials. Highly qualified environmental professionals operating within the organisation are trained and certified to Lead Auditor Standard by BSI. We continuously audit and monitor environmental performance and management systems, driving continuous improvement across all facilities by sharing best practice. EMS systems at all sites are externally assessed by BSI/BV – up to twice annually.	**Year on year change in likelihood:** Unchanged **Potential impact:** High **Effect:** Reputational damage, costs, sales and profitability

Principal Risk: INFLUENCE OF MARKET CONDITIONS		
Business Risk Due to competing technologies and changing applications, historical GaAs products are decreasing Cost of new product development will increase Downturn of a large end market	**Mitigation:** While GaAs products have been the foundation for mobile communications for the past 20+ years, Si products are overtaking the low performance applications of GaAs while the shift to higher frequencies may require tougher specification for GaAs or entirely alternative materials such as GaN and InP at the high end of the market spectrum. We have therefore maintained close relationships with our customers to be their "materials partner of choice." This positions us to leverage our new GaN and InP wafer products into our customer's next generation designs. We also continue to invest in product development of GaN, InP, cREO and Porous Si to ensure competitive advantage when engaging with new customers. The CAGR of new GaN products is exceeding the declining percentage of GaAs products, but it may take 2-3 years for the increasing GaN revenue to catch-up and surpass the declining maturity cycle of GaAs. There are estimates that new 5G applications will offer new large volume GaAs opportunities in areas such as fixed point antenna beam steering. IQE is dependent, to a significant extent, on the strength of the defense and security industry and the defense budgets made available by national governments to purchase, develop or fund compound semiconductor based infrared product technologies. Changes in defense funding or spending, including those pertaining to the wider geo-political situation, could affect the sales of IQE products or services, and this could adversely affect its business, results of operations or financial conditions. IQE's strategy to mitigate against these risk has been to diversify the application of these products into areas which lie outside of defense and security for example in automotive, environmental and biosensor markets. By doing so the customer and product application base has increased substantially, thus enabling the business to strengthen its position and competitiveness within the markets that it operates.	**Year on year change in likelihood:** Reduced **Potential impact:** Medium to High **Effect:** Costs, sales and profitability

Principal Risk: HUMAN RESOURCING

Business Risk	**Mitigation:**	**Year on year change in likelihood:**
Loss of key people and critical skills Insufficient skilled employees Poor engagement and morale	As IQE continues to develop its new manufacturing site in Newport, South Wales, the demand for human resourcing naturally increases, which in turn, increases the overall risk to the Group. However, the risk is mitigated through effective recruitment planning. In 2018 we made a decision to bring recruitment in-house and decrease our dependence on agencies. This has been a success as recruitment is on track, taking an average of 35 days from advert to job offer. Our recruitment specialist continuously works on recruitment campaigns and on our recruitment pipeline. We have formed direct links with Universities to feed our pipeline and are actively managing succession planning across all areas of the business. Retention and development of its workforce is also critical to the long-term success of the Group. IQE's people are the heart of the business. In order to promote the development and retention of its staff, IQE offers career progression, personal development and a range of benefits and incentives. This is reflected in low staff turnover, with many employees who have been with the company since it was formed over twenty years ago. We have recently reviewed and benchmarked our employee benefits to ensure that we offer incentives that are better than our competition and in 2019 we are updating our Share Option and Long Term Incentive plans across the Group. In addition, IQE operates a highly effective, robust, and fully documented quality management system across all of its operations. These systems ensure that all key data and procedures are fully documented, reflecting IQE's "learning organisation" philosophy. These rigorous systems provide IQE and its customers with a high level of confidence in terms of process reproducibility and product traceability, and minimise the potential impact of losing key personnel.	Increased **Potential impact:** Medium **Effect:** Quality issues and increased cost

Principal Risk: NATURAL DISASTERS		
Business Risk Natural disaster disrupts production capability, supply of materials or customer demand.	**Mitigation:** IQE operates multiple global manufacturing facilities, which mitigates against the impact of natural disasters on IQE. Our active programme to second source or dual site sources for all critical supplies mitigates supplier risk. Similarly, our larger customers have multi- site production to mitigate their risk. IQE maintains appropriate business interruption insurance including for natural catastrophe despite the availability of natural catastrophe cover in the insurance market reducing since 2017. Contracts entered into by IQE, including those for the supply of epiwafers to customers, provide relief from IQE's obligations to perform during Force Majeure events. Data is appropriately stored and backed-up with IT system recovery plans in place.	**Year on year change in likelihood:** Unchanged **Potential impact:** Medium/High **Effect:** Costs, sales and profitability

Principal Risk: FINANCIAL LIQUIDITY		
Business Risk The business does not maintain sufficient funding and liquidity to meet its obligations as they fall due.	**Mitigation:** The Group prepares regular financial forecasts to evaluate its funding and liquidity requirements for the foreseeable future. These forecasts are reviewed and approved by the Board. Based on the forecasts, appropriate funding and liquidity solutions are put in place to ensure that appropriate headroom is maintained. At the 31 December 2018 year-end, the Group had net cash of £20.8m. On 24 January 2019, the Group secured additional committed funding in the form of a new $35m three-year multi-currency revolving credit facility with HSBC.	**Year on year change in likelihood:** Unchanged **Potential impact:** Medium **Effect:** Financial loss and reputational damage

Principal Risk: BUSINESS INTERRUPTION – SUPPLY CHAIN		
Business Risk Dependency on sole supplier Availability of qualified raw materials The cost of producing products can be significantly affected by the cost of the underlying commodities Limitation of SiC raw material for GaN epiwafer products	**Mitigation:** The majority of raw materials that sustain IQE's products are not scarce resources. Active programme to maintain cross qualified second sources. Rigorous supplier quality management processes. We maintain close relationships with our key suppliers in order to keep well informed about potential supply issues. Commodity based items are protected wherever possible through Long-Term Supply Agreements that allow our supply chain to plan ahead and mitigate commodity fluctuations through hedging and/or buying ahead. For the majority of IQE's new GaN products, the substrate material is SiC and there are only two qualified, high volume suppliers of SiC substrates in the world. Due to rapid worldwide market expansion in RF & Power Electronic industries, there is currently a shortage of SiC substrates. We continue to foster close partnerships with both SiC suppliers while also establishing Long-Term Supply Agreements to ensure SiC supply is sufficient to meet IQE's growing needs.	**Year on year change in likelihood:** Unchanged **Potential impact:** Medium **Effect:** Quality issues, costs, sales volumes and profitability

Principal Risk: CUSTOMER CONCENTRATION

Business Risk	Mitigation:	Year on year change in likelihood:
Dependency on a low number of customers could result in a significant impact from the loss of share from a customer. The Group has three customers that individually account for more than 10% of Group sales. (2017: three customers more than 10%) Two Wireless customers accounted for 58% of Wireless revenue in 2018. One photonics customers accounted for 37% of photonics revenue in 2018.	IQE has a diverse portfolio of intellectual property and is in product development and qualifications across many different end markets, which is evident from the continuing diversification of IQE's revenues. The Group continued to diversify revenues in 2018 with the adoption of its VCSEL technology in the mass market. The wireless sector which accounted for 62.5% of IQE's revenue in 2018, continues to contribute a significant proportion of Group revenues, but will be reduced as IQE revenues diversify into photonics and infrared. As an epitaxial wafer supplier with a bespoke offering for each customer we pursue a diversification strategy to become embedded in as many volume supply chains as possible, sometimes into the same end customer but also across competing end products. This provides a hedge against allocation decisions and the competitive landscape in the end market. Great progress has been made in 2018 with a large number of new engagements for VCSELs, some of which have already reached mass production. The wireless sector is highly concentrated with the top 5 RF Chip companies accounting for the vast majority of the wireless market. IQE's strategy is to embed itself as a significant supplier of advanced semiconductor materials with all of the major RF chip companies in order to reduce the potential impact of swings in market share between these companies.	Reduced **Potential impact:** Medium/Low **Effect:** Costs, sales and profitability

Principal Risk: LEGAL COMPLIANCE		
Business Risk Failure to comply with applicable laws and regulations such as those concerning export control, anti- bribery & corruption and data protection as well as employment and company law.	**Mitigation:** Engagement of expert advisors. Detailed internal control processes and procedures. Continuing education of the team on the legislative developments and requirements. Internal reviews and external audits.	**Year on year change in likelihood:** Unchanged **Potential impact:** Medium/Low **Effect:** Financial loss and reputational damage

Principal Risk: LOSS OF INTELLECTUAL PROPERTY		
Business Risk Infringement of IQE patents by third parties Loss of trade secrets to third parties Claims alleging IQE has breached third party intellectual property rights	**Mitigation:** As IQE has increased its IP portfolio during the year, this has naturally increased the aggregate risk, however, the risk in respect of each element of IP has not increased and is mitigated as follows. IQE protects its technology by strategically patenting in key areas. Policies and procedures that ensure contractual non-disclosure and confidentiality obligations are agreed with third parties including employees, vendors, and customers. Routine searching of worldwide patent databases in relevant areas of technology in order to identify and assess possible infringement of IQE intellectual property.	**Year on year change in likelihood:** Increased **Potential impact:** Medium/Low **Effect:** Costs, sales and profitability

Principal Risk: INFORMATION TECHNOLOGY FAILURE		
Business Risk Loss of information Failure of equipment	**Mitigation:** Information and cyber security mitigation plans in place to protect our information assets. In 2018, we linked-up with our prestigious cyber security partner, who is supporting us with our ongoing enhancement plans through 2019. We are continuing with our successful cyber training systems. All IQE personnel are required to complete a rolling programme of training modules concerning information security. IQE monitors and acts upon the completion and assessment metrics for such training. In 2018, new modules were added and several modules updated and replayed. A risk framework with plans for the management, mitigation and resolution of device failures is in place. Hardware and software systems have in-built resiliency including redundant elements. More sophisticated resiliency was introduced in 2018 and futher improvements will be continued through 2019. Data is appropriately stored and backed-up with IT system recovery plans in place.	**Year on year change** **in likelihood:** Unchanged **Potential impact:** Medium **Effect:** Costs, sales, profitability and reputational damage

<table>
<tr><th colspan="3">Principal Risk: TAX COMPLIANCE</th></tr>
<tr><td>Business Risk

Failure to comply with tax regulations and/or operate in a tax efficient manner resulting in tax liabilities which had not been previously anticipated.</td><td>Mitigation:

The Group concluded a global assessment to assess the risk of unidentified tax exposures in conjunction with an independent global tax specialist during 2018. The global risk assessment has not identified any material tax liabilities or issues of significant non-compliance. The Group engages global independent tax specialists on a proactive and ongoing basis to manage tax compliance and tax strategy.</td><td>Year on year change

in likelihood:

Reduced

Potential impact:

Medium/Low

Effect:

Financial loss and reputational damage</td></tr>
</table>

Brexit

As previously stated ahead of the 23 June 2016 referendum on whether the UK should remain in the European Union, the management team has not changed in its view that the intention for the UK to leave the European Union (commonly referred to as 'Brexit') will have no significant impact on IQE's business. The Group operates and trades globally, with Asia and the USA forming the Group's dominant markets.

IQE has conducted a detailed analysis on the potential disruption that could be caused by Brexit and the UK leaving Europe in a "no deal" scenario. The financial impact of World Trade Organisation tariffs has been evaluated as being de minimis. Safety stock holding of critical supply items have been increased for UK operations to mitigate potential customs delays and the cost to store such safety stocks is not material.

Currently, no licence is required to move our goods within the EU. If the UK leaves the EU without a deal, this will change. However, the UK Government has set up a new Open General Export Licence (OGEL) for the purpose of exporting dual use goods to EU member States. This new OGEL, similar to the one we use to export goods to the USA, has been created for the "no-deal" eventuality. To mitigate the risk of a no-deal Brexit, IQE (Europe) Limited and IQE Silicon Compounds Limited applied for and have been granted an OGEL for exporting dual use goods to EU member States. The licence will come into force at 23:00 UK time on 29 March 2019 if the UK leaves the EU without a deal.

Whilst IQE does not believe that Brexit will have a significant impact on its cashflow, it does have the benefit of a $35m multi-currency revolving credit facility provided by HSBC. The Facility has a three-year term and is US dollar denominated, which mitigates the risk of fluctuations in the value of sterling that may be caused by Brexit.

IQE does not foresee any plausible scenarios where Brexit will have a significant impact on the Company or any of its subsidiaries' ability to access workers with requisite skills. Nor does it envisage any circumstances in which a party might gain a competitive advantage over IQE as a result of Brexit.

There remains some uncertainty regarding the availability of funding for new research and development proposals involving UK organisations. However, IQE has established trading, development partnerships and grant funding from across all territories in which it operates. Whilst continued membership of the EU would have offered a great deal of upside potential for collaboration across member states, IQE's strength in its market sector means that such collaborations will continue despite likely changes in any government funding mechanisms. Innovation and collaboration are vital components in developing advanced capabilities and technology leadership. IQE has a long history of engagement with other industrial partners, academia and government agencies across the world for the development and commercialisation of next generation technologies and there is no reason to consider that the decision to leave the European Union will have any long-term impact on our business opportunities.

Section 172(1) Statement - Stakeholders

The Directors have given due regard to the matters set out in section 172(1)(a) to (f) when performing their duties under section 172 of the Companies Act. They have considered the long-term consequences of decisions, matters affecting the Company's employees and other stakeholder relationships, and the need to act fairly between members of the Company.

Recognising that companies are run for the benefit of their shareholders, but that the long-term success of a business is dependent on maintaining relationships with stakeholders, the Board continuously reviews which relationships support the generation and preservation of value in the Company. These relationships include those with customers, suppliers, employees, academic and research institutions, industrial partners and public bodies.

The key relationships are those that are essential to achieving IQE's vision and strategy:

- **IQE's vision is to maintain and grow our established position as the leading global provider of advanced semiconductor materials – the global "go to" compound semiconductor materials specialist;**
- **to realise this vision requires the ability to deliver "enabling technology", which meets the performance and price points needed for adoption, and which can be delivered reliably, on-time, every-time with the ability to scale rapidly;**

and to the effectiveness of its business model as described in this Strategic Report above.

The Directors have directly engaged with these key stakeholders or through senior representatives of the Group - including those responsible for procurement, planning, operations and quality who interact with their counterparts at other organisations - who report directly to the Directors with a view to understanding the relevant issues through a number of methods.

These methods include:

- **face-to-face meetings;**
- **attendance at industry conferences as described further at page 15;**
- **regularly reading relevant publications, journals and reports;**
- **workers council, town hall and Employee Pensions and Benefits Governance Committee (EPBGC) meetings as described in this Strategic Report at page 28.**

In 2018, IQE has maintained very active dialogue with a wide range of customers and suppliers and also major end-use OEMs. Guidance from end customers on future volume and technical requirements for photonics applications has driven investment decisions on capacity and also on metrology requirements critical to maintaining position as supplier of choice for major consumer applications.

Engagement with our Wireless customers' customers is more limited due to the preference of our customers for us to act through them, not around them. Nevertheless, we actively monitor our customers' customers via their public data releases, analysts' reports and applicable conferences. Feedback from all sources is carefully weighted, verified and evaluated internally with cross-referencing to other IQE Business Units with like customers and markets.

Other examples of decisions and strategies that have been affected by regard to stakeholders in 2018 include:

- **considering the interests of shareholders and employees in the closure of IQE's site in New Jersey, USA;**
- **consideration of culture as the basis of decision making within the business has underpinned the decision to undertake the process of revisiting our vision and strategy, redefining our values and creating an overarching brand for our people strategy as described further at page 20;**
- **decisions concerning financial capital allocation, including investment in R&D and manufacturing capacity to ensure an ability to generate and preserve value over the longer term;**
- **consideration of employee benefits which have resulted in the establishment of the EPBGC and a change of pension provider;**
- **entering into a sub-lease of space at IQE's new Newport site to the Compound Semiconductor Applications Catapult with consideration to the Catapult's business plan and strategy, to the Cardiff Capital Region City Deal (the superior landlord at the Newport site) and also the considerations relevant the local population, Welsh Government and UK Government for the growth of an industry cluster in the region as described further at page 13;**
- **working with various industry bodies in the region to support a bid to the Strength in Places fund led by UK Research and Innovation to support the growth of a compound semiconductors cluster in the South Wales region.**

In 2018, IQE's Directors have also considered the need to act fairly between members of the Company when explaining to those of IQE's major shareholders that are loaning their stock the difficulty that such loaning of stock creates for the Company. The Board has also considered queries regarding customer concentration and the competitive landscape that were raised by shareholders at roadshows. For example, at a Capital Markets Days held in London on 21 September 2018, the Directors noted that shareholders were pleased by IQE's explanation of the competitive landscape for VCSELs and that investors would like to receive such detail and explanation for non-VCSEL markets. They have sought to act upon this feedback in developing investor presentations since then. These matters are also considered further in the Principal Risks and Uncertainties section of this Strategic Report at page 34 and more generally, the information gathered through stakeholder engagement is fed into IQE's risk management processes.

Operational review

2018 represented a year of transformation, consolidation and preparation to position our business to maximise the opportunities ahead.

Transformation

From turnkey manufacturer to value added innovator

IQE has a clearly demonstrable track-record in successfully developing and commercialising advanced semiconductor materials that enable everyday innovations across a wide range of digital electronic devices including new and emerging mobile communications devices.

Our technology leadership and comprehensive product portfolio coupled with our reputation for quality of service and excellence in manufacturing are testament to IQE's position and consequently, our ability to provide excellent long-term shareholder value.

There is little doubt that our products will continue to transform the way we live, work, travel and spend our leisure-time, but IQE has also transformed the way it adds value to its customers.

During its formative years, IQE's expertise was focussed on process innovation which transformed the Company into the world leader in the provision of specialised outsourcing services to the semiconductor industry. Under this model, our customers owned the product intellectual property whilst IQE owned the process know-how in how to achieve the customers' specifications to exacting standards in a manufacturing environment.

In recent years, IQE has been adding greater value that is increasingly being embedded within our customers' products. Our innovation in materials science has enabled us to offer unique solutions that enhance our customers' products and our expertise ensures early engagement in new product development processes. The added value not only provides IQE with unique IP across a broad product portfolio, but further integrates our products and services deep within the supply chain, creating significant barriers to entry to our competitors.

Consolidation

Focus on high growth opportunities for cash-generation

The IQE Group has established its global leadership position through a combination of organic growth and acquisitions which has resulted in a geographically diverse manufacturing base.

Our product portfolio also spans a number of key markets which is reflected across a number of market-focussed business units.

Our multiple manufacturing facilities around the world have served the Group well by providing continuous manufacturing capabilities and de-risking our customers supply chains, giving IQE a unique competitive advantage. Our facilities, which all operate 24/7, also allow us to service our customers' needs at a regional level.

Transferring manufacturing operations between manufacturing sites involves complex and lengthy qualification processes but once fully established, the multiple-site manufacturing capabilities cannot be matched by our competitors and become effective barriers to entry.

The operation of manufacturing facilities across different jurisdictions also allows targeted deployment of new and emerging technologies that could be subject to import/export restrictions in some territories, allowing the Group to engage in a wide range of technological areas.

During the last two-years, great efforts have been made to consolidate our research, development and manufacturing activities enabling the transfer of technologies and processes which in turn have led to the closure of our activities in Bath, UK and Somerset, New Jersey with activities being transferred to other IQE facilities whilst maintaining consistency of supply with our customer base.

In terms of our markets, we are also focussing on our three primary sectors of wireless (connectivity, 5G), photonics (sensors, optical communications) and infrared (high-end imaging, healthcare technologies). The remaining three sectors of power (power control and switching), solar (space PV, concentrated PhotoVoltaics/CPV) and CMOS++ (advanced, next generation Compound Semicoductor on Silicon technologies) will be combined under an "emerging technologies" umbrella to provide a focus on next-generation applications, and allow an efficient route to market.

Preparation

Stepping up a gear

The last two years have seen unprecedented progress in the Group's expansion of its high-volume manufacturing capacity and capabilities. Our investment in capacity expansion is clearly focussed on servicing a number of new and emerging high-growth markets.

By far the largest single expansion has been at our new epi mega-foundry in Newport, Wales, UK which was initiated by IQE in September 2017.

The 30,000m^2 building was originally constructed by the Welsh Government in 1998 to serve as a silicon technology packaging and test centre for a major global semiconductor company as part of a programme to attract inward investment into the UK. The inward investment project was never completed and the building remained unoccupied until it was acquired in September 2017 by the Cardiff Capital Region and subsequently leased by IQE.

Since taking on the lease of the building as an empty shell, IQE has completed the first phase of construction of cleanrooms and services for up to 20 MOCVD tools, of which, the first 10 tools have been installed and are in various stages of commissioning and qualification.

In addition to the internal cleanrooms and supporting services, the initial construction phase has included external facilities for deliveries, storage, access and car parking that will also support future expansion.

When fully occupied, the Newport facility will have the capacity to house up to 100 high-volume production tools comprising a mixture of platforms (MOCVD and MBE). To put this into perspective, prior to the start of the current expansion plan, the Group operated around 100 legacy tools across its entire global facilities, so the expansion when completed will create almost three times the manufacturing capacity taking into account the increased productivity of the new high-volume tools.

The initial phase of construction at the Newport facility is dedicated to photonics for a diverse range of sensor applications.

In addition to the new flagship facility in Newport, our expansion program also includes the installation of additional wireless capacity in Hsinchu (Taiwan), expansion of our gallium nitride (GaN) capacity in Taunton (Massachusetts) as well as additional capacity for our gallium antimonide (GaSb) and indium antimonide (InSB) infrared production lines in Milton Keynes.

2018 to January 2019 also saw the completion of the migration of production of GaN from our Somerset, New Jersey facility to our Taunton Massachusetts site, a process requiring complex process and customer re-qualifications whilst maintaining consistency of supply to our customer base. The transfer was completed with the closure of the New Jersey facility expected to result in annual operating savings of $4M per annum from 2019.

A further consolidation during 2018 was the relocation of research and development activities from Bath, UK to our facility in Cardiff, Wales, UK.

Further operating efficiencies are expected to be achieved through merging and consolidating existing operational facilities over time. Continuous improvement is an ongoing process across IQE's global operations, with numerous programmes under way at any given time.

OUTLOOK

Year of opportunity

The Group's technology and market leadership, coupled with its strong pipeline of high growth opportunities positions it uniquely to capitalize on its high-growth potential and deliver margin expansion, improving cash generation, increasing ROI and EPS growth in the coming years built on the firm foundations of technology and market leadership combined with a growing pipeline of high growth opportunities.

We fully expect the VCSEL wafer ramp to return during 2019 with an existing major customer along with additional demand from other qualified chip manufacturers for new entrant OEMs in the fast-developing 3D sensing VCSEL market.

The Group's investment in expanding GaN capacity in its facility in Taunton, Massachussets provides a strong position for the upcoming wide ranging 5G deployment of GaN solutions. This investment will be completed by H1 2019.

The Group has also committed approximately £15m to additional wireless capacity at its plant in Hsinchu, Taiwan. This project will complete in H1 2019, increasing capacity at the plant by 40%. With this investment the Company will be able to avoid the costs of converting and reconverting reactors from Wireless to Photonics and back again which have totalled approximately £3m in the last two years in costs and lost opportunity and provide additional capacity for the continued growth of the Group's wireless business.

These investments will enable the Group to better balance its production capabilities, provide capacity to fulfil market growth expectations and reduce costs, improving efficiency to underpin margin expansion.

The Group is committed to generating shareholder value by delivering increased revenues and profitability from continued investment in IP as well as through the development of new products and services for our global markets and delivering long-term sustainable revenues at high margins.

Our KPIs are highlighted on page 45 of this Strategic Report.

GLOSSARY OF TERMS

cREO™ .... Crystalline Rare Earth Oxide
DFB .... Distributed Feedback Laser
Epitaxy .... See page 4
GaAs .... Gallium arsenide
GaSb .... Gallium antimonide
GaN .... Gallium Nitride
InP .... Indium phosphide
InSb .... Indium antimonide
MBE .... Molecular Beam Epitaxy
MOCVD .... Metal Organic Chemical Vapour Deposition
NIL .... Nano Imprint Lithography
PQC .... Photonic Quasi Crystals
RF .... Radio Frequency
VCSEL .... Vertical Cavity Surface Emitting Laser

Financial review

The Group reports financial performance in accordance with International Financial Reporting Standards adopted by the European Union ('IFRS') and provides disclosure of additional alternative non IFRS GAAP performance measures to provide further understanding of financial performance. Details of the alternative performance measures used by the Group including a reconciliation to reported IFRS GAAP performance measures is set out in note 5 to the financial statements.

Consolidated revenues were up 1% to £156.3m (2017: £154.6m) which has been achieved with a similar manufacturing capacity compared to 2017, without the recognition of any license income (2017: £1.9m) and against a currency headwind of 4%.

Wireless continues to represent the largest proportion of the Group's revenue accounting for 63% (2017: 60%) of total wafer sales with Photonics representing 28% (2017: 31%), Infrared representing 8% (2017: 8%) and CMOSS++ representing 1% (2017: 1%).

Wireless wafer revenues were up 7% to £97.8m (2017: £91.7m). Wireless demand, especially for GaN products, has been strong throughout the year and additional capacity has been made available to address GaAs demand, including the replenishment of inventory channels in the first half of the year that were depleted during 2017 as manufacturing capacity was switched to photonics.

Photonics wafer revenues were down 8% to £43.8m (2017: £47.7m). Photonics demand, especially for VCSEL products was adversely impacted in the first half of the year as excess inventory in the downstream supply chain took longer than expected to be consumed whilst the sudden decline in short term demand for VCSEL wafers in the final quarter of the year also adversely impact sales and volumes. Despite the decline in revenue year on year the Group has made significant progress to strengthen its position in the VSCEL market with more than 25 engagements with VCSEL chip companies at varying stages of product development, qualification and production.

Infrared wafer revenues were up 10% to £13.1m (2017: £12.0m). Infrared demand, especially for defence applications has remained strong whilst successful progress continues to be made in broadening customer engagements into product development for mass market consumer applications where continued growth opportunities exist.

Gross profit declined from £38.8m to £37.5m. Adjusted gross profit, which excludes the charge for share based payments, decreased from £43.8m to £36.8m. Excluding license income, which has a 100% margin, the adjusted gross margin on wafer sales declined from 27.5% to 23.5% reflecting a shift in mix from higher margin photonics sales to lower margin wireless sales.

Other income increased from £nil to £1.1m. The increase in other income relates to the net insurance proceeds received following the death of the Chief Financial Officer, Phillip Rasmussen, and the income has been excluded from the adjusted profit measures in 2018 as the income did not relate to underlying trading.

Selling, general and administrative ('SG&A') expenses increased from £21.6m to £29.9m. Adjusted SG&A, which excludes charges for share based payments, amortisation of acquired intangibles, restructuring costs, onerous property leases and patent dispute legal costs increased from £17.3m to £20.7m reflecting investment for growth alongside the Group's capital expansion programme.

Restructuring costs totalling £3.3m relate to the closure of the Group's manufacturing facility in New Jersey, USA and the associated transfer of the trade and assets to the Group's manufacturing facility in Massachusetts as part of the Group's consolidation and expansion of GaN capacity at the Massachusetts site. The consolidation of GaN capacity at the Massachusetts site is expected to deliver annual cost savings of c.£3.0m. Onerous property lease costs totalling £4.4m relate to the extension of the onerous lease at the Group's Singapore manufacturing facility to the end of the lease in 2022 whilst legal costs relate to costs incurred in respect of a patent dispute defence.

Operating profit decreased from £17.2m to £8.7m. Reflecting the adjustments noted above, adjusted operating profit decreased from £26.5m to £16.0m. The segmental analysis in note 4 reflects the adjusted operating margins for the primary segments (before central corporate support costs). Wireless adjusted operating margins declined from c.15% to c.12%, partially reflecting costs associated with switching capacity from Photonics to Wireless during the year. The decline in adjusted Photonics operating margins from c.38% to c.26% reflects the decline in volume and a focus on lower margin customer development work as the Group has sought to strengthen its position in the VCSEL market by engaging with all the major VCSEL chip companies. Infrared margins have remain robust at c.26% (2017: 27%) as the segment continues to grow.

Share of losses in joint ventures (2018: £2.0m, 2017: £nil) reflects payments made on behalf of the Group's joint venture, CSDC, during a period when CSDC has required funding following a significant (£6.0m) reduction in revenues in 2018 which has coincided with increased investment in new customer engagements. New engagements include twelve Chinese customers for fifteen separate product qualifications which CSDC expects to ramp into mass production.

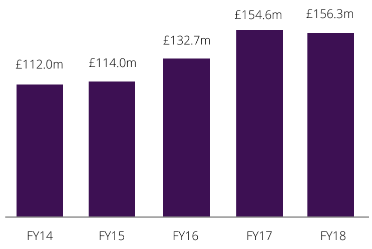
Finance costs decreased from £2.1m to £0.1m of income following the equity fund raising in 2017 and the subsequent repayment of the Group's bank borrowings. Adjusted finance costs, which exclude imputed interest associated with the discounting, are negligible at £0.1m (2017: £2.0m).

The charge for taxation increased from £0.4m to £5.6m. Adjusted tax, which excludes the tax affect associated with the alternative performance measure adjustments was £2.7m (2017: credit £0.4m) at an effective underlying tax rate of 17%. The adjusted tax charge reflects deferred tax associated with accelerated capital allowances in excess of depreciation, reflecting the on-going significant capital investment in the business partially offset by the recognition of certain US tax losses. The tax charge on adjusted items of £2.8m and the associated high effective tax rate principally reflects the impact of the effective tax rate on the share based payment charge. The effective tax rate on the share based payment charge reflects a deferred tax charge in relation to a reduction in future corporation tax deductions associated with the decrease in share price and a reduction in the number of options where performance criteria are expected to be achieved. The cash payment of taxes decreased from £5.8m to £0.7m due to the settlement in 2017 of US taxes relating to prior years. Cash taxes are expected to remain at approximately £1m to £2m for the near future, whilst the effective rate is expected to be approximately 15% to 20% reflecting the deferred tax charge associated with the utilisation of tax losses.

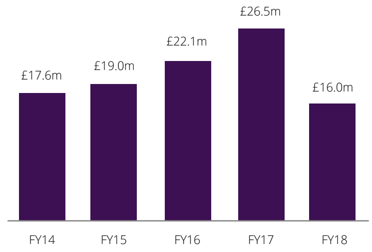
Cash invested increased from £28.2m in 2017 to £42.4m in 2018 as the Group has continued with a significant investment program across its global operations. Capital expenditure has increased from £11.3m to £30.4m as the Group has focused on capacity expansion with the construction of a new mega epi foundry in Newport, which will be dedicated to photonics applications, installation of additional wireless capacity in Hsinchu, expansion of GaN capacity in Massachusetts and additional capacity for infrared production in Milton Keynes. Investment has continued in technology and intellectual property with cash expenditure totalling £12.0m (2017: £16.9m) and share based payments for the purchase of the cREO technology and intellectual property portfolio totalling £3.5m (2017:£nil).

KPIs (Dashboard)

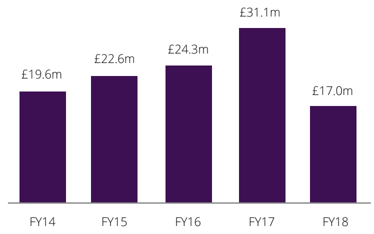
Revenue



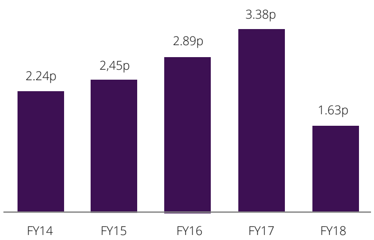
Adjusted operating profit



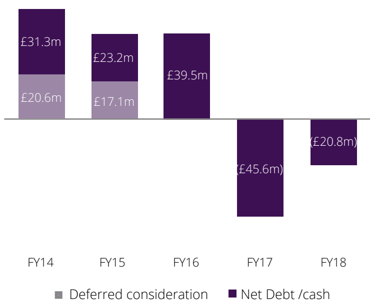
Net Cash flow from operations before adjustments



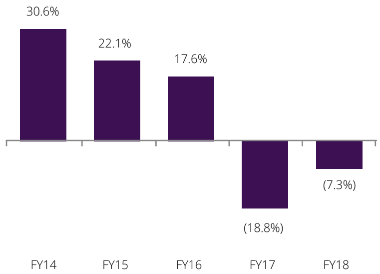
Adjusted Diluted EPS



Leverage



Gearing



Going concern

After making enquiries and considering the available resources, the financial forecasts together with available cash and committed borrowing facilities to enable them to consider the future prospects of the Group, the Directors have formed a judgement that there is a reasonable expectation that the Company and the Group have adequate resources to continue operating for the foreseeable future and therefore the going concern basis has been adopted in preparing these financial statements.

In reaching this conclusion, the Board has considered the magnitude of potential impacts resulting from uncertain future events or changes in conditions, the likelihood of their occurrence and the likely effectiveness of mitigating actions that the Directors would consider undertaking.

Long-term viability statement

The Directors have considered the viability of the Group over a three-year period to December 2021, taking account of the Group's current position and the potential impact of the principal risks and uncertainties described in the Strategic Report at page 28.

In making this statement the Directors have considered the resilience of the Group, taking account of its current position, the principal risks facing the business in severe but reasonable scenarios, and the effectiveness of any mitigating actions.

The Directors have determined that the three-year period to December 2021 is an appropriate period over which to provide its viability statement as it reflects a period of time over which information and forecasts concerning demand for development, qualification and production of wafers, is considered reasonably reliable. In making their assessment, the Directors have taken account of the Group's ability to raise new finance in most market conditions and other potential mitigating actions.

As explained above, the market in compound semiconductors is growing and there is little doubt that it will continue to do so for the foreseeable future. To ensure IQE continues to be well positioned to exploit this growing market in the longer-term, IQE has developed a technology roadmap and continues to invest in research and development. We have also made strategic investments to provide additional manufacturing capacity at sites in the UK, US and Asia and space for further expansion at our site in Newport, South Wales. Further, we have recently agreed a three-year $35m multi-currency revolving credit facility provided by HSBC to ensure IQE has plenty of liquidity to make strategic investments as may be required to exploit opportunities that arise.

Based on this assessment, the Directors have a reasonable expectation that the Company will be able to continue in operation and meet its liabilities as they fall due over the period to December 2021.
This Strategic Report is approved by the Board of Directors and signed on its behalf by:

Dr Godfrey H H Ainsworth
Executive Chairman, IQE plc
20 March 2019

Directors' Report

The directors present their annual report and the audited consolidated financial statements for the year ended 31 December 2018.

In accordance with section 414C(11) of the Companies Act, the Company has chosen to include in the Company's Strategic Report, certain information which would otherwise be required by Schedule 7 of the 'Large and Medium-sized Companies and Groups (Accounts and Reports) Regulations 2008' to be contained in the Director's Report. Cross references to such information in the Strategic Report are included below.

Activities

The principal activity of the Group during the year was the development, manufacture and sale of advanced semiconductor materials. The principal activity of the Company is that of a holding company for the Group, the provision of services to subsidiary companies, and the research, development and provision of engineering consultancy services to the compound semiconductor industry.
Those branches of the Group outside of the United Kingdom are described in the Strategic Report at page 8.

Business review

A review of the Group's trading during the year and its position at the year-end is provided on pages 43 to 45 and 54 to 56. The review includes key performance indicators as detailed in the Five Year Financial Summary. The principal risks and uncertainties facing the Group are set out on pages 28 to 37. The future outlook for the Group is set out on pages 46. Details of any important events and likely future developments affecting the Company and subsidiaries since the end of the financial year are also included in the Strategic Report.

Dividends

The directors do not recommend the payment of a dividend (2017: £nil).

Directors

The directors in office at 31 December 2018 and throughout the year and their beneficial interests in the company's issued ordinary share capital and share options are set out in the remuneration report on pages 77 to 78.

Substantial interests in shares

As at 28 February 2018 the company had been notified pursuant to the Companies Act of the following substantial interests in the shares of the company as defined by the Listing Rules in addition to those disclosed for the directors:

Shareholder / Beneficial owner	Shares	% IC
OppenheimerFunds	124,659,406	16.03
T Rowe Price International	71,687,223	9.22
Hargreaves Lansdown Asset Mgt	53,820,842	6.92
T Rowe Price	34,631,685	4.45
Schroder Investment Mgt	33,341,562	4.29
Interactive Investor	31,293,638	4.02
Barclays Wealth	31,269,975	4.02
Dr Andrew W Nelson	28,459,218	3.66

Source: EQUINITI Investor Analytics
IQE has not acquired any of its own shares during 2018.

Research and development
The Group incurred costs in respect of research and development during the year of £11,202,000 (2017: £17,011,000) of which £10,559,000 (2017: £15,434,000) has been capitalised in accordance with IAS 38 ("Intangible assets"). The remaining research and development costs totaling £643,000 (2017: £1,577,000) have been charged to the income statement, net of grant funding of £617,000 (2017: £1,507,000).

Payment terms
The Group seeks to agree favourable credit terms with its suppliers where possible, and adhere to the agreed terms. The Group's average number of days' purchases outstanding in respect of trade creditors at 31 December 2018 was 82 days (2017: 90 days).

Employment policies
A review of the Group's employment policies is provided on pages 18 to 22.

Principal risks and uncertainties
Details of the principal risks and uncertainties impacting the Group have been included in the Strategic Report on pages 28 to 37.

Treasury
IQE operates a central treasury function, which acts in accordance with specific board policies. Speculative transactions are not permitted. The significant treasury policies relate to Interest rates, foreign currency and liquidity are detailed in note 21.

Insurance and Indemnities
We have purchased and maintain appropriate insurance cover in respect of directors' and officers' liabilities. The Company has also entered into qualifying third party indemnity arrangements for the benefit of all its Directors in a form and scope that comply with the requirements of the Act. These indemnities were in force throughout the year and up to the date of this Report and Annual Accounts.

Provision of information to auditors
As far as the Directors are aware, there is no relevant audit information of which the Company's auditors are unaware. The Directors have taken all the steps that ought to have been taken as directors in order to make themselves aware of any relevant audit information and to establish that the Company's auditors are aware of that information.

Approved by the Board of Directors and signed on behalf by:

Dr Godfrey H H Ainsworth
Executive Chairman, IQE plc
20 March 2019

Governance

Statement of Compliance with the UK Corporate Governance Code

The Board of Directors believes in high standards of corporate governance and is accountable to shareholders for the Group's performance in this area. Furthermore, IQE is a company trading on AIM, a market operated by The London Stock Exchange plc, and since September 2018, the AIM rules expressly require companies to recognise and apply a corporate governance code of practice.

For many years, the Board of Directors has chosen to apply the UK Corporate Governance Code (the "Code") and to provide corporate governance disclosures similar to those that would be required of a premium-listed company. The Group continued to apply the April 2016 edition of the Code during 2018 and shall apply the 2018 edition of the Code in respect of its financial year ending 31 December 2019. Each edition of the Code is available on the website of the Financial Reporting Council (FRC) at: www.frc.org.uk.

Disclosure requirements arising from changes to the Code will not take effect until 31 December 2019 annual reports. However, in order to help investors and stakeholders understand the progress being made by the Board to implement some of the changes, this statement addresses the additional requirements set out in the new Code. This statement is also structured according to the five sections of the updated Code, namely: Board Leadership and Company Purpose; Division of Responsibilities; Composition, Succession & Evaluation; Audit, Risk and Internal Control; and Remuneration.

The Company is a smaller company for the purposes of the Code, and as such, certain provisions of the Code either do not apply to the Company or are judged to be disproportionate or less relevant in its case. Where the Company does not comply with any specific code provision then this is highlighted and explained in this statement below.

IQE has identified the following main areas of non- compliance with the new Code:

- Whilst the Board is satisfied that IQE's Chairman, Dr Godfrey Ainsworth, has continued to demonstrate objective judgement throughout his tenure, he is not deemed independent by virtue of his length of service and because, following the tragic death of IQE's Chief Financial Officer, Phillip Rasmussen, he became Executive Chairman and Interim CFO in April 2018. Mr Phil Smith, who joined the IQE Board in December 2016, will be independent as defined by Provision 10 of the new Code when he becomes Non-Executive Chairman on the retirement of Dr Ainsworth in 2019.
- The Company's Articles of Association do not provide that Directors are subject to annual re-election as prescribed by the new Code. The Board has previously considered the FRC's guidance to companies outside the FTSE 350 to consider the annual re-election of all Directors, and considered that this would be overly burdensome for the nature of the Group. Now that the new Code removes the exemption for small companies, the Board will give due consideration to this when considering matters to be put to a vote by shareholders at the next AGM. It will also consider the requirement of the new Code to set out in the papers accompanying the resolution to elect each Director the specific reasons why their contribution is, and continues to be, important to the company's long-term sustainable success.
- IQE does not currently maintain a succession plan for the company secretary or all management immediately below Board level, but IQE is working to develop such plans based on merit and objective criteria (including the promotion of diversity of gender, social and ethnic backgrounds, cognitive and personal strengths) as required by the new Code. As part of its consideration of developed succession plans, the Nominations Committee will consider the linkage of its diversity objectives with company strategy and the gender balance of those in senior management and their direct reports.
- The performance of the Directors is assessed on an ongoing basis. For example, the Chief Executive reviews the performance of the Executive Directors on a periodic basis and reports to the Remuneration Committee at least annually. However, IQE has not carried out a formal and rigorous annual evaluation of the performance of the Board, its Committees, Chair and individual Directors to the extent as required by the Code. It is intended that a formal review process will be implemented during 2019 and thereafter, but that this will probably not require external facilitation. Companies outside the FTSE 350 such as IQE are encouraged, but not required, to consider the use of externally facilitated board evaluations.
- The Remuneration Committee has responsibility for determining the policy and setting remuneration for the Executive Directors and the Chairman. It also has responsibility to recommend and monitor the level and structure of remuneration for senior management. However, the Remuneration Committee does not currently determine the policy and set the remuneration for senior management and the Company Secretary as required by the Code.

Board Leadership and Company Purpose

The Group is headed by an effective and entrepreneurial Board that is collectively responsible for the long-term sustainable success of the Group, generating value for shareholders and contributing to wider society.

The Strategic Report on pages 4 to 46 sets out how the Board has recently engaged with:

- **opportunities and risks to the future success of the business;**
- **the sustainability of the Group's business model;**
- **delivery of the Group's strategy;**
- **its aims of creating shareholder value and contributing to wider society.**

All directors act with integrity, lead by example and promote the desired culture of innovation, collaboration, valuing people, integrity, accountability and constant improvement. As explained at pages 18 to 22 of the Strategic Report, workforce policies and procedures - including in relation to investing in and rewarding its workforce - are consistent with the company's culture and values and support its long term sustainable success. As described on page 22} of the Strategic Report, the Board actively engages with the workforce including through its Employee Benefits and Pensions Governance Committee, Workers Counsels and 'town hall' meetings. Through this activity and engagement, the Board is satisfied that the Group's purpose, values and strategy (set out in the Strategic Report) are aligned with a culture of innovation, collaboration, valuing people, integrity, accountability and constant improvement. The Board has also inputted to IQE's culture review project 'EPIC' (described at page 20 and 21 of the Strategic Report) and will provide ongoing governance as that project progresses from its review of the defined values to its 'values in action' strategy.

Through its budget processes and consideration of strategic projects, each of which include presentations to the Board from leaders of business units and functions, the Board establishes the Group's objectives, ensures that necessary resources are in place to meet those objectives and measures performance against those objectives. These are complimented by the Audit & Risk Committee's responsibility to consider risk management as set out in the Strategic Report at pages 20 to 27.

As required under its Terms of Reference and the Code applicable to 31 December 2018, the Audit and Risk Committee recently reviewed and refreshed a policy on whistleblowing that is applicable across the Group's global operations. This sets out the means by which the workforce should raise concerns and how they may do so in confidence and if they wish, anonymously. Further information is provided at page 20 of the Strategic Report. Pursuant to the requirements of the new Code, moving forward, the full Board shall not only consider reports arising from its operation, but will also routinely review the arrangements in place for the proportionate and independent investigation and follow-up action as set out in the whistleblowing policy.

The Board regards regular communications with shareholders as one of its key responsibilities. The Chief Financial Officer, Chief Executive Officer and Chairman meet with institutional investors on a regular basis to discuss the Group's performance, the shareholders' views, and to ensure that the strategies and objectives of the Group are aligned and well understood.

The Chief Executive Officer and Chairman keep the Board fully informed of any significant matters discussed with shareholders and of shareholders' views. Furthermore, all members of the Board receive copies of any analysts' reports of which the Company is made aware.

The Company employs an Investor Relations Manager who supports the Directors with day-to-day investor relations. Together, they respond to investor enquiries throughout the year. In addition, all shareholders attending the AGM are given a presentation on the business and are invited to ask the Directors questions about the business.

The Committee Chairs engage with shareholders on significant matters related to their areas of responsibility at AGMs and other shareholder meetings as required.

The Investor Relations Manager also maintains the Group's website, which provides details of the Group's business including its strategy, technologies, operations and products. The website has a separate investor relations section that provides news about the Group, share price information, and financial reports including the annual and interim reports. Hard copies of annual reports are also available by request. The website can be found at www.iqep.com.

The Company will advise shareholders attending the AGM of the number of proxy votes lodged in respect of each resolution, split between 'For', 'Against', 'at the Chairman's discretion' and 'abstentions'. These are advised after the resolutions have been dealt with on a show of hands, providing that a poll has not been called for or is required. In accordance with the recommendations of the new Code, when announcing results of votes where 20% or more have been cast against the board recommendations for a resolution, the Company will explain what actions it intends to take to consult shareholders in order to understand the reasons behind the result. An update on the views received from shareholders and actions taken will then be published no later than six months after the shareholder meeting. A final summary on what impact the feedback has had on the decisions the board has taken and any actions or resolutions now proposed will be included in the annual report and if applicable, in the explanatory notes to the resolutions at the next shareholder meeting.

The Chairman is available to meet with major institutional shareholders as needed throughout the year to consult on corporate governance matters and performance against the strategy. The Senior Independent Director is also available to consult on governance matters and to provide an independent view of the position and prospects of the Group.

The Non-Executive Directors, having considered the Code, are of the view that this approach to shareholder communication remains appropriate for the Group. However, should shareholders have concerns which they feel cannot be resolved through normal shareholder meetings, the Senior Independent Director and the remaining Non-Executive Directors may be contacted through the Company Secretary.

As described further in the Section 172(1) Statement on pages 38 and 39, the interests of the company's other key stakeholders have also been considered in recent Board discussions and has influenced the Board's decision-making. The Board continuously reviews the effectiveness of its engagement with stakeholders and the mechanisms that facilitate such engagement.

Under Article 117 of IQE Plc's Articles of Association, if a Director or a person closely connected to them has an interest in a transaction or arrangement of the Company, such Director is required to declare such interest in accordance with Company Law. Save in certain defined circumstances described in Article 118, a Director should not be counted for quorum or voting purposes in respect of any transaction or arrangement where they have an interest. The Directors give due consideration to any circumstances in which a potential conflict of interest may arise or may be perceived to arise, including in connection with significant shareholdings and ensure that the influence of third parties does not compromise or override independent judgement. For example, in the context of discussions concerning IQE's joint venture with Cardiff University in 2018, Sir Derek Jones noted he has provided services to Cardiff University. Upon the raising of this, there was no concern amongst the Directors that there was a conflict of interest.

Where Directors have any concerns about the operation of the Board or the management of the company that cannot be resolved, their concerns are recorded in the minutes of Board Meetings. On resignation, a Non-Executive director should provide a written statement to the Chairman for circulation to the Board, if they have any such concerns.

Division of Responsibilities

The Board comprises the Executive Chairman, Dr Godfrey Ainsworth, the President and Chief Executive Officer, Dr Drew Nelson, two other Executive Directors and three independent Non-Executive Directors. Throughout the year ending 31 December 2018 and since, at least half of the Board, excluding the Chairman, have been Non-Executive Directors.

The Board considers that the three Non-Executive Directors, Sir David Grant, Mr Phil Smith and Sir Derek Jones who have each held office for less than nine years, to be independent in accordance with the Code, and free from any business or other relationship which could materially interfere with the exercise of their independent judgement. Sir Derek Jones most recently joined the board as Non-Executive Director on 29 November 2017. This followed the appointment of Mr Phil Smith on 19 December 2016.

As explained further in the Nominations Committee Report at page 63, the Board intends to appoint an additional independent Non-Executive Director during 2019. Such an appointment will ensure that, after Mr Phil Smith becomes Chairman on the retirement of Dr Ainsworth, half of the Board, excluding the Chair, will be non-executive directors whom the Board considers to be independent.

The Board recognises the special position and role of the Chairman under the Code, and it has approved the formal division of responsibilities between the Chairman and Chief Executive. The Chairman is responsible for the leadership of the Board and ensuring its effectiveness. The Chief Executive manages the Group and has the prime role, with the assistance of the Board, of developing and implementing business strategy.

The Board meets regularly through the year - at least six times and additionally on an ad hoc basis as is required to discharge its duties effectively. It is provided with appropriate strategic, operational and financial information prior to each meeting together with reports to enable it to monitor the performance of the Group. The number of meetings of the Board, Committees and individual attendance by Directors is set out in the annual report each year (see page 58.

Under the direction of the Chairman, the Company Secretary facilitates good information flows within the Board and its Committees and between senior management and Non-Executive Directors. The Company Secretary is also responsible for advising the Board through the Chairman on all governance matters. All Directors have direct access to the advice and services of the Company Secretary who is responsible for ensuring that Board procedures are followed, and are allowed to take independent professional advice if necessary at the Company's expense. Pursuant to Article 134 of IQE Plc's Articles of Association, both the appointment and removal of the Company Secretary is a matter for the whole board.

At Board meetings, the Chairman ensures that all Directors are able to make an effective contribution throughout meetings and every Director is encouraged to participate and provide their perspective and opinions. The Chairman always seeks to achieve unanimous decisions of the Board following due discussion of agenda items.

The Board has a formal schedule of matters referred to it for decision, this list includes appropriate strategic, financial, organisational and compliance issues, including the approval of high level announcements, circulars, reports and accounts and certain strategic and management issues.

Examples of such items include, but are not limited to:

- **the approval of interim and annual results,**
- **the approval of the annual budget,**
- **approval of acquisitions or disposals,**
- **approval of major items of capital expenditure,**
- **approval of changes to corporate or capital structure,**
- **financial issues, including changes in accounting policy, the approval of dividends, bank facilities and guarantees, and**
- **the approval of significant contracts.**

The Non-Executive Directors scrutinise and hold to account the performance of management and individual executive directors against agreed performance objectives. To facilitate this, the Chairman and Senior Independent Director ensure that meetings of Non-Executive Directors without the Executive Directors present are held. These include meetings of the Nominations, Remuneration and Audit & Risk Committees as described further below.

One of the roles of the Non-Executive Directors is to undertake detailed examination and discussion of the strategies proposed by the Executive Directors to ensure that decisions are in the best long-term interests of shareholders and take proper account of the interests of the Group's other stakeholders.

The Senior Independent Director, Mr Phil Smith, is recognised as the independent Board member who acts as an independent sounding board for the Chairman and serves as an intermediary for the other directors if needed. Furthermore, the Senior Independent Director is available to discuss any concerns of shareholders and/or employees which have not adequately been resolved by the Executive Directors, or for which such contact is inappropriate, such as concerns of any suspected impropriety. These concerns can be conveyed in private and investigated as required by the Code.

The Non-Executive Directors have not formally met without the Chairman present to appraise the Chairman's performance. However, this was not specifically required under the Code as applicable in the year ending 31 December 2018. Furthermore, the Non-Executive Directors do not consider that a formal appraisal is required given the Chairman is due to retire in 2019.

When making new appointments, the Board takes into account other demands on Directors' time and significant appointments are required to be disclosed with an indication of the time involved. Pursuant to the new Code, since 1 January 2019, additional external appointments should not be undertaken without prior approval of the Board, with the reasons for permitting significant appointments explained in the annual report. No full time Executive Director has more than one non-executive directorship in a FTSE 100 company or other significant appointment.

The Board has four sub committees, the Executive Committee, the Remuneration Committee, the Nominations Committee and the Audit & Risk Committee. The Board has delegated special responsibilities to these committees as follows:

(a) Executive Committee

The Executive Committee consists of the Executive Directors under the chairmanship of Dr Drew Nelson and is responsible for the development of strategy, annual budgets and operating plans linked to the management and control of the day-to-day operations of the Group.

The Executive Committee is also responsible for monitoring key research and development programmes and for ensuring that the Board policies are carried out on a Group-wide basis.

(b) Audit & Risk Committee

The Audit & Risk Committee consists of the Non-Executive Directors, Sir Derek Jones, Mr Phil Smith and Sir David Grant. The Committee meets at least twice a year under the chairmanship of Sir Derek Jones.

The Audit & Risk Committee's main duties are described on page 56. They include monitoring internal controls throughout the Group, approving the Group's accounting policies, and reviewing the Group's interim results and full year financial statements before submission to the full Board. The Audit & Risk Committee also reviews and approves the scope and content of the Group's annual risk assessment programme and the annual audit, and monitors the independence of the external auditors.

A report on the activity of the Audit & Risk Committee during 2018 is included on pages 60 to 62.

(c) Remuneration Committee

The Remuneration Committee consists of the three non-executive directors. Mr Phil Smith and Sir Derek Jones, who joined the Committee at the beginning of 2018. Sir David Grant is Chairman of the Committee. The Committee meets at least twice a year.

The Chief Executive attends meetings of the Remuneration Committee by invitation to respond to questions raised by the Committee, but he is excluded from any matter concerning the details of his own remuneration.

The Remuneration Committee is responsible for setting salaries, incentives and other benefit arrangements of Executive Directors. It scrutinises the performance of individual Executive Directors against agreed performance objectives.

A report on the activity of the Remuneration Committee during 2018 as well as the Company's Remuneration Policy is included on pages 63 to 78.

(d) Nominations Committee

The Nominations Committee consists of the three non-executive Directors and is chaired by Sir David Grant. Mr Phil Smith and Sir Derek Jones joined the Committee at the beginning of 2018.

The Board has delegated responsibility for nominations to this Committee, which has a prime role in appointing and removing executive directors.

The Chairman and Chief Executive attend meetings of the Nomination Committee by invitation.

A report on the activity of the Nominations Committee during 2018 is included on page 63.

Terms of reference for the Remuneration Committee, Nominations Committee and Audit & Risk Committee are available from the Company Secretary or on the corporate website (www.iqep.com).

Composition, Succession and Evaluation

Rules concerning the appointment and replacement of Directors and Secretaries of the Company are contained in the Articles of Association ("Articles"). Amendments to the Articles must be approved by a special resolution of the shareholders.

Under the Articles, all Directors are subject to election by shareholders at the first Annual General Meeting following their appointment, and to re-election thereafter at intervals of no more than three years.

The Articles provide that the Company Secretary shall be appointed by the Directors for such term, at such remuneration and upon such conditions as they may think fit and any Company Secretary so appointed may be removed by them. If thought fit, two or more persons may be appointed as joint company secretaries or an assistant or deputy company secretary may be appointed by the Directors. Any person so appointed by the Directors may also be removed by the Directors.

The Nominations Committee (which consists of the three Non-Executive Directors) reviews the Board structure, leads the process for Board appointments and makes recommendations to the Board, including on succession planning. Due consideration is given to the length of service of the Board as a whole and the need to ensure its membership is regularly refreshed.

All Directors are appointed by the Board following a formal, rigorous and transparent selection process and recommendation by the Nominations Committee. Board appointments are made on merit, against criteria identified by the Nominations Committee having regard to the benefits of diversity on the Board, including gender.

Pursuant to its Terms of Reference (available from the Company Secretary and at www.iqep.com), the Nominations Committee is required to give full consideration to succession planning for Directors and other senior executives in the course of its work, taking into account the challenges and opportunities facing the company, and the skills and expertise needed on the Board in the future.

The Nominations Committee meets regularly during the year and is instrumental in determining the requirement and process for the identification and subsequent appointment of Directors. The Nominations Committee evaluates the balance of skills, knowledge and experience on the Board and, in the light of this evaluation, prepares a description of the role for new appointments. In identifying potential candidates for positions as Non-Executive Directors, the Committee has full regard to the principles of the Code regarding the independence of Non-Executive Directors. The terms and conditions of appointment of the Non-Executive Directors are available for inspection upon request to the Company Secretary.

The Nominations Committee is responsible for the Board's policy on diversity. The Board recognises the benefits of diversity. Diversity of gender, social and ethnic backgrounds, cognitive and personal strengths, skills, international and industry experience and knowledge are amongst many other factors taken into consideration when seeking to appoint new Directors to the Board. Notwithstanding the foregoing, all Board appointments will always be made on merit.

IQE and its Nominations Committee do not usually use open advertising and/or an external search consultancy for the appointment of the Chair and Non-Executive Directors, but does so when appropriate and in such event will include a statement about any connection it has with Company or individual Directors in the annual report.

An account of the activities of the Nominations Committee during the year ending 31 December 2018 is included in the Nominations Committee Report at page 63.

By way of induction to the Group, new Directors meet with the existing members of the Board, senior managers and business function leaders as appropriate and at least annually all Directors receive presentations from senior managers and business function leaders and receive professional independent training and advice as necessary from time to time at the Company's expense.

Audit, Risk and Internal Control

The Board views maintaining high standards in its governance and management of the affairs of the Group as a fundamental part of discharging its stewardship responsibilities. Accordingly, both the Board and the Audit & Risk Committee continue to keep under review the Group's whole system of internal control, which comprises not only financial controls, but also operational controls, compliance and risk management. This process accords with the Guidance on Risk Management, Internal Control and Related Financial and Business Reporting.

The Audit & Risk Committee consists of the three independent Non-Executive Directors named above, whose biographies are included at pages 80 and 81. The Board is satisfied that the Audit Committee has competence relevant to the sector in which the company operates. The Nominations Committee is working to recruit an additional Non-Executive Director with recent and relevant financial experience who will take over the Chair of the Audit & Risk Committee, which has been chaired by Sir Derek Jones since April 2018 when Dr Ainsworth became Executive Chairman and Interim CFO immediately following the death of Philip Rasmussen and resigned his Chairmanship of the Committee.

The main responsibilities of the Audit & Risk Committee are as follows:

- **reviewing the effectiveness of the Company's financial reporting, internal control policies and procedures for the identification, assessment and reporting of risk;**
- **reviewing significant financial reporting issues and judgements;**
- **monitoring the integrity of the Company's financial statements and any formal announcements relating to the company's financial performance;**
- **keeping the relationship with the auditors under review, including their terms of engagement, fees and independence;**
- **monitoring the role and effectiveness of internal audit;**
- **advising the Board on whether the Committee believes the annual report and accounts, taken as a whole, is fair, balanced and understandable and provides the information necessary for shareholders to assess the Company's performance, business model and strategy;**
- **conducting the tender process and making recommendations to the board, about the appointment, reappointment and removal of the external auditor, and approving the remuneration and terms of engagement of the external auditor;**
- **reviewing and monitoring the external auditor's independence and objectivity;**
- **reviewing the effectiveness of the external audit process, taking into consideration relevant UK professional and regulatory requirements;**
- **developing and implementing policy on the engagement of the external auditor to supply non-audit services, ensuring there is prior approval of non-audit services, considering the impact this may have on independence, taking into account the relevant regulations and ethical guidance in this regard, and reporting to the board on any improvement or action required; and**
- **reporting to the board on how it has discharged its responsibilities.**

The Audit & Risk Committee meets regularly during the year. The meetings are also attended by senior members of the finance team and representatives of the Group's external auditors by invitation. At meetings attended by the external auditors time is allowed for the Audit & Risk Committee to discuss issues with the external auditors without management being present.

The Board reviews the effectiveness of the Group's risk management and internal controls on a continuing basis and has recently extended the Terms of Reference of the Audit Committee so that the Committee now has extended oversight for such matters. Terms of reference for the Audit & Risk Committee are available from the Company Secretary or on the corporate website (www.iqep.com).

The Work of the Audit & Risk Committee is set out in the Audit & Risk Committee Report below on pages 60 to 62. The Board and its Audit & Risk Committee's recent consideration of risk management and internal controls is described further in the Strategic Report at page 62.

A statement regarding the Director's responsibility for preparing the annual report is set out in the Board Report below on pages 58 and 59.

The Board's robust assessment of the Company's emerging and principal risks and a description of the procedures it has in place to identify and manage risks is set out in the Strategic Report on pages 26 to 37.

The Board's most recent considerations of the adoption of the going concern basis of accounting and its assessment of the long term viability of the business are set in the Strategic Report at page 46.

Remuneration

The Group's policy and practices on Directors' remuneration and the activities of the Remuneration Committee are described in the Director's Remuneration Report on pages 63 to 78.

The Executive Directors have responsibility for determining the remuneration of senior management and the company secretary in accordance with policies developed through consultation with the Group's Human Resources advisors and Remuneration Committee. As with all employees, senior management are eligible to receive share option awards and to an annual bonus (each subject to personal as well as Group financial performance). Further information in relation to IQE's Bonus Plan and Share Option Plan are provided at pages 72 to 78.

Directors exercise independent judgement and discretion when authorising remuneration outcomes, taking account of Company and individual performance as well as wider circumstances. Directors do not participate in decisions concerning their own remuneration.

Contribution of the Directors

The Board's goal is to ensure that its membership and the membership of its committees should have the appropriate combination of skills, experience and knowledge (including experience and knowledge of IQE's business). Biographies of the Directors are set out on pages 80 to 81 and on IQE's website (www.iqep.com). These show the range of business and financial experience upon which the Board is able to call and why each director's contribution is and continues to be important to the company's long-term sustainable success.

The number of meetings held during 2018 by the Board, the Audit & Risk Committee, the Nominations Committee and the Remuneration Committee are as shown below. The number of meetings attended by the Executive and Non-Executive Directors is also shown below:

	Board	Audit & Risk Committee	Remuneration Committee	Nominations Committee
Number of meetings in 2018	10	4	3	2
Attendance				
Executive				
Dr A W Nelson	10	N/A	N/A	N/A
Mr P J Rasmussen[1]	3	N/A	N/A	N/A
Dr H R Williams	10	N/A	N/A	N/A
Dr G H H Ainsworth[2]	10	1	1	N/A
Non-Executive				
Sir D Grant	10	4	3	2
Mr P Smith	9	3	3	2
Sir D Jones	10	4	3	2

1 Philip Rasmussen was an Executive Director during the year until his death on 1 April 2018.
2 Dr Godfrey Ainsworth resigned from Committees when he became an Executive Director on 2 April 2018.

As appropriate, Directors that are unavailable to attend a meeting are consulted and their views are made known in advance or at the meeting. Such directors receive a briefing on matters discussed as soon as possible following the meeting.

Statement of Directors' responsibilities in respect of the financial statements

The Directors are responsible for preparing the Annual Report and the Group and parent Company financial statements in accordance with applicable law and regulations.

Company law requires the Directors to prepare Group and parent Company financial statements for each financial year. Under the AIM Rules of the London Stock Exchange they are required to prepare the Group financial statements in accordance with International Financial Reporting Standards as adopted by the European Union (IFRSs as adopted by the EU) and applicable law and they have elected to prepare the parent Company financial statements on the same basis.

Under company law the Directors must not approve the financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the Group and parent Company and of their profit or loss for that period.

In preparing each of the Group and parent Company financial statements, the Directors are required to:

- **select suitable accounting policies and then apply them consistently;**
- **make judgements and estimates that are reasonable, relevant and reliable;**
- **state whether they have been prepared in accordance with IFRSs as adopted by the EU;**
- **assess the Group and parent Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern; and**
- **use the going concern basis of accounting unless they either intend to liquidate the Group or the parent Company or to cease operations, or have no realistic alternative but to do so.**

The Directors are responsible for keeping adequate accounting records that are sufficient to show and explain the parent Company's transactions and disclose with reasonable accuracy at any time the financial position of the parent Company and enable them to ensure that its financial statements comply with the Companies Act 2006. They are responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error, and have general responsibility for taking such steps as are reasonably open to them to safeguard the assets of the Group and to prevent and detect fraud and other irregularities.

The Directors have decided to prepare voluntarily a Directors' Remuneration Report in accordance with Schedule 8 to The Large and Medium-sized Companies and Groups (Accounts and Reports) Regulations 2008 made under the Companies Act 2006, as if those requirements applied to the company. The Directors have also decided to prepare voluntarily a Corporate Governance Statement as if the company were required to comply with the Listing Rules and the Disclosure Guidance and Transparency Rules of the Financial Conduct Authority in relation to those matters.

Under applicable law and regulations, the Directors are also responsible for preparing a Strategic Report and a Directors' Report that complies with that law and those regulations.

The Directors are responsible for the maintenance and integrity of the corporate and financial information included on the Company's website. Legislation in the UK governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

We consider the annual report and accounts, taken as a whole, is fair, balanced and understandable and provides the information necessary for shareholders to assess the Group's position and performance, business model and strategy.

David Grant

Sir David Grant CBE
Signed on behalf of the Board
20 March 2019

Audit & Risk Committee Report

An annual rolling agenda is used to ensure that all matters within the Audit & Risk Committee's Terms of Reference are appropriately covered during the year. The Committee considers that it has discharged its responsibilities as set out in its Terms of Reference to the extent appropriate during the year.

Through consideration of reports from, and meetings with, management and the external auditors, the Committee has reviewed and determined the following:

- **judgemental areas and whether revenue recognition and the provisioning policies have been applied consistently and the level of provisions remains appropriate;**
- **whether the expected future cash flows of the Group support the carrying value of goodwill, and whether there are any triggering events which suggest any potential impairment of other intangible assets including the valuation of development intangibles and the capitalisation of development costs;**
- **whether the presentation of the financial statements, including the presentation of adjusted performance measures, is appropriate and balanced;**
- **whether the accounting for joint ventures and any related disclosure in the financial statements are appropriate.**

Through consideration of reports by independent tax specialists assessing the Group tax affairs in the UK, the US, Taiwan and Singapore as appropriate, and consideration of reports by and meetings with management assessing current and deferred tax accounting, the Committee has reviewed and determined whether the provision for tax liabilities, and the current and deferred tax accounting is appropriate. The Committee has reviewed the resources available to the Group, taking account of the Group's trading and cashflow forecast together with available funding headroom to assess the appropriateness of the going concern assumption.

At the request of the Board, the Committee also considered whether the 2018 annual report was fair, balanced and understandable and whether it provided the necessary information for shareholders to assess the Group's performance, business model and strategy.

Matters the Committee considered in the financial year ending 31 December 2018 also included:

- **accounting in respect of joint ventures;**
- **requests for information from and responses to the Financial Reporting Council (FRC) from July 2018 concerning joint ventures, revenue recognition, share based payments, capitalisation of intangibles, impairment losses in the parent company accounts and directors' shareholdings, further to which the FRC concluded that no changes to accounting treatment in any of the areas noted above is necessary, although the FRC requested certain enhanced disclosure which IQE has provided in its 2018 financial statements to assist investors in their understanding[1];**
- **change of tax advisors - Baker Tilly was appointed to provide US federal and state tax services following a competitive tender process;**
- **the establishment of an Employees Pensions & Benefits Governance Committee 'EPBGC' with members who were chosen by IQE staff to represent the interests of the staff in all decisions concerning employee benefits.**

[1]The FRC notes that its review is based on IQE's 2017 annual report and accounts and does not benefit from detailed knowledge of our business or an understanding of the underlying transactions entered into. It is, however, conducted by staff of the FRC who have and understanding of the relevant legal and accounting framework. The FRC supports continuous improvement in the quality of corporate reporting and recognises that those with more detailed knowledge of our business, including the Audit Committee and auditors, may have recommendations for future improvement, consideration of which the FRC encourages. The FRC provides no assurance that the 2017 report and accounts are correct in all material respects; the FRC's role is not to verify the information provided but to consider compliance with reporting requirements. The FRC, its officers, employees and agents accept no liability for reliance on them by the Company or any third party, including but not limited to investors and shareholders.

External Auditors

The Audit & Risk Committee has developed a formal auditor independence policy. In accordance with this policy, the Committee oversees the relationship with the external auditors and monitors all services provided by them and all fees payable to them. This is to ensure that potential conflicts of interest are considered and that an independent, objective and professional relationship is maintained.
During 2017, the Audit & Risk Committee completed a review of its external auditors and, further to the recommendation of the Audit & Risk Committee, the Board appointed KPMG LLP ("KPMG") as its new auditor in December 2017. KPMG replaced PricewaterhouseCoopers LLP ("PwC") who had acted as IQE's auditors since 2005. As part of the handover process, PwC provided IQE with a written statement,

which confirmed that there were no matters which needed to be brought to the attention of the Company's members, creditors or directors.

The Committee also regularly reviews the nature, extent, objectivity and cost of non-audit services provided by the external auditors. In doing this, the Committee does not approve any contract for additional services from them that would compromise their audit independence. Under this policy, the award to the Group's auditors of audit-related services, tax consulting services or other non-audit related services in excess of £10,000 must first be approved by both the Chairman of the Audit & Risk Committee and the Senior Independent Director. The provision of external audit and tax compliance are separated where possible. Tax advice is provided by independent advisors including KPMG, EY, Mazars, Baker Tilly and Bevan & Buckland. The policy also establishes guidelines for the recruitment of employees or former employees of the external auditor.

The nature of the services provided by the auditors and the amounts paid to them are as detailed below:

PricewaterhouseCoopers LLP (Group auditors to December 2017)	**2018 £'000**	**2017 £'000**
Fees payable to the company's auditor and its assoicates for the audit of parent company and consolidated financial statements	-	-
Fees payable to company's auditor and its associates for other services:		
- The audit of company's subsidiaries	-	-
- Audit related assurance services	-	11
- Tax advisory	-	5
- Tax compliance service	-	-
Total PricewaterhouseCoopers LLP (Group auditors to December 2017)	**-**	**16**

KPMG LLP (group auditors from December 2017)	**2018 £'000**	**2017 £'000**
Fees payable to the company's auditor and its assoicates for the audit of parent company and consolidated financial statements	156	120
Fees payable to company's auditor and its associates for other services:		
- The audit of company's subsidiaries	10	10
- Audit related assurance services	12	-
- Tax advisory	55	104 *
- Tax compliance service	-	-
Total KPMG LLP (group auditors)	**233**	**234**

*Includes fees payable for services engaged prior to the appointment as group auditors of £84,000

Ernst and Young (auditors or MBE Technology Pte Limited)	**2018 £'000**	**2017 £'000**
- Subsidiary company's audit	8	8
- Tax services	4	8
Total Ernst and Young (auditors or MBE Technology Pte Limited)	**12**	**16**
Total	**245**	**266**

The Audit & Risk Committee also monitors the effectiveness of the annual audit. Before the end of the financial year, the Committee receives a detailed audit plan from the auditors that identifies the auditors' assessment of the key risks and their intended areas of focus. This is agreed with the Committee to ensure that the scope and coverage of audit work is appropriate. IQE's management also provide the Committee with feedback on the effectiveness of the audit and the quality of the audit firm and lead audit partner.

In addition, the Group's auditors are required to make a formal report to the Audit & Risk Committee annually on the safeguards that are in place to maintain their independence and the internal safeguards in place to ensure their objectivity.

A resolution to reappoint KPMG will be proposed at the forthcoming Annual General Meeting.

Internal Audit & Controls

The Audit & Risk Committee has reviewed the effectiveness of the Group's system of internal controls and risk management activities bi-annually as part of the half year and full year public reporting.

The system of internal control comprises those controls established in order to provide assurance that the assets of the Group are safeguarded against unauthorised use or disposal, and to ensure the maintenance of proper accounting records and the reliability of financial information used within the business or for publication.

Any system of internal control can only provide reasonable, but not absolute, assurance against material misstatement or loss, as it is designed to manage rather than to eliminate the risk of failing to achieve the business objectives of the Group.

The key procedures that the Directors have established with a view to providing effective internal control include the following:

- **a clearly defined organisational structure and limits of authority;**
- **corporate policies and procedures for financial reporting and control, project appraisal, human resources, quality control, health and safety, information security and corporate governance;**
- **the preparation of annual budgets and regular forecasts which require approval from both the Group Executive Committee and the Board;**
- **the monitoring of performance against budget and forecasts and the reporting of any variances in a timely manner to the Board;**
- **regular review and self-assessment of the risks to which the Group is exposed, taking steps to monitor and mitigate these wherever possible;**
- **where appropriate, taking out insurance cover;**
- **approval by the Audit & Risk Committee of audit plans and, on behalf of the Board, receipt of reports on the Group's accounting and financial reporting practices and its internal controls together with reports from the external auditors as part of their normal audit work.**

This process remained in operation for the year under review and as part of that process, management report any material exceptions to the Audit & Risk Committee.

The Group does not have an independent internal audit function, however the Group operates internal audit on an ad hoc peer review basis, with a scope of evaluating and testing the Group's financial control procedures. The Committee considers that this remains appropriate for the size and geographical spread of the Group.

In completing its review of the effectiveness of the Group's system of internal controls the Audit & Risk Committee has taken account of any material developments up to the date of the signing of the most recent financial statements. In addition, recognition is given to the external audit findings, which help to inform the Audit & Risk Committee's views of areas of increased risk.

Nominations Committee Report

Following the tragic death of Mr Phillip Rasmussen ACA, the Group's CFO in April 2018, the Board appointed Dr Godfrey Ainsworth FCA, to act as Executive Chairman and Interim CFO of the Group. Dr Ainsworth previously performed the role of Chairman in a Non-Executive capacity.

In 2018, with the direction of the Nominations Committee, IQE conducted a tender exercise for the engagement of head-hunters to assist the Board in recruiting a replacement permanent CFO. The Board appointed Odgers Berndston head-hunters in May 2018 and actively engaged with them to complete a preliminary evaluation and provide a list of potential candidates with the necessary skills and experience. In scoping the search for candidates, each Board member was consulted in order to agree the necessary skills and experience of candidates to be considered for appointment. Based on these criteria a list of potential candidates was developed, which was filtered to a short-list of four candidates for interview by the Nominations Committee. Odgers Berndston has no other connection with the Company and is an independent provider of services to the Company.

The recruitment process was completed on 15 October 2018 when the Company announced the appointment of Mr Timothy Neil Pullen as Chief Financial Officer. Mr Pullen took up his employment on 4 February 2019.

The Nominations Committee is working to recruit an additional Non-Executive Director who will take over the Chair of the Audit & Risk Committee, which has been chaired by Sir Derek Jones since April 2018 when Dr Ainsworth became an Executive Director and resigned his Chairmanship of the Committee.

Dr Ainsworth has indicated to the Board that he will seek to retire on or before the next AGM on 25 June 2019. Mr Phil Smith, former Chairman of Cisco who joined the board in December 2016, will become Non-Executive Chairman on the retirement of Dr Ainsworth.

The Nominations Committee is also exploring options for the establishment of an advisory board of experienced and independent individuals to meet twice a year and feedback their advice to the IQE Board, as is quite common for technology businesses.

Directors' Remuneration Report

Remuneration Committee Chairman's Statement

Dear Shareholders,

On behalf of the Board, I am pleased to present the Remuneration Committee's report of the Directors' remuneration for the year ended 31 December 2018 for which we will be seeking shareholder approval at the Annual General Meeting on 25 June 2019. As an AIM-listed company, IQE is not required to submit a remuneration policy to a shareholder vote. However, in light of the feedback received from shareholders on directors' remuneration around the 2016 AGM, we voluntarily decided to do so. We appointed Kepler, a brand of Mercer Ltd., to undertake a review of IQE's remuneration arrangements and this culminated in IQE's remuneration policy for the years 2017 to 2019, as set out below. This remuneration policy, along with the annual report for 2016 remuneration was approved at the 2017 AGM, with 99.99% and 99.73% voting in favour respectively. The report for 2017 remuneration was approved at the 2018 AGM with 99.94% voting in favour. This annual report for 2018 remuneration will be put to a shareholder vote on a voluntary basis at the 2019 AGM.

Sir David Grant
Remuneration Committee Chairman
20 March 2019

NOTE: This report includes audited and unaudited information, which is identified throughout the report.

Remuneration Statements

Directors' Remuneration Policy (unaudited)

IQE aims to attract, retain and motivate high calibre executives, whilst recognising the need to be cost effective, and to incentivise significant industry out-performance. The Remuneration Committee established a remuneration policy that balances these factors, taking account of investor feedback and prevailing best practice. This section of the Directors' Remuneration Report sets out the Policy for Executive Director remuneration which was approved by shareholders at the 2017 AGM.

Policy Table (unaudited)

Function	Operation	Opportunity	Performance metrics
Base salary To recognise the individual's skills and experience and to provide a competitive total package.	Base salaries are reviewed annually, with reference to market levels, individual contribution, the experience of each Executive and increases across the Group. Any adjustments become effective on 1 January.	Any base salary increases are applied in line with the outcome of the Remuneration Committee's review. In respect of existing Executive Directors, it is anticipated that salary increases will generally be in line with those of salaried employees as a whole. In exceptional circumstances (including, but not limited to, a material increase in job size or complexity, material market misalignment) the Remuneration Committee has discretion to make appropriate adjustments to salary levels to ensure they remain appropriate.	n/a
Pension To provide an opportunity for executives to build up income on retirement.	All Executives are members of the Group pension scheme and/or receive a cash pension allowance. Salary is the only element of remuneration that is pensionable.	Executive Directors receive a pension contribution of 10% of salary or an equivalent cash allowance.	n/a
Benefits To provide non-cash benefits which are competitive in the market in which the executive is employed.	Executives receive benefits which consist primarily of health cover, private medical insurance, life assurance, long-term disability insurance and reimbursement for fuel, although may include other benefits that the Remuneration Committee deems appropriate in the circumstances.	Benefits may vary according to role and individual circumstances. Eligibility to benefits and the cost of benefits are reviewed periodically. The Remuneration Committee retains discretion to approve a higher cost in exceptional circumstances (e.g. relocation or expatriation) or in circumstances where market rates have changed (e.g. cost of insurance cover).	n/a

Annual Bonus To incentivise and reward strong performance against financial and personal annual targets, thus delivering value to shareholders and being consistent with the delivery of the strategic plan.	Performance measures, targets and weightings are set at the start of the year. The scheme is based on a combination of financial performance and personal objectives. At the end of the year, the Remuneration Committee determines the extent to which targets have been achieved. Bonus payments are delivered in cash. Clawback (of any bonus paid) may be applied during employment or for 2 years post-termination in the event of gross misconduct, material financial misstatement, error in calculation of outcomes or in any other circumstance that the Remuneration Committee considers appropriate.	For Executive Directors, the maximum annual bonus opportunity is 100% of base salary. The bonus will pay 0% at Threshold, 50% at Target and 100% at Maximum, with straight-line vesting between these levels, and no vesting below Threshold.	Performance is assessed on an annual basis against financial and personal / strategic objectives set at the start of each year. Financial measures will be weighted appropriately each year according to business priorities, and will represent no less than 70% of the annual bonus. Performance vs. targeted levels will be measured at budgeted FX rates. Personal/strategic objectives will represent no more than 30% of the bonus and will be set annually to capture expected individual contributions to IQE's strategic plan. The personal element shall not pay out unless financial performance is at least at Threshold. The Remuneration Committee has discretion to adjust formulaic bonus outcomes to ensure fairness for shareholders and participants, to ensure pay aligns underlying company performance, and to avoid unintended outcomes. These adjustments can be either upwards (within plan limits) or downwards (including down to zero). The Remuneration Committee may consider measures outside of the bonus framework to ensure there is no reward for failure. Further details of the measures, weightings and targets applicable are provided on pages 68 to 78.

LTIP To drive sustained long-term performance that supports the creation of shareholder value.	Under the long-term incentive plan (LTIP) annual awards of shares or nil-cost options may be made to participants. Award levels and performance conditions are reviewed before each award cycle to ensure they remain appropriate. The Committee has the discretion to authorise a payment, in cash or shares, equal to the value of dividends which would have accrued on vested shares during the vesting period. Malus (of any unvested LTIP) and clawback (of any vested LTIP) may be applied during employment or for 2 years post-termination in the event of gross misconduct, material financial misstatement, error in calculation of outcomes or in any other circumstance that the Remuneration Committee considers appropriate.	The LTIP provides for normal awards of up to 100% of salary. A multiplier of up to 2x may apply to the normal level of vesting in case of truly exceptional performance. In exceptional circumstances, including but not limited to recruitment, normal awards may be made up to 200% of salary to secure the right individual. Up to 25% of the LTIP will be paid for achieving Threshold performance, increasing on a straight-line basis to full vesting for achieving Stretch performance.	Vesting of LTIP awards is subject to achieving performance conditions and continued employment. The Remuneration Committee has the discretion to change the performance measures for new cycles to ensure that they continue to be linked to the delivery of the Company's strategy. Any significant change would be subject to prior shareholder consultation. For 2019, the normal performance condition for the award will continue to be based on EPS growth from 6% to 12% p.a. over 3 years. To further reinforce IQE's ambitious growth strategy, awards can be doubled if absolute TSR growth over the 3-year performance period is 100% or more. If no entitlement has been earned at the end of the relevant performance period, awards lapse. The Remuneration Committee has discretion to adjust the EPS outcome to ensure it fairly reflects underlying performance. The Remuneration Committee also considers environmental, social, governance and health and safety criteria, to ensure there is no reward for failure. Details of the targets to be used in future LTIP grants are included on page 73.

Notes to the policy table (unaudited)

Performance measure selection and approach to target setting

The measures used under the annual bonus plan are selected annually to reflect IQE's main objectives for the year and reflect both financial performance and personal contributions to the strategic plan. The Remuneration Committee considers EPS to be a key measure of IQE's long-term bottom line performance. TSR is a measure which strongly aligns management and shareholder interests.

Targets applying to the bonus and LTIP are reviewed annually, based on a number of internal and external reference points. Performance targets are intended to be stretching and achievable, and reflect IQE's strategic priorities and its market opportunities.

Remuneration policy for other employees

All employees are eligible to participate in a discretionary annual bonus and share option plan. Only executive directors participated in the Group's LTIP during 2018.

Shareholding guidelines

The Remuneration Committee wishes to encourage Executive Directors to build up a significant shareholding in the Company. Shareholding guidelines will therefore be put in place to require Executive Directors to acquire a shareholding (excluding shares held conditionally pursuant to LTIP performance) equivalent to 200% of base salary. 50% of any shares vesting (post-tax) under the new LTIP are required to be held until the relevant shareholding levels are achieved. Executive Directors are expected to build up the required shareholding within five years of appointment to the Board. Details of the Executive Directors' current shareholdings are provided at page 77 .All Executive Directors as at 31 December 2018 held shares equivalent to a number in excess of 200% of salary at that time.

Non-Executive Director remuneration (unaudited)

Non-Executive Director	Date of appointment letter
Dr Godfrey Ainsworth*	16 June 2016
Sir David Grant	1 September 2012
Phil Smith	30 November 2016
Sir Derek Jones	1 December 2017

**Following the death of IQE's CFO, Phil Rasmussen, IQE's Non-Executive Chairman, Dr Godfrey Ainsworth, became Executive Chairman on 2 April April 2018 and signed a Director's Service Agreement dated 6 June 2018, which replaced this appointment letter.*

Subject to re-election by shareholders, Non-Executive Directors are appointed by the full Board and retire by rotation in accordance with the Company's Articles of Association. The remuneration of Non-Executive Directors are matters reserved for the full Board subject to limit of £150,000 per annum (exclusive of value added tax if applicable) or such other figure as shareholders my approve plus reasonable expenses in accordance with the Company's Articles of Association.

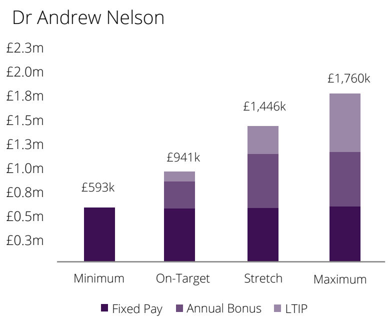
The Non-Executive Directors are not eligible to participate in the Company's performance related bonus plan, long-term incentive plans or pension arrangements. Full terms and conditions for each of the Non-Executive Directors are available at the Company's registered office during normal business hours and will be available at the AGM for 15 minutes prior to the meeting and during the meeting.

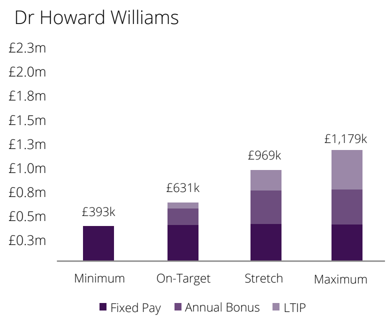
Details of the policy on fees paid to the Company's Non-Executive Directors are set out in the table below:

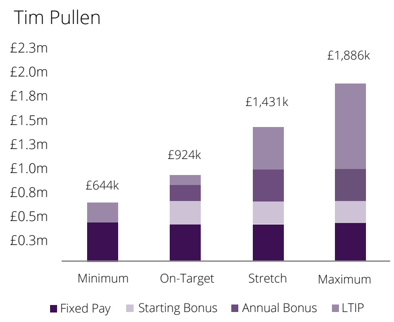
Function	Operation	Opportunity	Performance metrics
Fees To attract and retain Non-Executive Directors of the highest calibre with broad commercial and other experience relevant to the Company.	The fees paid to the Non-Executive Directors are determined by the Board (excluding the Non-Executive Directors or group of Non-Executive Directors whose remuneration is being discussed). Fee levels are benchmarked against similar roles at comparable companies. Time commitment and responsibility are taken into account when reviewing fee levels.	Fee levels are reviewed annually, with any adjustments effective 1 January in the year following review. It is expected that increases to Non-Executive Director fee levels will normally be in line with salaried employees over the life of this policy. However, in the event that there is a material misalignment with market or a material change in the time commitment required to fulfil a non-executive director role, the Board has the power to make an appropriate adjustment to the fee level.	n/a

Pay scenarios (unaudited)

The charts below provide an illustration of the potential future reward opportunities for the Executive Directors, and the split between the different elements of remuneration under four different performance scenarios: 'Minimum', 'On-target', 'Stretch' and 'Maximum'.







The 'Minimum' scenario comprises just fixed remuneration, i.e. base salary, pension and benefits, which are the elements of the remuneration package not linked to performance. The figures for base salary and pension (10% of salary) are as of 1 January 2019, while those for taxable benefits are based on the single figure table for 2018. The 'On-Target' scenario reflects fixed remuneration as above, plus a target bonus payout of 50% of maximum and threshold vesting for the LTIP of 25% of maximum. The 'Stretch' scenario reflects fixed remuneration, plus full payout of the annual bonus (100% of salary) plus full vesting of the normal LTIP of 100% of salary. The 'Maximum' scenario reflects fixed remuneration, plus full payout of the annual bonus at 100% of salary, plus the normal LTIP of 100% of salary with a 2x multiplier applied for doubling shareholder value over 3 years.

Approach to recruitment remuneration (unaudited)

External appointments

In the cases of hiring or appointing a new Executive Director from outside the Company, the Remuneration Committee may make use of all the existing components of remuneration, as follows:

Component	Approach	Maximum annual grant value
Base salary	The base salaries of new appointees will be determined by reference to relevant market data, experience and skills of the individual, internal relativities and current basic salary. Where new appointees have initial basic salaries set below market, any shortfall may be managed with phased increases over multiple years subject to the individual's development in the role.	
Pension	New appointees will receive pension contributions or an equivalent cash supplement in line with existing policy.	
Benefits	New appointees will be eligible to receive benefits which may include (but are not limited to) those outlined in the policy table.	
Annual Bonus	The structure described in the policy table will apply to new appointees with the relevant maximum being pro-rated to reflect the proportion of employment over the year. Targets for the personal element will be tailored to each executive.	100% of salary
LTIP	New appointees will be granted awards under the LTIP on the same terms as other executives, as described in the policy table.	Up to 200% of salary on appointment; normally 100% of salary thereafter

In determining the appropriate remuneration for a new executive director appointee, the Remuneration Committee will take into consideration all relevant factors (including nature and quantum of each component of remuneration and the jurisdiction from which the candidate was recruited) to ensure that arrangements are in the best interests of IQE and its shareholders. The Remuneration Committee may make an award in respect of a new appointment to 'buy out' remuneration arrangements forfeited on leaving a previous employer on a like-for-like basis, which may be awarded in addition to the ongoing remuneration elements outlined in the table above. In doing so, the Remuneration Committee will consider relevant factors, including time to vesting, performance conditions attached to awards, and the likelihood of these conditions being met. Any 'buy-out' awards will typically be made under the existing annual bonus and LTIP schemes, although in exceptional circumstances the Remuneration Committee may exercise the discretion available under Listing Rule 9.4.2 R to make awards using a different structure. Any 'buy-out' awards would have a fair value no higher than the awards forfeited. The Remuneration Committee will take advice from independent remuneration consultants on the structure and award package for a new Executive Director.

Internal appointments

In the case an internal promotion to the Board, the Remuneration Committee will use the same policy as detailed above, although there will be no opportunity for a buyout. However, where an individual has contractual commitments made prior to their promotion to Executive Director level, the Company will continue to honour these arrangements.

Non-Executive Directors

In recruiting a new Non-Executive Director, the Remuneration Committee will utilise the policy as set out in the table on page 67.

Service contracts and treatment for leavers and change of control (unaudited)

Executive	Date of service contract
Phillip Rasmussen*	7 January 2007
Dr Andrew Nelson	1 June 2016
Dr Howard Williams	1 June 2016
Dr Godfrey H H Ainsworth	4 June 2018

**ceased on the death of Mr Rasmussen on 1 April 2018*

Executive Director service contracts, including arrangements for early termination, are carefully considered by the Remuneration Committee. Save in respect of Dr Godfrey Ainsworth, each of the Executive Directors has a rolling service contract requiring 6 months' notice of termination on either side. Following the death of IQE's Chief Financial Officer on 1 April 2018, IQE's Chairman, Dr Ainsworth agreed a contract with the Company for his appointment to Executive Chairman and Interim Chief Financial Officer with 3 months' notice of termination on either side. Such contracts contain no specific provision for compensation for loss of office, other than an obligation to pay for any notice period waived by the Company, where pay refers to salary, benefits and pension only. Executive Directors' service contracts are available to view at the Company's registered office.

When considering exit payments, the Remuneration Committee reviews all potential incentive outcomes to ensure they are fair to both shareholders and participants. The table below summarises how the awards under the annual bonus and LTIP are typically treated in different circumstances, with the final treatment remaining subject to the Remuneration Committee's discretion:

Reason for leaving	Calculation of vesting / payment
Annual bonus	
Resignation	No annual bonus payable.
'Good leaver'[1]	Cash bonuses will typically be paid to the extent that performance objectives have been met. Any resulting bonus will typically be prorated for time worked. The Remuneration Committee retains discretion to vary this treatment in individual circumstances.
Change of control	
LTIP	
Resignation	Outstanding awards lapse
'Good leaver'[1] and change of control	The Committee determines whether and to what extent outstanding awards vest based on the extent to which performance conditions have been achieved and the proportion of the vesting period worked. The Remuneration Committee retains discretion to vary this treatment in individual circumstances. The determination of vesting will be made as soon as reasonably practical following the end of the performance period or such earlier date as the Remuneration Committee may agree (within 12 months in the event of death). In the event of a change of control, awards may alternatively be exchanged for new equivalent awards in the acquirer where appropriate.

[1] *'Good leaver' is defined as a participant ceasing to be employed by the Group by reason of death, disability, ill health, retirement or any other reason that the Committee determines in its absolute discretion.*

As announced on 1 May 2018, the remuneration committee approved the accelerated vesting of 8,262,707 options in addition to the 2,211,444 options vested but unexercised by the late Mr Phillip Rasmussen. These options were exercised in 2018 by the Executrix to his estate subsequent to a transfer of the options to her. The annual bonus in respect of the performance period from 1 January 2017 to 31 December 2017 was also transferred to the Executrix of the estate.

External appointments (unaudited)

With the approval of the Board in each case, and subject to the overriding requirements of the Group, Executive Directors may accept external appointments as Non-Executive Directors of other companies and retain any fees received. None of the Executive Directors received any remuneration from external directorships whilst an Executive Director of IQE.

Consideration of conditions elsewhere in the company (unaudited)

When making decisions on changes to Executive Director remuneration, the Remuneration Committee considers changes to pay and conditions across the Group. To this end, the HR Manager provides the Remuneration Committee with a summary of the proposed level of average increase for employees prior to the annual salary review. For Executive Directors, the Remuneration Committee does not formally consult with employees on the executive remuneration policy and implementation.

Consideration of shareholder views (unaudited)

The Remuneration Committee maintains a regular dialogue with the Company's major shareholders. Following the 2016 AGM, we consulted with shareholders regarding the concerns raised regarding the previous year's remuneration report. Subsequently, we appointed Kepler as the company's independent consultant to assist the Remuneration Committee and help us review our approach to executive remuneration, monitor trends and developments in corporate governance, market practice and shareholder views, and reporting in the director's remuneration report.

Annual Report on Remuneration

Remuneration Committee role, membership and advice (unaudited)

The primary role of the Remuneration Committee is to determine and agree with the Board fair and reasonable remuneration arrangements for the Chairman and Executive Directors.

The main activities of the Remuneration Committee during the year were as follows:

- **determined annual bonuses payable to Executive Directors in 2018;**
- **reviewed and approved vesting of LTIP awards;**
- **reviewed and approved the Executive Directors' salaries for 2018;**
- **determined performance targets for the Executive Directors' 2018 annual bonus and LTIP awards in line with the Company's strategic plan;**
- **drafted the Directors' Remuneration Report;**
- **agreed remuneration arrangements (having taken advice from independent remuneration consultants, Kepler) for the Chairman's appointment as an Executive Director following the tragic death of IQE's Chief Financial Officer, Phil Rasmussen on 1 April 2018;**
- **considered benchmarking and advice from independent remuneration consultants, Kepler, and approved the remuneration of Tim Pullen, who joined IQE into the role of Chief Financial Officer on 4 February 2019.**

The Remuneration Committee's Terms of Reference are set out on the Company's website at www.iqep.com.

During the year, the Remuneration Committee comprised all of the Non-Executive Directors. The number of meetings held during 2018 by the Remuneration Committee and attendance by the individual Committee members at such meetings is set out in the Board Report on page 58.

The Board undertakes an annual evaluation of the Remuneration Committee's performance to ensure its continued ability to independently and objectively review Executive Director remuneration at the Group.

The following individuals may be invited to attend meetings of the Remuneration Committee on certain occasion to provide advice and to help the Remuneration Committee to make informed decisions:

- **Dr Andrew Nelson, Chief Executive Officer;**
- **Mr Jason Howells, In-House Lawyer, Company Secretary and Secretary to the Remuneration Committee;**
- **Representatives from Kepler, a brand of Mercer Ltd, independent advisors to the Committee.**

No individuals are involved in decisions relating to their own remuneration.

Kepler, a brand of Mercer, provides independent advice to the Remuneration Committee. Kepler is a signatory to the Code of Conduct for Remuneration Consultants in the UK, operated by the Remuneration Consultants Group, and which requires all advice to be objective and independent (see www.remunerationconsultantsgroup.com for more information). Services provided by Kepler included advice on remuneration packages for executives, assistance with a review of incentive arrangements and support on drafting this Directors Remuneration Report, as well as other ad-hoc advice on remuneration. Fees of £15,350 exclusive of VAT were paid to Kepler in respect of services it provided to the Company in 2018. The Committee considers that Kepler is independent, does not have any connections with IQE that may impair their independence, and does not provide any services to the Group other than its advice on remuneration.

Single total figure of remuneration for Executive Directors (audited information)

The table below sets out a single figure for the total remuneration received by each Executive Director for the year ended 31 December 2018 and the prior year:

	Dr Andrew Nelson		Dr Howard Williams		Dr Godfrey Ainsworth[1]		Mr Philip Rasmussen[2]	
	2018 £'000	2017 £'000	2018 £'000	2017 £'000	2018 £'000	2017 £'000	2018 £'000	2017 £'000
Salary	525	515	352	345	264	-	88	345
Benefits[3]	1	6	1	1	-	-	-	4
Annual bonus[4]	105	515	70	345	238	-	-	345
Long-term incentive[5]	2,999	-	2,009	-	-	-	-	-
Pension[6]	53	51	35	34	26	-	9	34
Total	**3,683**	**1,087**	**2,467**	**725**	**528**	**-**	**97**	**728**

1. Dr Godfrey Ainsworth became an Executive Director on 2 April 2018. This figure of executive remuneration excludes fees as a Non-Executive Director up to 31 March 2018 of £31,000, detailed later in this Directors' Remuneration Report.
2. Philip Rasmussen was an Executive Director during the year until his death on 1 April 2018.
3. Taxable benefits for 2018 consist of health cover, private medical insurance, life assurance, long-term disability insurance, fuel and car repairs.
4. Details are included below in "Incentive outcomes for years ending 31 December 2017 and 31 December 2018".
5. As announced on 1 May 2018, the Board approved the accelerated vesting of 8,262,707 options in addition to the 2,211,444 options that were vested but unexercised by the late Phillip Rasmussen. These options were transferred to the Executrix of the estate. 12,579,262 LTIP options awarded to Drew Nelson and Howard Williams were due to vest on 31 December 2018 in relation to the award in 2016 of which the performance criteria for 7,825,442 were achieved and therefore have vested. The remaining 4,753,820 awards have lapsed. The face value of options vesting in the year was based on the share price at the date of vesting of 65p less the nominal value exercise price of 1p.
6. Executive Directors are entitled to participate in a defined contribution scheme, in relation to which the Company contributes 10% of salary or equivalent cash allowance.

Incentive outcomes for years ending 31 December 2017 and 31 December 2018 (unaudited)

Annual Bonus

In 2017 financial objectives were met in full such that the maximum bonus of 100% of salary was awarded to each of the Executive Directors.

Financial objectives (EBITDA and cashflow measures) were not met in 2018, however the Committee exercised modest discretion to ensure fairness for shareholders and participants and to avoid unintended outcomes. As such, 20% of salary was awarded to Drew Nelson and Howard Williams for strong cash management and achievement of personal objectives. This reflects the tight control of cash flow during the year despite difficult trading conditions and significant capital expenditure (increasing headroom significantly with the agreement of $35m RCF facility with HSBC). It also reflects strong performance on the development of IQE's new foundry in Newport South Wales, which has progressed from an empty building to production within 15 months. Further, it has been made in recognition of the substantial strategic progress made by the Group in a significantly challenging year following the death of CFO, Phillip Rasmussen. Godfrey Ainsworth, who took on the CFO role at short notice, was excluded from the long-term incentive but given a bonus opportunity structured largely around specific individual objectives: providing support to the Board and the wider leadership team at a very difficult time, contributing to an important recruitment process for a new CFO, assistance to the CEO in investor relations activities and acting as interim CFO pending the appointment of Mr Pullen, which he achieved. As a result, he earned a bonus of 90% of salary.

Long-term incentive plan

As announced on 1 May 2018, the Board approved the accelerated vesting of 8,262,707 options in addition to the 2,211,444 options that were vested but unexercised by the late Phillip Rasmussen. These options were transferred to the Executrix of Mr Rasmussen's estate.

12,579,262 LTIP options awarded to Drew Nelson and Howard Williams in 2016 were due to vest on 31 December 2018 of which the performance criteria for 7,825,442 were achieved and therefore have vested. The remaining 4,753,820 awards have lapsed.

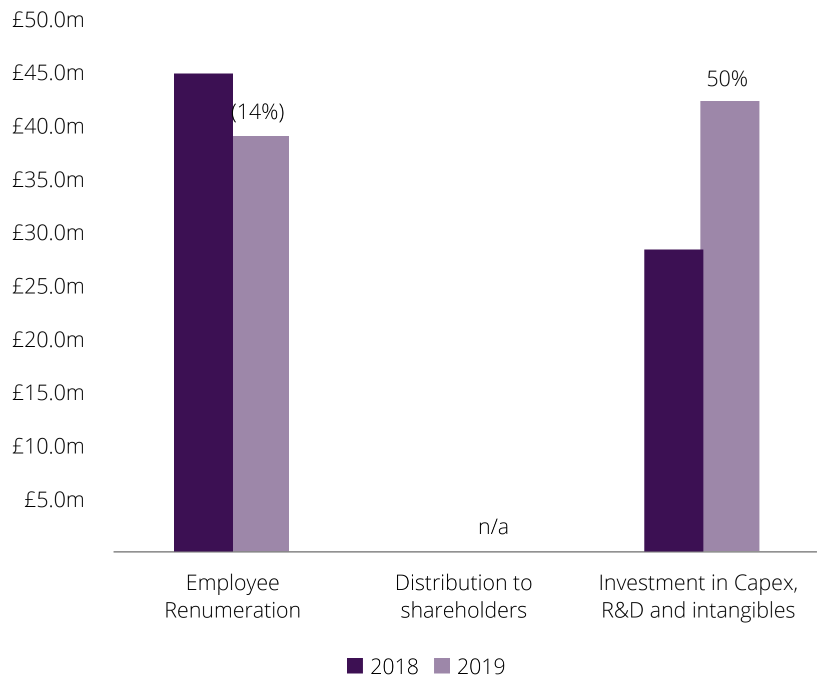
Percentage change in CEO remuneration (unaudited)

The table below shows the percentage change in CEO remuneration from the prior year compared to the average percentage change in remuneration for other employees. The CEO's annual remuneration includes base salary, taxable benefits and annual bonus. The % change in annual remuneration for other employees is calculated using the increase in the earnings of all employees who were employed in the UK throughout 2017 and 2018. The Committee considers the UK employee population to be the most appropriate comparison for CEO vs. other employee pay, as all executive directors are currently employed in the UK, our UK employee population includes employees at all levels of the organisation, and pay inflation in our other geographies is affected by local market factors.

	% change 2017-18	
	CEO	All UK employees
Base salary	+2.5%	+2.5%
Taxable benefits	-83%	+3.0%
Annual bonus	-80%	+0%

Relative importance of spend on pay (unaudited)

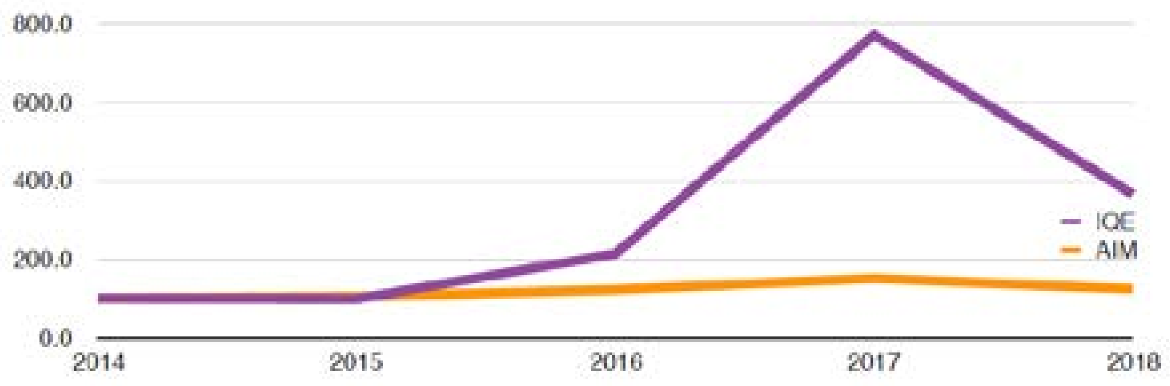
The graph below shows shareholder distributions (i.e. dividends and share buybacks), total employee pay expenditure and investment in capital expenditure, research & development and intangibles for the financial years ended 31 December 2017 and 31 December 2018, along with the percentage change.



Review of past performance (unaudited)

The following graph charts the TSR of the Company and the FTSE AIM Index (to which IQE is a member) over the period from 1 January 2014 to 31 December 2018. The table below details the Chief Executive's "single figure" remuneration over the same period.

Historical TSR performance



Historical CEO remuneration

	2014	2015	2016	2017	2018
CEO single figure of remuneration (£000)	889	851	1,066	1,087	3,683
STI award as a % of maximum opportunity	0%	0%	100%	100%	20%
LTI award as a % of maximum opportunity	83%	100%	n/a	n/a	62%

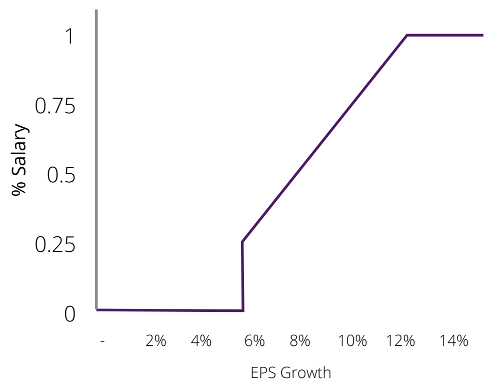
Scheme interests awarded in 2018 (audited information)

Executive director	Award type	Date of award	# shares awarded	Face value	End of performance period
Dr Andrew Nelson	Nil-cost option	07 January 2018	462,846	£651,224	31 December 2020
Phillip Rasmussen	Nil-cost option	07 January 2018	310,062	£436,257	31 December 2020*
Dr Howard Williams	Nil-cost option	07 January 2018	310,062	£436,257	31 December 2020

* As announced on 1 May 2018, the Remuneration Committee approved the accelerated vesting of these options, which were exercised in 2018 by the Executrix to Mr Rasmussen's estate subsequent to a transfer of the options to her.

The face value of shares was based on the share price at date of award of 140.7p less the 1p nominal value exercise price.

Vesting of these awards is subject to EPS growth as illustrated below, where EPS is measured over the period from 1 January 2018 to 31 December 2020.



Exit payments made in the year (unaudited)
No exit payments were paid to any Director during the year.

Payments to past directors (unaudited)
No payments were made to past Directors during the year.

Single total figure of remuneration for Non-Executive Directors (audited information)
The table below sets out a single figure for the total remuneration received by each Non-Executive Director for the year ended 31 December 2018 and the prior year:

	NED fees	
	2018 £'000	2017 £'000
Dr Godfrey Ainsworth[1]	31	125
Sir David Grant	50	50
Phil Smith	50	50
Sir Derek Jones[2]	50	4

1. *Non-Executive Director fees to 31 March 2018 prior to his appointment as Executive Chairman on the death of Phillip Rasmussen on 1 April 2018*
2. *Sir Derek Jones was appointed to the Board as an independent Non-Executive Director on 29 November 2017*

Implementation of remuneration policy for 2019 (unaudited)

Base salary
The Remuneration Committee approved the following base salary increases, in line with the average increase for all UK employees:

Executive Director	Annual base salary at 1 January 2018	Annual base salary at 1 January 2019	Percentage increase
Dr Andrew Nelson	£525,300	£538,433	2.5%
Dr Howard Williams	£351,900	£360,698	2.5%
Tim Pullen*	n/a	£362,457	n/a

* Mr Pullen took up employment on 4 February 2019 and this represents his salary on appointment

The Board reviewed the Chairman's salary since his appointment to the position of Executive Chairman and Interim CFO on 2 April 2018 and decided to increase it by 2.5% effective 1 January 2019.

Pension
Executive Directors are entitled to a pension contribution of 10% of salary or equivalent cash allowance.

Annual bonus (unaudited)
For 2019 the Remuneration Committee approved the following annual bonus opportunities for Executive Directors, as outlined in the Policy Table. The Remuneration Committee considers annual bonus targets for 2019 to be commercially sensitive at this time, but will disclose them retrospectively once they are no longer commercially sensitive.

EBITDA (% weighting)	Cashflow (% weighting)	Personal/strategic objectives (% weighting)	Maximum annual bonus opportunity (% salary)
60%	20%	20%	100%

Payment of the personal element is also subject to IQE achieving Threshold EBITDA performance.

An annual bonus of £225,000 will be paid to Mr Pullen in 2019 and a further £100,000 in 2020, both paid quarterly in arrears in compensation for awards forfeited when he left his previous employment. These bonuses are subject to a two-year clawback in certain circumstances if Mr Pullen leaves the employment of the Company before the end of the Clawback Period.

LTIP (audited information)

For 2019, normal LTIP awards of up to 100% of salary may be made to Executive Directors, as outlined in the Policy Table. For all participants, awards will vest after three years in accordance with the performance conditions outlined in the table below. No award will vest below Threshold performance, and vesting will increase on a straight-line basis between Threshold and Stretch.

UK high street retail prices are not particularly relevant to IQE global semiconductor revenues or the way we drive business performance internally, so we have converted the EPS scale from real growth of 4-10% p.a. to nominal growth of 6-12% p.a. (which assumes a long run UK RPI of 2% p.a. for equivalence).

Vesting schedule	Compound annual growth rate in EPS from 1 January 2019 to 31 Dec 2021	
	3-year EPS growth	% of normal maximum
Threshold	+6%	25%
Stretch	+12%	100%

For truly exceptional absolute TSR growth, at or above 100% growth over the three-year performance period, the level of vesting under the normal award will be subject to a 2x multiplier.
In accordance with the discretion available for recruitment, Mr Pullen was granted a 2019 LTIP award of 150% of salary for 2019 rather than the normal 100%.

Non-Executive Director Fees (Unaudited)

Non-Executive Directors will continue to receive a fee of £50,000 per annum with no additional fees for chairing a Board Committee or for fulfilling the role of Senior Independent Director.

Directors' interests (unaudited)

A table setting out the beneficial interests of the Directors and their families in the share capital of the Company as at 31 December 2018 is set out below.

Since 31 December 2018 there have been no changes in the Directors' interests in shares.
Details of Directors' share options are set out in the tables below.

	Shares owned outright as at 1 Jan 2018	Shares owned outright as at 31 Dec 2018	Shareholding requirement % salary/fee	Current shareholding % salary/fee	Requirement met?
Dr Andrew Nelson	28,459,218	28,459,218	200%	3,524%	Yes
Phillip Rasmussen	1,573,357	-	200%	N/A	N/A
Dr Howard Williams	2,392,965	2,392,965	200%	442%	Yes
Tim Pullen*	-	-		0%	
Dr Godfrey Ainsworth	2,154,197	2,154,197		707%	
Sir David Grant	215,000	215,000	N/A	280%	N/A
Phil Smith	-	-		-	
Sir Derek Jones	-	-		-	

*Tim Pullen was appointed on 4 February 2019. Executive Directors are expected to build up a shareholding of 200% of salary within five years of appointment to the Board.

2018	Options					
	Unvested and subject to continued performance	Unvested and subject to continued employment	Vested but unexercised	Vested during year	Lapsed during year	Exercised during year
Dr Andrew Nelson	4,682,988	-	7,681,199	4,686,329	2,846,633	-
Phillip Rasmussen	-	-	-	8,262,707	-	-*
Dr Howard Williams	3,131,844	-	6,313,583	3,139,113	1,907,187	-
Tim Pullen	-	-	-	-	-	-
Dr Godfrey Ainsworth	N/A					
Sir David Grant	N/A					
Phil Smith	N/A					
Sir Derek Jones	N/A					

*As announced on 1 May 2018, the Board approved the accelerated vesting of 8,262,707 options in addition to the 2,211,444 options that were vested but unexercised by the late Phillip Rasmussen. These options were transferred to the Executrix of Mr Rasmussen's estate and subsequently exercised.

2017	Options					
	Unvested and subject to continued performance	Unvested and subject to continued employment	Vested but unexercised	Vested during year	Lapsed during year	Exercised during year
Dr Andrew Nelson	11,753,104	-	2,994,870	-	-	-
Phillip Rasmussen	7,952,645	-	2,211,444	-	-	-
Dr Howard Williams	7,868,082	-	3,174,470	-	-	-
Dr Godfrey Ainsworth	N/A					
Sir David Grant	N/A					
Phil Smith	N/A					
Sir Derek Jones	N/A					

Summary of shareholder voting at the 2018 AGM (unaudited)

Results of the vote on the remuneration report at the IQE's AGM on 4 June 2018 are as below:

	Total number of votes	% of votes cast
For (including discretionary)	311,504,183	98.03%
Against	151,416	0.048%
Total votes cast (excluding withheld votes)	**311,655,599**	**98.08%**
Votes withheld	6,095,295	1.92%
Total votes cast (including withheld votes)	**317,750,894**	**100%**

Directors' biographies

Dr Godfrey H H Ainsworth FCA (63)
Executive *Chairman*

Following a Ph.D at Cardiff University, Dr Godfrey Ainsworth qualified as a Chartered Accountant and was employed by Coopers & Lybrand before becoming an audit partner and then corporate finance partner with Spicer & Oppenheim. He founded Gambit Corporate Finance in 1992, a practice specialising in the provision of corporate finance services where he was Managing Partner until his retirement from the firm in November 2009. He has held several Non-Executive Directorship appointments, including assignments for 3i plc, The Business Growth Fund and the Welsh Development Agency. He was appointed to the Board of EPI (prior to its merger with QED Inc. to form IQE plc) in 1997. He was appointed to the Board of IQE Plc in April 1999, and was appointed Non-Executive Chairman in February 2002. He was appointed Executive Chairman and Interim CFO in April 2018 following the death in service of Mr Phillip Rasmussen. Current directorships outside of the IQE Group: Compound Semiconductor Centre Limited (joint venture between IQE and Cardiff University).

Phil Smith (61)
Senior Independent Director

Phil Smith BSc, Hon LLD, DUniv. FIET, became Chairman of Cisco for the UK and Ireland in August 2016, after eight years as Chief Executive. Mr Smith is also the Chairman of Innovate UK and Chairman of the Tech Partnership. Additionally, he sits on the Board of the National Centre for Universities and Business (NCUB). Mr Smith has a thirty-five year track record in the technology industry in leading companies including Philips Electronics and IBM. In September 2014 he was awarded an Honorary Doctorate by Birmingham City University, cited for his outstanding contribution to the IT industry, a "leader among leaders". In March 2015 Mr Smith was awarded an Honorary Degree of Doctor of Laws by the University of Warwick and in 2016 an Honorary Degree of Doctor of Science by his alma mater, Glasgow University. Current directorships: Be The Business (Productivity Council), Streeva Ltd, Tech Partnership Degrees.

Sir David Grant CBE (71)
Non-executive Director, Chairman of the Remuneration and Nomination Committees

Sir David Grant has a background in engineering and technology and was appointed to the Board of IQE Plc in September 2012. He was Vice-Chancellor of Cardiff University from 2001 to 2012. Previously he held leadership positions in a number of international businesses including United Technologies Corp., Dowty Group plc and GEC plc. He has been a Vice-President of the IET, and was a Vice-President of the Royal Academy of Engineering from 2007 to 2012. He was awarded the IEE's Mensforth Gold Medal in 1996 and in 1997 he was made a CBE for his contribution to the UK's Foresight Programme. He has a PhD in Engineering Science from the University of Durham. Current directorships: Renishaw plc, NPL.

Sir Derek Jones KCB (66)
Non-executive Director, Chairman of the Audit & Risk Committee

Sir Derek Jones was the Permanent Secretary of the Welsh Government as well as a member of the UK Civil Service Board and its Senior Leadership Committee until he retired from the Welsh Government in February 2017. He spent the earlier part of his government career in Whitehall, working at HM Treasury and the then Department for Trade & Industry, where he headed the Far East Trade Desk. In government in Wales he has also served as Director of Finance and Director of Economic Affairs. Outside government, Sir Derek was Director of Business & Strategic Partnerships at Cardiff University, responsible for securing long-term collaborations with the private sector and is an Honorary Professor and Fellow of the University. Sir Derek is currently the Chair of the Prince's Trust in Wales and is a Vice President of Cardiff Business Club. He was made Companion of the Order of the Bath (CB) in 2009 and subsequently Knight Commander (KCB) in 2014, for services to economic and social conditions. Due to his work in government, Sir Derek does not hold any other current directorships and has not held any past directorships within the last five years.

Dr Drew Nelson OBE (64)
President and Chief Executive Officer

Dr Drew Nelson has over 30 years' experience in the semiconductor industry in a variety of research and managerial positions. Following a PhD in Semiconductor Physics, he joined BT Research Laboratories in 1981, leading the group responsible for the development of advanced optoelectronic devices for optical fibre communications. He subsequently managed the technology transfer from BT to Agilent for mass production. He co- founded EPI in 1988 (which became IQE in 1999) and was appointed Chief Executive Officer of IQE Plc in April 1999. Dr Nelson has held several Non-Executive Directorship appointments, and served on several Government and Industry bodies. He received an OBE in 2001 for services to the Electronics Industry. He is currently a member of the High Level Group appointed by the EC to oversee the implementation of Key Enabling Technologies (KETs) throughout Europe. Current directorships outside of the IQE Group: Compound Semiconductor Centre Limited (joint venture between IQE and Cardiff University), Neptune 6 Limited, Llansannor Management Consultants Ltd, Llansannor House Holdings Limited, Oyster Innovations Limited, Truelux Group Limited.

Tim Pullen (41)
Chief Financial Officer

Tim Pullen, who joined the Board of IQE Plc on 4 February 2019, was most recently Chief Financial Officer of ARM Limited, a global semiconductor and software design company owned by Softbank Group. During his time at ARM, Mr Pullen was focused on executing the investment strategy and scaling the company's finance and business capabilities. Prior to this, Mr Pullen was Finance Director at O2 / Telefonica UK, where he held a variety of senior financial positions including responsibility for Technology Operations, B2B and Digital segments and Finance Operations. In connection with his time at O2, Mr. Pullen also held roles as a Non-Executive Director of Tesco Mobile, O2's joint venture with Tesco Mobile and was a Director of Cornerstone Telecommunications Infrastructure Limited, O2's network sharing joint venture with Vodafone. Before his time at O2, Mr. Pullen held various senior finance roles at Serco Group plc, a leading British provider of outsourcing services, including the BPO Division in UK & Europe, the Global Technology business and in Business Transformation. Mr Pullen is a Chartered Accountant and qualified with Ernst & Young. Tim Pullen does not currently hold any directorships outside of the IQE Group.

Dr Howard Williams (64)
Chief Operations Officer

Dr Howard Williams has held a number of positions within both manufacturing and service industry sectors, with roles ranging from Engineering Management to General Management. He was a member of the founding team of EPI in 1988 (which became IQE in 1999) and was appointed Operations Director for EPI in 1996. He was appointed General Manager of IQE Inc. in 2002 and General Manager of IQE (Europe) Limited in 2003. He was subsequently appointed Chief Operations Officer in 2004 and was appointed to the Board of IQE Plc as Operations Director in December 2004.

Jason Howells (33)
Company Secretary

Jason Howells studied at University of Oxford where he gained a BA (Hons) in Jurisprudence and subsequently completed his Postgraduate Diploma in Legal Practice at Cardiff University. He qualified as a solicitor at Eversheds LLP, a predecessor of Eversheds Sutherland (International) LLP. After seven years at Eversheds, which included a secondment to GlaxoSmithKline, he moved to Capita Property and Infrastructure in 2015 before joining IQE in October 2016. Jason was appointed Company Secretary in March 2017.

Officers and advisers

IQE plc is a public limited company incorporated in England and Wales.

Directors

Dr G H H Ainsworth BSc, Ph.D, FCA (Executive Chairman)
Mr P Smith BSc, Hon LLD, DUniv., CEng, FIET (Senior Independent Non-Executive Director)
Sir David Grant CBE PhD FREng FLSW CEng FIET (Non-Executive Director)
Sir Derek Jones KCB (Non-executive Director)
Dr A W Nelson OBE, BSc, Ph.D, FREng (President and Chief Executive Officer)
Mr T N Pullen BA (Hons), ACA (Chief Financial Officer)
Dr H R Williams BSc, Ph.D, CEng, MIMechE, MCIBSE (Operations Director)

Company Secretary

Mr J M Howells MA (Oxon)

Registered office

Pascal Close, Cardiff, United Kingdom, CF3 0LW

Principal Bankers

HSBC Bank Plc
8 Canada Square, London, E14 5HQ

Auditors

KPMG LLP
15 Canada Square, London, E14 5GL

Nominated advisers and brokers

Canaccord Genuity Limited
88 Wood Street, London, EC2V 7QR

Broker

Peel Hunt LLP
Moor House, 120 London Wall, London EC2Y 5ET

Registrars

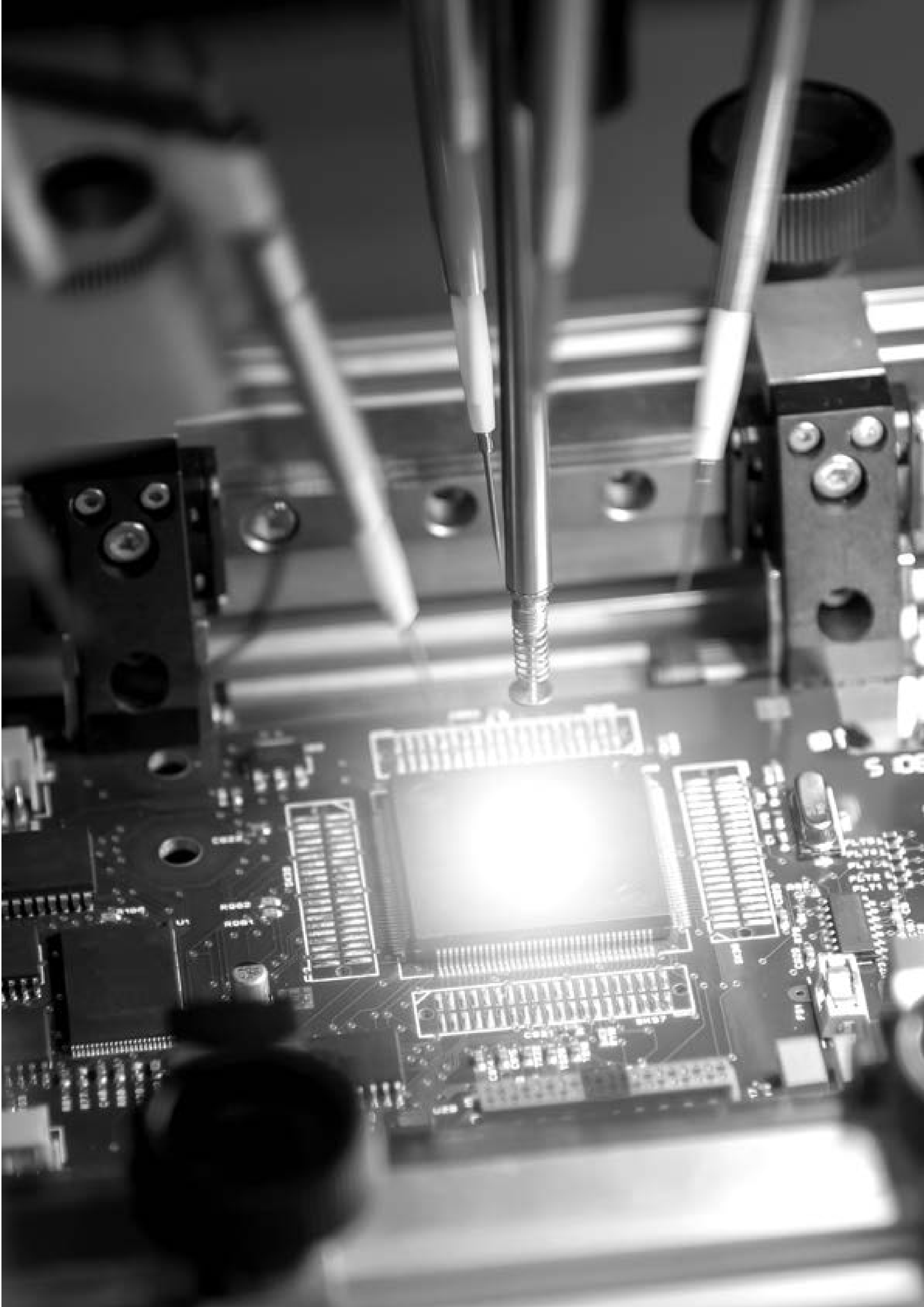
Link Asset Services
The Registry, 34 Beckenham Road, Beckenham, Kent BR3 4TU

Financial Advisors

Lazard & Co., Limited
50 Stratton Street, London W1J 8LL

Investor relations

Chris Meadows
Tel +44(0)29 2083 9400
investors@iqep.com



Independent auditor's report

to the members of IQE plc

1. Our opinion is unmodified

We have audited the financial statements of IQE plc ("the Company") for the year ended 31 December 2018 which comprise the consolidated income statement, consolidated statement of comprehensive income, consolidated balance sheet, consolidated statement of changes in equity, consolidated cash flow statement, parent company balance sheet, parent company statement of changes in equity, parent company cash flow statement, and the related notes, including the accounting policies in note 2.

In our opinion:

— the financial statements give a true and fair view of the state of the Group's and of the parent Company's affairs as at 31 December 2018 and of the Group's profit for the year then ended;

— the group financial statements have been properly prepared in accordance with International Financial Reporting Standards as adopted by the European Union (IFRSs as adopted by the EU);

— the parent Company financial statements have been properly prepared in accordance with IFRSs as adopted by the EU and as applied in accordance with the provisions of the Companies Act 2006; and

— the financial statements have been prepared in accordance with the requirements of the Companies Act 2006.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) ("ISAs (UK)") and applicable law. Our responsibilities are described below. We have fulfilled our ethical responsibilities under, and are independent of the Group in accordance with, UK ethical requirements including the FRC Ethical Standard as applied to listed entities. We believe that the audit evidence we have obtained is a sufficient and appropriate basis for our opinion.

Overview

Materiality: group financial statements as a whole	£660k (2017: £940k) 3.8% (2017: 4.1%) of normalised group profit before tax
Coverage	99% (2017: 97%) of group profit before tax

Risks of material misstatement		**vs 2017**
Recurring risks	Revenue recognition	◄►
	Valuation of development intangibles	◄►
	Capitalisation of development costs	◄►
Event driven risk	The impact of uncertainties due to the UK exiting the European Union on our audit	NEW
Parent Company only	Valuation of investments in subsidiaries	◄►

2. Key audit matters: including our assessment of risks of material misstatement

Key audit matters are those matters that, in our professional judgment, were of most significance in the audit of the financial statements and include the most significant assessed risks of material misstatement (whether or not due to fraud) identified by us, including those which had the greatest effect on: the overall audit strategy; the allocation of resources in the audit; and directing the efforts of the engagement team. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. In arriving at our audit opinion above, the key audit matters were as follows:

	The risk	Our response
The impact of uncertainties due to the UK exiting the European Union on our audit *Refer to page 28 (principal risks), page 98 (accounting policy) and page 98 (financial disclosures).*	**Unprecedented levels of uncertainty** All audits assess and challenge the reasonableness of estimates, in particular as described in valuation of development intangibles and capitalisation of development costs below, and related disclosures and the appropriateness of the going concern basis of preparation of the financial statements. All of these depend on assessments of the future economic environment and the group's future prospects and performance. Brexit is one of the most significant economic events for the UK and at the date of this report its effects are subject to unprecedented levels of uncertainty of outcomes, with the full range of possible effects unknown.	We developed a standardised firm-wide approach to the consideration of the uncertainties arising from Brexit in planning and performing our audits. Our procedures included: — **Our Brexit knowledge:** We considered the directors' assessment of Brexit-related sources of risk for the group's business and financial resources compared with our own understanding of the risks. We considered the directors' plans to take action to mitigate the risks**.** — **Sensitivity analysis:** When addressing valuation of development intangibles and capitalisation of development costs and other areas that depend on forecasts, we compared the directors' analysis to our assessment of the full range of reasonably possible scenarios resulting from Brexit uncertainty and, where forecast cash flows are required to be discounted, considered adjustments to discount rates for the level of remaining uncertainty. — **Assessing transparency:** As well as assessing individual disclosures as part of our procedures on valuation of development intangibles and capitalisation of development costs, we considered all of the Brexit related disclosures together, including those in the strategic report, comparing the overall picture against our understanding of the risks. However, no audit should be expected to predict the unknowable factors or all possible future implications for a company and this is particularly the case in relation to Brexit.
Revenue recognition *Refer to note 2.21 (accounting policy).*	**2018/2019 sales** Pressures on achieving internal and external expectations of results increase the risk of fraudulent revenue recognition, in particular the recognition of sales around the year end in the correct. In addition, provisions for sales returns and rebates, as a result of delivered wafers not being within the required specification, may be insufficient at the year-end.	Our procedures included: — **Control design:** Assessing the design of controls over the matching of sales invoices to related orders and customer-authorised delivery notes. — **Enquiry of customers:** Obtaining direct confirmation of contract asset balances held by a sample of customers to determine the level of uninvoiced product held by each at the year-end. — **Test of details:** Vouching a sample of billings and accruals around the year-end, based upon their financial significance, to customer-authorised delivery notes. — **Historical comparison:** Assessing the returns and rebates provisions based on historical trends, contract terms and any specific known product issues identified either at or subsequent to the year-end.

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2. Key audit matters: our assessment of risks of material misstatement (continued)

	The risk	Our response
Carrying value of development intangibles (£41.8 million; 2017: £35.5m) *Refer to note 2.5 (accounting policy) and note 13 (financial disclosures).*	**Subjective valuation** Value in use calculations, prepared when there are indicators of impairment, are subjective due to the inherent uncertainty involved in forecasting and discounting future cash flows. The effect of these matters is that, as part of our risk assessment, we determined that the value in use of development intangibles has a high degree of estimation uncertainty, with a potential range of reasonable outcomes greater than our materiality for the financial statements as a whole.	Our procedures included: — **Control design:** We tested the design of controls over the forecasts prepared for the development intangibles, including approval and challenge of those forecasts by the directors. — **Historical comparisons:** Comparing budgets for the prior year(s) with actual results and understanding the reasons for the variances. — **Benchmarking assumptions:** Comparing the group's assumptions to externally derived data in relation to key inputs such as growth rates and discount rates. — **Sensitivity analysis:** Performing sensitivity analysis on the assumptions noted above. — **Personnel interviews:** We held discussions with the Group Technology Director to corroborate our understanding of the future uses and opportunities for the development assets. — **Assessing transparency:** Assessing the adequacy of the Group's disclosures in respect of the development intangibles.
We continue to perform procedures over valuation of goodwill. However, following further consideration of the amount of headroom, we have not assessed this as one of the most significant risks in our current year audit and, therefore, it is not separately identified in our report this year.		
Capitalisation of development costs (£9.8 million; 2017: £15.4m) *Refer to note 2.5 (accounting policy) and note 13 (financial disclosures).*	**Accounting treatment** Capitalised development costs are significant due to investment in areas including VCSEL, GaN, cREO and Photonics. The application of accounting standards to determine whether the criteria for capitalisation have been met is inherently subjective as this involves an assessment of the probability of future outcomes, the time period that constitutes the process development phase and the identification of any costs related to saleable wafer product produced at the same time, which should be excluded from capitalisation. .	Our procedures included: — **Our expertise:** We critically assessed the costs capitalised against the criteria of the relevant accounting standard and our understanding of the progress of the Group's projects, including assessing the technical feasibility of the asset. — **Test of details**: Vouching a sample of labour costs allocated to development projects to supporting documentation, primarily timesheets and payroll records for relevant employees. Vouched a sample of material and overhead costs to supporting documentation, including vouching substrate costs to purchase invoices and analysing gas consumption. — **Challenged assumptions:** Challenging the reasonableness of the assumptions applied in respect of the proportion of labour and overhead costs capitalised with reference to the number of development runs performed during the year compared to the total number of all runs. — **Calculation reperformance:** Re-performing the group's calculation of standard costs used in allocating costs throughout the year, using actual costs incurred and critically assessed any differences arising. — **Test of details:** Vouching a sample of development items from development run records back to supporting documentation to check whether that the selected wafer is not showing as having been sold and has a nil value in the associated inventory records. Where development projects result in the production of saleable wafers, we recalculated the capitalised cost to ensure all costs in respect of those delivered had been appropriately expensed. — **Test of details:** Vouching a sample of wafers sold during the year, selected from sales records, back to production/development run records to ensure that the cost of sold wafers has not been capitalised inappropriately.

2. Key audit matters: our assessment of risks of material misstatement (continued)

	The risk	Our response
Parent Company: Valuation of investments in subsidiaries (£89.2 million; 2017: £88.1m) *Refer to note 2.27 (accounting policy) and note 15 (financial disclosures).*	**Low risk, high value** The carrying amount of the parent company's investments in subsidiaries represents 36% (2017: 37%) of the company's total assets. Their recoverability is not at a high risk of significant misstatement or subject to significant judgement. However, due to their materiality in the context of the parent company financial statements, this is considered to be the area that had the greatest effect on our overall parent company audit.	Our procedures included: — **Control design:** We tested the design of controls over the forecasts prepared for the subsidiaries, including approval and challenge of those forecasts by the directors. — **Benchmarking assumptions:** Challenging the assumptions used in the cash flows included in the budgets based on our knowledge of the Group and the markets in which the subsidiaries operate. — **Historical comparisons:** Assessing the reasonableness of the budgets by considering the historical accuracy of the previous forecasts. — **Our sector experience**: Evaluating the current level of trading, including identifying any indications of a downturn in activity, by examining the post year end management accounts and considering our knowledge of the Group and the market.

3. Our application of materiality and an overview of the scope of our audit

Materiality for the group financial statements as a whole was set at £660k (2017: £940k), determined with reference to a benchmark of group profit before tax, normalised to exclude the impact of the costs relating to the onerous lease charge, site closure costs, legal fees, insurance income, and the accelerated share-based payment charges (being £0.6m of the total) as disclosed in note 5, of £17,242k, of which it represents 3.8% (2017: 4.1%).

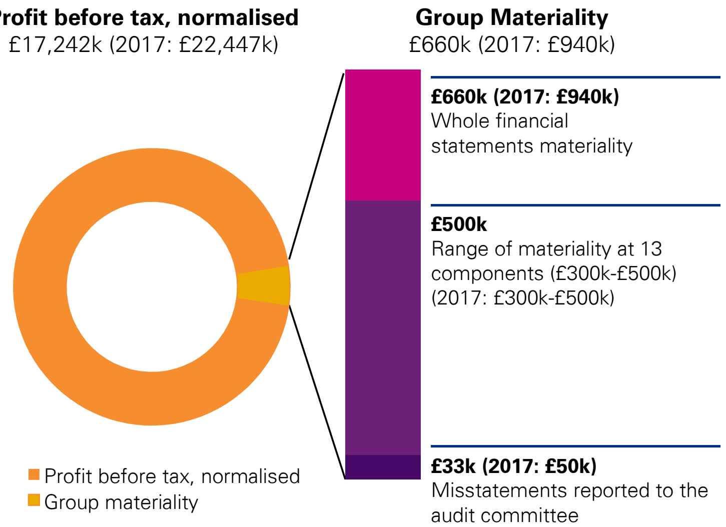
Materiality for the parent company financial statements as a whole was set at £300k (2017: £300k), as communicated by the group audit team. This is lower than the materiality we would otherwise have determined by reference total assets, and represents 0.13% (2017: 0.13%) of the Company's total assets.

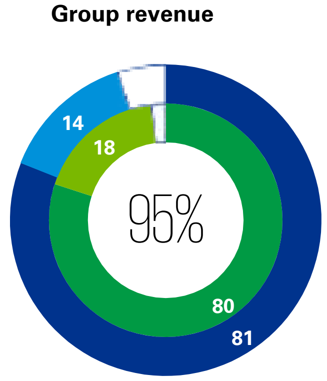
We agreed to report to the Audit Committee any corrected or uncorrected identified misstatements exceeding £33k (2017: £50k), in addition to other identified misstatements that warranted reporting on qualitative grounds.

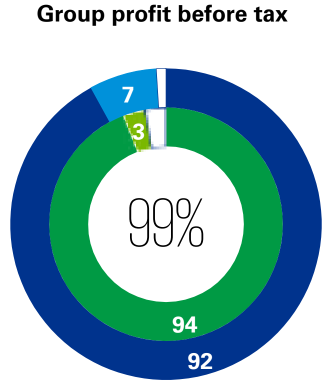
Of the group's 13 (2017: 13) reporting components, we subjected 8 (2017: 8) to full scope audits for group purposes and 2 (2017: 3) to specified risk-focused audit procedures. The latter were not individually financially significant enough to require a full scope audit for group purposes, but did present specific individual risks that needed to be addressed.

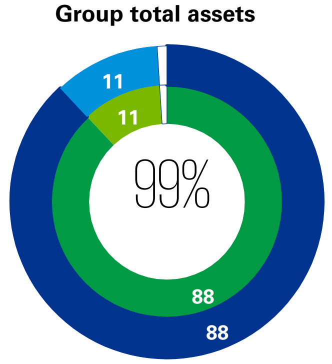
The components within the scope of our work accounted for the percentages illustrated opposite.

The remaining 5% (2017: 2%) of total group revenue, 1% (2017: 3%) of group profit before tax and 1% (2017: 1%) of total group assets is represented by 3 (2017: 2) reporting components, none of which individually represented more than 2% (2017: 2%) of any of total group revenue, group profit before tax or total group assets. For these residual components, we performed analysis at an aggregated group level to re-examine our assessment that there were no significant risks of material misstatement within these.









Key

- Full scope for group audit purposes 2018
- Specified risk-focused audit procedures 2018
- Full scope for group audit purposes 2017
- Specified risk-focused audit procedures 2017

3. Our application of materiality and an overview of the scope of our audit (continued)

The work on 1 of the 13 reporting components was performed by a component auditor and the rest, including the audit of the parent company, was performed by the Group team. The group team performed procedures on the items excluded from normalised group profit before tax. The Group team instructed the component auditor as to the significant areas to be covered, including the relevant risks detailed above and the information to be reported back. The Group team approved the component materiality, having regard to the mix of size and risk profile of the Group across the components. Video and telephone conference meetings were held with the component auditor. At these meetings, the findings reported to the Group team were discussed in more detail, and any further work required by the Group team was then performed by the component auditor.

The Group's 2 joint ventures were not individually significant enough to require an audit for group reporting purposes, but an assessment was performed of the management accounts and the Board minutes of these joint ventures and the audit team held discussions with the joint venture management teams. We performed analysis at an aggregated group level to re-examine our assessment that there were no significant risks of material misstatement within these.

4. We have nothing to report on going concern

The Directors have prepared the financial statements on the going concern basis as they do not intend to liquidate the Company or the Group or to cease their operations, and as they have concluded that the Company's and the Group's financial position means that this is realistic. They have also concluded that there are no material uncertainties that could have cast significant doubt over their ability to continue as a going concern for at least a year from the date of approval of the financial statements ("the going concern period").

Our responsibility is to conclude on the appropriateness of the Directors' conclusions and, had there been a material uncertainty related to going concern, to make reference to that in this audit report. However, as we cannot predict all future events or conditions and as subsequent events may result in outcomes that are inconsistent with judgements that were reasonable at the time they were made, the absence of reference to a material uncertainty in this auditor's report is not a guarantee that the Group and the Company will continue in operation.

In our evaluation of the Directors' conclusions, we considered the inherent risks to the Group's and Company's business model and analysed how those risks might affect the Group's and Company's financial resources or ability to continue operations over the going concern period. The risks that we considered most likely to adversely affect the Group's and Company's available financial resources over this period were :

- The impact of World Trade Organisation tariffs being applied to imports and exports of materials; and
- The impact of reduced availability of research funding.

As these were risks that could potentially cast significant doubt on the Group's and the Company's ability to continue as a going concern, we considered sensitivities over the level of available financial resources indicated by the Group's financial forecasts taking account of reasonably possible (but not unrealistic) adverse effects that could arise from these risks individually and collectively and evaluated the achievability of the actions the Directors consider they would take to improve the position should the risks materialise. We also considered less predictable but realistic second order impacts, such as the shorter-term impact of customs delays on import and export of materials.

Based on this work, we are required to report to you if we have anything material to add or draw attention to in relation to the directors' statement in Note 1 to the financial statements on the use of the going concern basis of accounting with no material uncertainties that may cast significant doubt over the Group and Company's use of that basis for a period of at least twelve months from the date of approval of the financial statements.

We have nothing to report in these respects, and we did not identify going concern as a key audit matter.

5. We have nothing to report on the other information in the Annual Report

The directors are responsible for the other information presented in the Annual Report together with the financial statements. Our opinion on the financial statements does not cover the other information and, accordingly, we do not express an audit opinion or, except as explicitly stated below, any form of assurance conclusion thereon.

Our responsibility is to read the other information and, in doing so, consider whether, based on our financial statements audit work, the information therein is materially misstated or inconsistent with the financial statements or our audit knowledge. Based solely on that work we have not identified material misstatements in the other information.

Strategic report and directors' report

Based solely on our work on the other information:

- we have not identified material misstatements in the strategic report and the directors' report;
- in our opinion the information given in those reports for the financial year is consistent with the financial statements; and
- in our opinion those reports have been prepared in accordance with the Companies Act 2006.

5. We have nothing to report on the other information in the Annual Report (continued)

Disclosures of principal risks and longer-term viability

Based on the knowledge we acquired during our financial statements audit, we have nothing material to add or draw attention to in relation to:

— the directors' confirmation within the long-term viability statement that they have carried out a robust assessment of the principal risks facing the Group, including those that would threaten its business model, future performance, solvency and liquidity;

— the principal risks and uncertainties disclosures describing these risks and explaining how they are being managed and mitigated; and

— the directors' explanation in the long-term viability statement of how they have assessed the prospects of the Group, over what period they have done so and why they considered that period to be appropriate, and their statement as to whether they have a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over the period of their assessment, including any related disclosures drawing attention to any necessary qualifications or assumptions.

Our work is limited to assessing these matters in the context of only the knowledge acquired during our financial statements audit. As we cannot predict all future events or conditions and as subsequent events may result in outcomes that are inconsistent with judgments that were reasonable at the time they were made, the absence of anything to report on these statements is not a guarantee as to the Group's and Company's longer-term viability.

Corporate governance disclosures

We are required to report to you if:

— we have identified material inconsistencies between the knowledge we acquired during our financial statements audit and the directors' statement that they consider that the annual report and financial statements taken as a whole is fair, balanced and understandable and provides the information necessary for shareholders to assess the Group's position and performance, business model and strategy; or

— the section of the annual report describing the work of the Audit Committee does not appropriately address matters communicated by us to the Audit Committee.

We have nothing to report in these respects.

6. We have nothing to report on the other matters on which we are required to report by exception

Under the Companies Act 2006, we are required to report to you if, in our opinion:

— adequate accounting records have not been kept by the parent Company, or returns adequate for our audit have not been received from branches not visited by us; or

— the parent Company financial statements are not in agreement with the accounting records and returns; or

— certain disclosures of directors' remuneration specified by law are not made; or

— we have not received all the information and explanations we require for our audit.

We have nothing to report in these respects.

7. Respective responsibilities

Directors' responsibilities

As explained more fully in their statement set out on page [50], the directors are responsible for: the preparation of the financial statements including being satisfied that they give a true and fair view; such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error; assessing the Group and parent Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern; and using the going concern basis of accounting unless they either intend to liquidate the Group or the parent Company or to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue our opinion in an auditor's report. Reasonable assurance is a high level of assurance, but does not guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

A fuller description of our responsibilities is provided on the FRC's website at www.frc.org.uk/auditorsresponsibilities.

8. The purpose of our audit work and to whom we owe our responsibilities

This report is made solely to the Company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the Company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Company and the Company's members, as a body, for our audit work, for this report, or for the opinions we have formed.

A Campbell

Andrew Campbell-Orde (Senior Statutory Auditor)
for and on behalf of KPMG LLP, Statutory Auditor
Chartered Accountants
3 Assembly Square
Britannia Quay
Cardiff
CF10 4AX
20 March 2019

KPMG

Five year financial summary

	2018 £'000	Restated 2017 £'000	2016 £'000	2015 £'000	2014 £'000
Revenue	156,291	154,553	132,707	114,024	112,011
Adjusted EBITDA (see below)	26,404	37,152	31,730	29,001	27,009
Operating profit					
Adjusted*	16,040	26,534	22,119	18,977	17,618
Reported	8,660	17,194	19,826	21,166	7,167
Profit after tax					
Adjusted*	11,229	24,998	20,692	17,045	15,496
Reported	1,189	14,660	18,023	17,847	791
Net cash flow from operations					
Before adjustments (note 5)	16,982	31,089	24,281	22,575	19,614
Reported	16,988	29,717	22,463	20,971	14,861
Free cash flow**					
Before exceptional cash flows	(26,045)	(2,945)	4,382	12,114	11,446
Reported	(26,039)	(4,317)	2,564	10,510	6,693
Net cash/(debt)	20,807	45,612	(39,549)	(23,223)	(31,251)
Equity shareholders' funds	305,730	287,950	184,666	142,299	117,851
Basic EPS – adjusted***	1.44p	3.61p	3.06p	2.53p	2.32p
Basic EPS – unadjusted	0.13p	2.11p	2.66p	2.65p	0.06p
Diluted EPS – adjusted***	1.38p	3.38p	2.89p	2.45p	2.24p
Diluted EPS – unadjusted	0.12p	1.98p	2.52p	2.56p	0.06p

Comparative information has been restated for 2017 as detailed in note 2.30. The information for 2014-2016 has not been restated for the change to accounting standards.

* The adjusted performance measures for 2017 and 2018 are reconciled in note 5. The adjusted performance measures for 2014-2016 are reconciled in those financial statements.

** Free cash flow is defined as net cash flow (£25,292,000) before acquisitions (£nil), financing (£813,000) and net interest paid (£66,000).

*** Adjusted EPS measures exclude share based payments, exceptional items, acquisition accounting amortisation and the impact of discounting and any associated tax impact of the adjustment (see note 12).

Five year financial summary (continued)

Adjusted EBITDA has been calculated as follows:

	2018 £'000	Restated 2017 £'000	2016 £'000	2015 £'000	2014 £'000
Profit after tax	1,189	14,660	18,023	17,847	791
Tax	5,558	435	340	248	4,452
Interest (income)/expense	(87)	2,099	1,463	1,790	1,924
Share based payments	(1,044)	7,526	2,881	2,001	1,458
Profit & Loss on disposal	-	22	47	(5,187)	15
Adjusted items	7,906	385	(1,962)	1,070	7,877
Depreciation	6,773	5,637	5,561	6,192	6,590
Amortisation of intangible assets	6,109	6,388	5,377	5,040	3,902
Adjusted EBITDA	26,404	37,152	31,730	29,001	27,009

Consolidated income statement for the year ended 31 December 2018

	Note	2018 £'000	Restated 2017 £'000
Revenue	4	**156,291**	**154,553**
Cost of sales		(118,840)	(115,755)
Gross profit		**37,451**	**38,798**
Other income and expenses	5	1,097	-
Selling, general and administrative expenses		(29,888)	(21,582)
Loss on disposal of property, plant and equipment	5	-	(22)
Operating profit	6	**8,660**	**17,194**
Finance income / (costs)	8	87	(2,099)
Share of losses of joint ventures accounted for using the equity method	29	(2,000)	-
Adjusted profit before income tax		**13,974**	**24,515**
Adjustments	5	(7,227)	(9,420)
Profit before income tax		**6,747**	**15,095**
Taxation	9	(5,558)	(435)
Profit for the year		**1,189**	**14,660**
Profit attributable to:			
Equity shareholders		966	14,560
Non-controlling interest		223	100
		1,189	**14,660**
Earnings per share attributable to owners of the parent during the year			
Basic earnings per share	12	0.13p	2.11p
Diluted earnings per share	12	0.12p	1.98p

Adjusted basic and diluted earnings per share are presented in note 12.

All items included in the profit for the year relate to continuing operations.

The company has elected to take the exemption under section 408 of the Companies Act 2006 from presenting the parent company profit and loss account.

The notes on pages 98 to 144 form an integral part of these consolidated financial statements.

Consolidated statement of comprehensive income for the year ended 31 December 2018

	2018 £'000	Restated 2017 £'000
Profit for the year	1,189	14,660
Currency translation differences on foreign currency net investments*	11,140	(10,948)
Total comprehensive income for the year	**12,329**	**3,712**
Total comprehensive income attributable to:		
Equity shareholders	12,010	3,640
Non-controlling interest	319	72
	12,329	**3,712**

* Items that may be subsequently be reclassified to profit or loss.

Items in the statement above are disclosed net of tax. The income tax relating to each component of other comprehensive income is disclosed in note 9.

The notes on pages 98 to 144 form an integral part of these consolidated financial statements.

Consolidated balance sheet as at 31 December 2018

	Note	2018 £'000	Restated 2017 £'000
Non-current assets			
Intangible assets	13	121,775	108,513
Fixed asset investments	15	75	75
Property, plant and equipment	14	124,445	90,800
Deferred tax assets	10	13,244	17,768
Financial Assets	17	7,937	7,680
Total non-current assets		**267,476**	**224,836**
Current assets			
Inventories	16	35,709	33,044
Trade and other receivables	17	38,015	33,269
Cash and cash equivalents		20,807	45,612
Total current assets		**94,531**	**111,925**
Total assets		**362,007**	**336,761**
Current liabilities			
Trade and other payables	18	(45,908)	(43,172)
Current tax liabilities		(431)	(210)
Borrowings	19	-	-
Provisions for other liabilities and charges	20	(2,554)	(1,534)
Total current liabilities		**(48,893)**	**(44,916)**
Non-current liabilities			
Borrowings	19	-	-
Provisions for other liabilities and charges	20	(3,836)	(666)
Total non-current liabilities		**(3,836)**	**(666)**
Total liabilities		**(52,729)**	**(45,582)**
Net assets		**309,278**	**291,179**
Equity attributable to the shareholders of the parent			
Share capital	22	7,767	7,560
Share premium		151,147	145,927
Retained earnings		99,299	98,333
Other reserves		47,517	36,130
		305,730	**287,950**
Non-controlling interest		3,548	3,229
Total equity		**309,278**	**291,179**

The notes on pages 98 to 144 form an integral part of these consolidated financial statements.

The financial statements on pages 108 to 165 were authorised for issue by the board of directors approved on 19 March 2019 and were signed on its behalf.

Dr G H H Ainsworth

Dr A W Nelson

Consolidated statement of changes in equity for the year ended 31 December 2018

	Share capital	Share premium	Retained earnings	Exchange rate reserve	Other reserves	Non-controlling interests	Total equity
	£'000	£'000	£'000	£'000	£'000	£'000	£'000
At 1 January 2018	**7,560**	**145,927**	**98,333**	**20,069**	**16,061**	**3,229**	**291,179**
Comprehensive income							
Profit for the year	-	-	966	-	-	223	1,189
Other comprehensive income for the year	-	-	-	11,044	-	96	11,140
Total comprehensive income for the year	-	-	**966**	**11,044**	**-**	**319**	**12,329**
Transactions with owners							
Share based payments	-	-	-	-	1,826	-	1,826
Tax relating to share options	-	-	-	-	(437)	-	(437)
Proceeds from shares issued	207	5,220	-	-	(1,046)	-	4,381
Total transactions with owners	**207**	**5,220**	**-**	**-**	**343**	**-**	**5,770**
At 31 December 2018	**7,767**	**151,147**	**99,299**	**31,113**	**16,404**	**3,548**	**309,278**

	Share capital	Share premium	Retained earnings	Exchange rate reserve	Other reserves	Non-controlling interests	Total equity
	£'000	£'000	£'000	£'000	£'000	£'000	£'000
At 1 January 2017 - restated	**6,755**	**51,081**	**83,773**	**30,989**	**12,263**	**3,157**	**188,018**
Comprehensive income							
Profit for the year	-	-	14,560	-	-	100	14,660
Other comprehensive income for the year	-	-	-	(10,920)	-	(28)	(10,948)
Total comprehensive income for the year	**-**	**-**	**14,560**	**(10,920)**	**-**	**72**	**3,712**
Transactions with owners							
Share based payments	-	-	-	-	3,854	-	3,854
Tax relating to share options	-	-	-	-	683	-	683
Proceeds from shares issued	805	94,846	-	-	(739)	-	94,912
Total transactions with owners	**805**	**94,846**	**-**	**-**	**3,798**	**-**	**99,449**
At 31 December 2017 - restated	**7,560**	**145,927**	**98,333**	**20,069**	**16,061**	**3,229**	**291,179**

The notes on pages 98 to 144 form an integral part of these consolidated financial statements.

Consolidated cash flow statement for the year ended 31 December 2018

	Note	2018 £'000	2017 £'000
Cash flows from operating activities			
Adjusted cash inflow from operations		**16,982**	**31,089**
Cash impact of adjustments	5	6	(1,372)
Cash generated from operations	25	**16,988**	**29,717**
Net interest paid		(66)	(2,125)
Income tax paid		(665)	(5,844)
Net cash generated from operating activities		**16,257**	**21,748**
Cash flows from investing activities			
Purchase of property, plant and equipment		(30,375)	(11,260)
Purchase of intangible assets		(1,550)	(2,419)
Capitalised development expenditure		(10,437)	(14,511)
Net cash used in investing activities		**(42,362)**	**(28,190)**
Cash flows from financing activities			
Proceeds from issuance of ordinary shares		813	94,912
Proceeds from borrowings	26	-	27,864
Repayments of borrowings	26	-	(75,430)
Net cash generated from financing activities		**813**	**47,346**
Net (decrease)/increase in cash and cash equivalents		**(25,292)**	**40,904**
Cash and cash equivalents at 1 January	27	45,612	4,957
Exchange gains / (losses) on cash and cash equivalents		487	(249)
Cash and cash equivalents at 31 December	**27**	**20,807**	**45,612**

The notes on pages 98 to 144 form an integral part of these consolidated financial statements.

Parent company balance sheet for the year ended 31 December 2018

	Note	2018 £'000	2017 £'000
Non-current assets			
Intangible assets	13	6,263	2,076
Property, plant and equipment	14	15	10
Investments	15	89,228	88,161
Deferred tax assets	10	1,365	5,252
Total non-current assets		**96,871**	**95,499**
Current assets			
Trade and other receivables	17	147,328	114,229
Cash and cash equivalents		4,582	31,281
Total current assets		**151,910**	**145,510**
Total assets		**248,781**	**241,009**
Current liabilities			
Trade and other payables	18	(20,706)	(21,236)
Borrowings	19	-	-
Total current liabilities		**(20,706)**	**(21,236)**
Non-current liabilities			
Borrowings	19	-	-
Total non-current liabilities		-	-
Total liabilities		**(20,706)**	**(21,236)**
Net assets		**228,075**	**219,773**
Shareholders' equity			
Share capital	22	7,767	7,560
Share premium		151,147	145,927
Retained earnings		52,780	50,476
Other reserves		16,381	15,810
Total equity		**228,075**	**219,773**

The notes on pages 98 to 144 form an integral part of these financial statements.

The financial statements on pages 90 to 144 were authorised for issue by the board of directors approved on 19 March 2019 and were signed on its behalf.

Dr G H H Ainsworth

Dr A W Nelson

Parent company statement of changes in equity for the year ended 31 December 2018

	Share capital	Share premium	Retained earnings	Other reserves	Total Equity
	£'000	£'000	£'000	£'000	£'000
At 1 January 2018	**7,560**	**145,927**	**50,476**	**15,810**	**219,773**
Comprehensive expense					
Profit for the year	-	-	2,304	-	2,304
Total comprehensive expense	**-**	**-**	**2,304**	**-**	**2,304**
Transactions with owners					
Share based payments	-	-	-	1,826	1,826
Tax relating to share options	-	-	-	(209)	(209)
Proceeds from shares issued	207	5,220	-	(1,046)	4,381
Total transactions with owners	**207**	**5,220**	**-**	**571**	**5,998**
At 31 December 2018	**7,767**	**151,147**	**52,780**	**16,381**	**228,075**

	Share capital	Share premium	Retained earnings	Other reserves	Total Equity
	£'000	£'000	£'000	£'000	£'000
At 1 January 2017	**6,755**	**51,081**	**10,089**	**12,449**	**80,374**
Comprehensive expense					
Profit for the year	-	-	40,387	-	40,387
Total comprehensive expense	**-**	**-**	**40,387**	**-**	**40,387**
Transactions with owners					
Share based payments	-	-	-	3,854	3,854
Tax relating to share options	-	-	-	246	246
Proceeds from shares issued	805	94,846	-	(739)	94,912
Total transactions with owners	**805**	**94,846**	**-**	**3,361**	**99,012**
At 31 December 2017	**7,560**	**145,927**	**50,476**	**15,810**	**219,773**

The notes on pages 98 to 144 form an integral part of these financial statements.

Parent company cash flow statement for the year ended 31 December 2018

	Note	2018 £'000	2017 £'000
Cash flows from operating activities			
Cash outflow from operations	25	(30,332)	(21,785)
Interest received/(paid)		3,523	(1,846)
Income tax paid		-	-
Net cash used in operating activities		**(26,809)**	**(23,631)**
Purchase of intangible assets		(685)	(375)
Purchase of property plant and equipment		(18)	(11)
Net cash used in investing activities		**(703)**	**(386)**
Cash flows from financing activities			
Proceeds from issuance of ordinary shares		813	94,913
Proceeds from borrowings		-	27,194
Repayments of borrowings		-	(65,781)
Net cash generated from financing activities		**813**	**56,326**
Net (decrease)/increase in cash and cash equivalents		**(26,699)**	**32,309**
Cash and cash equivalents at 1 January		31,281	(1,028)
Cash and cash equivalents at 31 December		**4,582**	**31,281**

The notes on pages 98 to 144 form an integral part of these financial statements.

Notes to the financial statements for the year ended 31 December 2018

1. General information

IQE plc ('the company') and its subsidiaries (together 'the Group') develop, manufacture and sell advanced semiconductor materials. The Group has manufacturing facilities in Europe, United States of America and Asia and sells to customers located globally.

The company is a public limited company admitted to trading on AIM, a market operated by The London Stock Exchange plc and incorporated and domiciled in England and Wales. The address of its registered office is Pascal Close, St Mellons, Cardiff, CF3 0LW.

2. Significant accounting policies

The principal accounting policies applied in the preparation of these consolidated financial statements are set out below. These policies have been consistently applied to all years presented, except for the impact of the implementation of IFRS 15 'Revenue from contracts with customers'.

2.1 Basis of preparation

The financial statements of IQE plc have been prepared in accordance with International Financial Reporting Standards (IFRS) and IFRS Interpretations Committee (IFRS IC) interpretations adopted by the European Union and in accordance with the Companies Act 2006 applicable to companies reporting under IFRS. The financial statements have been prepared under the historical cost convention except where fair value measurement is required by IFRS.

The preparation of financial statements in conformity with IFRS requires the use of certain critical accounting estimates. It also requires management to exercise its judgement in the process of applying the Group's accounting policies. The areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the consolidated financial statements are disclosed in note 3.

2.2 Going concern

The Group meets its day to day working capital requirements through its bank facilities and available cash. The Group's forecasts and projections, taking account of reasonably possible changes in trading performance, show that the Group has adequate cash resources to continue operating for the foreseeable future such that the directors consider it appropriate to adopt the going concern basis of accounting in preparing the consolidated financial statements (see Strategic Report).

2.3 Changes in accounting policy and disclosures

(a) New standards, amendments and interpretations.
The following new standards, amendments and interpretations have been adopted by the Group for the first time for the financial year beginning on 1 January 2018:

- Annual improvements 2014 – 2016 cycle
- Amendment to IFRS 2, 'Share based payments' which clarifies the classification and measurement of certain share based payment transactions
- IFRS 9 'Financial instruments'
- IFRS 15 'Revenue from contracts with customers'
- Amendments to IAS 40, 'Investment Property' which clarifies that transfers to, or from, investment property can only be made if there has been a change in use that is supported by evidence
- Interpretation 22 'Foreign Currency Transactions and Advance Consideration' which clarifies how to determine the date of transaction for the exchange rate to be used on initial recognition of a related asset, expense or income where an entity pays or receives consideration in advance for foreign currency-denominated contracts.

The adoption of these standards, amendments and interpretations has not had a material impact on the financial statements of the Group or parent company, except for the adoption of IFRS 15 'Revenue from contracts with customers' where the impact of adoption of this new standard is set out in note 2.30 to the financial statements.

(b) New standards, amendments and interpretations issued but not effective and not adopted early
A number of new standards, amendments to standards and interpretations which are set out below are effective for annual periods beginning after 1 January 2019 and have not been applied in preparing these consolidated financial statements.

- IFRS 16 'Leases'
- IFRS 17 'Insurance contracts'
- Amendments to IAS 19 'Employee Benefits' which clarifies the accounting for defined benefit plan amendments, curtailments and settlements.
- Amendment to IAS 28 'Investments in associates and joint ventures' which clarifies the accounting for long-term interests in an associate or joint venture, which in substance form part of the net investment in the associate or joint venture, but to which equity accounting is not applied
- Amendments to IFRS 10 'Consolidated financial statements' and IAS 28 'Investments in associates and joint ventures' which clarifies the accounting treatment for sales or contribution of assets between an investor and its associates or joint ventures.

- Interpretation 23 'Uncertainty over Income Tax Treatments' which explains how to recognise and measure deferred and current income tax assets and liabilities where there is uncertainty over a tax treatment.

The Directors anticipate that none of the new standards, amendments to standards and interpretations is expected to have a significant effect on the financial statements of the Group or parent company, except for IFRS 16 'Leases'.

IFRS16 'Leases' addresses the definition of a lease, the recognition and measurement of leases and establishes principles for reporting useful information to users of financial statements about the leasing activities of both lessees and lessors. A key change arising from IFRS 16 is that most operating leases will be accounted for on balance sheet for lessees. The standard replaces IAS 17 'Leases', and related interpretations. The standard is effective for annual periods beginning on or after 1 January 2019.

The Group currently leases a number of assets principally relating to property, including the newly constructed Newport facility as well as leasing property, plant and equipment from its joint venture, Compound Semiconductor Centre (note 3a) under operating leases.

The adoption of IFRS 16 will have a significant impact on the financial statements as the standard will require operating leases to be accounted for through the recognition of a right of use asset and a corresponding lease liability where certain criteria are met. In adopting the new standard the Group will adopt IFRS16 using the modified retrospective approach and apply the following practical expedients on a lease-by-lease basis to its portfolio of leases:

- Application of a single discount rate to the portfolio of property and plant leases that are deemed to have reasonably similar characteristics;
- Adjustment to the asset associated with the leased Singapore manufacturing facility on transition by the amount of the previously recognised onerous lease provision as an alternative to performing an impairment review;
- Application of recognition and measurement exemptions for all leases where the lease term ends within 12 months or fewer of the date of initial application and account for those leases as short-term leases;
- Application of hindsight in applying the new standard to determine the lease term where lease contracts contains option to extend or terminate the lease; and
- Exclusion of any initial direct costs in the measurement of the right of use asset.

The impact on adoption of IFRS16 at 1 January 2019 will be to increase non-current assets by £45,954k (net of the previously recognised Singapore onerous lease of £5,256k) for the recognition of a right of use asset and increase liabilities by £51,110k for the recognition of a lease liability.

2.4 Consolidation

The consolidated financial statements comprise the results of IQE plc (the Company) and its subsidiary undertakings, together with the Group's share of the results of its associates and joint ventures.

Subsidiaries

Subsidiaries are all entities over which the Group has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are fully consolidated from the date on which control is transferred to the Group and are de-consolidated from the date that control ceases.

Inter-company transactions, balances and unrealised gains or losses on transactions between Group companies are eliminated and accounting policies of subsidiaries have been changed where necessary to ensure consistency with the policies adopted by the Group.

Joint ventures

The Group applies IFRS 11 to all joint arrangements. Under IFRS 11 investments in joint arrangements are classified as either joint operations or joint ventures depending on the contractual rights and obligations of each investor. We have assessed the nature of our joint arrangements and determined them to be joint ventures. Joint ventures are accounted for using the equity method.

Under the equity method of accounting, interests in joint ventures are initially recognised at cost and adjusted thereafter to recognise the Group's share of the post-acquisition profits or losses and movements in other comprehensive income.

Gains by the Group on transactions with joint ventures are eliminated against the carrying value of the Group's interest in its joint ventures to the extent that the gain does not exceed the carrying amount. In circumstances where a gain exceeds the carrying amount the Group has made an accounting policy choice to recognise the gain in the comprehensive income statement, subject to an assessment of recoverability of value from the joint venture rather than recognising the gain as deferred income in the consolidated balance sheet.

When the Group's share of losses in a joint venture equals or exceeds its interests in the joint ventures (which includes any long term interests that, in substance, form part of the Group's net investment in the joint ventures), the Group does not recognise further losses, unless it has incurred obligations or made payments on behalf of the joint ventures. Unrealised gains on transactions between the Group and its joint ventures are eliminated to the extent of the Group's interest in the joint ventures. Unrealised losses are also eliminated unless the transaction provides evidence of an impairment of the asset transferred. Accounting policies of the joint ventures have been changed where necessary to ensure consistency with the policies adopted by the Group.

Business combinations
The acquisition of subsidiaries is accounted for using the purchase method. The cost of an acquisition is measured at the fair value of the consideration. The acquired identifiable assets, liabilities and contingent liabilities are recognised at their fair value at the date of acquisition.

Where the fair values of contingent deferred consideration, assets and liabilities acquired are initially recognised on a provisional basis, these are reassessed during the 12 month period following the date of the business combination. Adjustments to the fair values as at the date of acquisition that result from new information that existed at the date of acquisition, which if known at the time would have resulted in a different amount being recognised within this 'measurement period' are recorded, with any net impact being added to or deducted from the goodwill recognised. Such adjustments are recognised in both the current period and restated comparative period balance sheets as if the final fair values had been used in the initial recognition of the acquisition. Subsequent to the measurement period, any adjustments to the recorded fair value of contingent deferred consideration are taken through the income statement as an exceptional income or expense.

The Group recognises any non-controlling interest on an acquisition-by-acquisition basis, either at fair value or at the non-controlling interest's proportionate share of the recognised amounts of the acquiree's identifiable net assets.

Acquisition related costs are expensed as incurred.

2.5 Intangible assets

a) Goodwill
Goodwill arising on an acquisition is recognised as an asset and initially measured at cost, being the excess of the fair value of the consideration over the fair value of the identifiable assets, liabilities and contingent liabilities acquired.

Goodwill is not amortised but is reviewed for potential impairment at least annually or more frequently if events or circumstances indicate a potential impairment. For the purpose of impairment testing, goodwill is allocated to each of the Cash Generating Units to which is relates. Any impairment identified is immediately charged to the Consolidated Income Statement. Subsequent reversals of impairment losses for goodwill are not recognised.

b) Patents, trademarks and licences
Separately acquired patents, trademarks and licences are shown at historical cost. Patents, trademarks and licences acquired in a business combination are recognised at fair value at the acquisition date. Patents, trademarks and licences have a finite useful life and are carried at cost less accumulated amortisation.

Amortisation is calculated using the straight-line method to allocate the cost of the assets over their estimated useful lives of 10 to 15 years. The carrying value of patents, trademarks and licences is reviewed for potential impairment if events or circumstances indicate a potential impairment. Any impairment identified is immediately charged to the Consolidated Income Statement.

c) Development costs
Expenditure incurred that is directly attributable to the development of new or substantially improved products or processes is recognised as an intangible asset when the following criteria are met:

- the product or process is intended for use or sale;
- the development is technically feasible to complete;
- there is an ability to use or sell the product or process;
- it can be demonstrated how the product or process will generate probable future economic benefits;
- there are adequate technical, financial and other resources to complete the development; and
- the development expenditure can be reliably measured.

Directly attributable costs refers to the materials consumed; the directly attributable labour; and the directly attributable overheads incurred in the development activity. General operating costs, administration costs and selling costs do not form part of directly attributable costs.

All research and other development costs are expensed as incurred.

Capitalised development costs are amortised in-line with the expected production volume profile over the period during which the economic benefits are expected to be received, which typically range between 3 and 8 years. The estimated remaining useful lives of development costs are reviewed at least on an annual basis. Amortisation commences once the project is completed and the development has been released into production.

The carrying value of capitalised development costs is reviewed for potential impairment if events or circumstances indicate a potential impairment. Any impairment identified is immediately charged to the Consolidated Income Statement.

d) Software
Directly attributable costs incurred in the development of bespoke software for the Group's own use are capitalised and amortised on a straight line basis over the expected useful life of the software, which typically range between 3 and 10 years.

The carrying value of capitalised software costs is reviewed for potential impairment if events or circumstances indicate a potential impairment. Any impairment identified is immediately charged to the Consolidated Income Statement.

The costs of maintaining internally developed software and annual license fees paid to utilise third party software are expensed as incurred.

e) Other intangibles recognised on acquisition
Other intangible assets which form part of the identifiable net assets of an acquired business are recognised at their fair value and amortised on a systematic basis over their useful economic life which is up to 7 years.

This includes customer contracts, the fair value of which has been evaluated using the multi period excess earnings method "MEEM". The MEEM model valuation was cross checked to the cost of product development and qualification to which the contract relates.

The carrying value of other intangible assets is reviewed for potential impairment if events or circumstances indicate a potential impairment. Any impairment identified is immediately charged to the Consolidated Income Statement.

2.6 Property, plant and equipment
Property, plant and equipment is stated at cost less accumulated depreciation and any provision for impairment. Cost comprises all costs that are directly attributable to bringing the asset into working condition for its intended use. Depreciation is calculated to write down the cost of property, plant and equipment to its residual value on a straight-line basis over the following estimated useful economic lives:

Freehold buildings	15 to 25 years
Short leasehold improvements	5 to 27 years
Plant and machinery	5 to 15 years
Fixtures and fittings	3 to 5 years

No depreciation is provided on land or assets yet to be brought into use. Depreciation is charged to cost of sales and selling and general administration expenses in the income statement.

Costs incurred after initial recognition are included in the assets' carrying amounts or recognised as a separate asset as appropriate only when it is probable that future economic benefits associated with them will flow to the Group and the cost of the item can be measured reliably. The carrying amount of the replaced part is derecognised. All other repairs and maintenance are charged to the income statement during the financial year in which they are incurred.

Gains and losses on disposals are determined by comparing the proceeds with the carrying amount and are recognised within 'profit/loss on disposal of property, plant and equipment' in the income statement.

The assets residual values and useful economic lives are reviewed, and adjusted if appropriate, at the end of each reporting period. A review was completed during 2018 which resulted in no material changes to asset residual values and useful economic lives (2017: no material changes). The carrying value of property, plant and equipment is reviewed for potential impairment if events or circumstances indicate a potential impairment. Any impairment identified is immediately charged to the Consolidated Income Statement.

2.7 Impairment of non-financial assets
Intangible assets that have an indefinite useful life or intangible assets not ready to use are not subject to amortisation and are reviewed for potential impairment at least annually or more frequently if events or circumstances indicate a potential impairment. Assets that are subject to amortisation are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value (less disposal costs) and value in use.

Value in use is based on the present value of the future cash flows relating to the asset, discounted at the Group's weighted average cost of capital. For the purpose of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (Cash Generating Units).

2.8 Inventories
Inventories are stated at the lower of cost and net realisable value. Cost is determined using the first-in, first-out method. Cost comprises direct materials and, where applicable, direct labour costs and attributable overheads that have been incurred in bringing the inventories to their present location and condition based on normal operating capacity. Net realisable value is the estimated selling price in the ordinary course of business, less applicable selling expenses.

2.9 Trade receivables
Trade receivables are amounts due from customers for merchandise sold or services performed in the ordinary course of business. If collection is expected in one year or less (or in the normal operating cycle of the business if longer), they are classified as current assets. If not, they are presented as non-current assets.

Trade receivables are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method, less provision for impairment.

2.10 Cash and cash equivalents
In the consolidated statement of cash flows, cash and cash equivalents includes cash in hand, deposits held at call with banks, other short-term highly liquid investments with original maturities of three months or less and bank overdrafts. In the consolidated and company balance sheets bank overdrafts are presented within cash and cash equivalents as Group treasury arrangements are pooled by territory.

2.11 Preference share debt instruments
Preference share financial assets are debt instruments due from a related party (see note 30). Debt instruments are initially recognised at fair value and subsequently measured at amortised cost on the basis that the financial asset is held with the objective of collecting the contractual cash flows and the contractual terms of the instrument give rise to cash flows that are solely payments of principal and interest on the principal amount outstanding.

2.12 Financial assets

The Group classifies its financial assets at amortised cost. The classification depends on the purpose for which the financial assets were acquired and the classification is determined at the date of initial recognition. Amortised cost financial assets are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They are included in current assets, except for maturities greater than 12 months after the reporting period where the item is classified as a non-current asset. The Group's amortised cost financial assets comprise trade and other receivables (note 2.9), cash and cash equivalents (note 2.10) and preference share debt instruments (note 2.11).

Financial assets are recognised on the Group's balance sheet when the Group becomes a party to the contractual provisions of the financial instrument and are derecognised when the rights to receive cash flows have expired or have been transferred and the Group has transferred substantially all the risks and rewards of ownership.

Financial assets are measured at amortised cost using the effective interest method. Amortised cost is reduced by impairment losses. Evidence of impairment may include indications that the debtor is experiencing significant financial difficulty, default or delinquency in payment and can include situations where observable data indicates that there is a measurable decrease in the estimated future cash flows, such as changes in arrears or economic conditions that correlate with defaults. Trade and other receivables do not carry interest and are stated at their nominal value as reduced by appropriate allowances for estimated irrecoverable amounts. Cash and cash equivalent comprise cash in hand. Debt instruments, represented by preference share debt are held at amortised cost less provision for impairment.

2.13 Financial liabilities

Financial liabilities and equity instruments are classified according to the substance of the contractual arrangements entered into. An equity instrument is any contract that evidences a residual interest in the assets of the Group after deducting all of its liabilities. Financial liabilities are non-derivative financial liabilities with fixed or determinable payments and they are included in current liabilities, except for maturities greater than 12 months after the reporting period where the item is classified as a non-current liability. The Group's financial liabilities comprise trade and other payables (note 2.14), borrowings (note 2.15) and finance leases (note 2.17) in the balance sheet.

2.14 Trade payables

Trade payables are obligations to pay for goods or services that have been acquired in the ordinary course of business from suppliers. Trade payables are classified as current liabilities if payment is due within one year or less (or in the normal operating cycle of the business if longer). If not, they are presented as non-current liabilities. Trade payables are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method.

2.15 Borrowings

Borrowings are recognised initially at fair value, net of transaction costs incurred. Borrowings are subsequently carried at amortised cost using the effective interest method.

2.16 Borrowing costs

General and specific borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that take a substantial period of time to get ready for their intended use, are added to the cost of those assets, until such time as the assets are substantially ready for their intended use. All other borrowing costs are recognised in profit or loss in the period in which they are incurred.

2.17 Leases

Leases which transfer substantially all the risks and rewards of ownership of an asset are treated as a finance lease. Assets held under finance leases are capitalised at their fair value at the inception of the lease and depreciated over the estimated useful economic life of the asset or lease term if shorter. The finance charges are allocated to the Consolidated Income Statement in proportion to the capital amount outstanding.

All other leases are classified as operating leases. Operating lease rentals (net of any incentives received from the lessor) are charged to the Consolidated Income Statement in equal annual amounts over the lease term.

2.18 Government grants

Government grants are recognised at fair value when there is reasonable assurance that the Group has complied with the conditions attaching to them and the grants will be received. Grants related to purchase of assets are treated as deferred income and allocated to the income statement over the useful lives of the related assets while grants related to expenses are treated as other income in the income statement.

2.19 Share capital and other reserves

Ordinary shares are classified as equity. Incremental costs directly attributable to the issue of new ordinary shares or options are shown in equity as a deduction, net of tax, from the proceeds.

Other reserves relates to share based payment transactions (see note 2.24).

2.20 Provisions

Provisions for onerous leases and restructuring costs are recognised when the Group has a present legal or constructive obligation as a result of a past event, it is probable that an outflow of resources will be required to settle the obligation and the amount has been reliably estimated. Restructuring provisions comprise site closure costs and employee termination payments. Provisions are not recognised for future operating losses.

Provisions are measured at the present value of the expenditures expected to be required to settle the obligation using a pre-tax rate that reflects the time value of money and the risks specific to the obligation.

Where a leasehold property, or part thereof, is vacant or sub-let under terms such that the rental income is insufficient to meet all outgoings, provision is made for the anticipated future shortfall up to termination of the lease, or the termination payment, if smaller.

2.21 Revenue recognition

Revenue represents the transaction price specified in a contract with a customer for goods, services and intellectual property licenses provided in the ordinary course of business net of value added and other sales related taxes.

Standard Customer Products

Revenue is recognised when the goods are delivered and have been accepted by customers at their premises. For contracts that permit the customer to return an item, revenue is recognised to the extent that it is highly probable that a significant reversal in the amount of revenue recognised will not occur.

The amount of revenue recognised is adjusted for expected returns, which are estimated based on historical data for each specific type of product with a refund liability recognised as part of trade receivables. The Group reviews its estimate of expected returns at each reporting date and updates the amounts of any liability accordingly.

A receivable is recognised when the goods are delivered, since this is the point in time that the consideration is unconditional because only the passage of time is required before the payment is due.

Bespoke Customer Products

Revenue is recognised for bespoke customer products where the Group has a guaranteed contractual right to payment on an over time basis prior to the delivery of goods to the customers' premises using the cost to cost method.

The amount of revenue recognised is adjusted for expected returns, which are estimated based on historical data for each specific type of product with a refund liability recognised as part of trade receivables. The Group reviews its estimate of expected returns at each reporting date and updates the amounts of any liability accordingly.

The Group operates supplier managed inventory arrangements for certain global customers where the Group is responsible for ensuring that contractually agreed levels of inventory are maintained at specified locations. The Group has a guaranteed contractual right to payment for the bespoke customer products manufactured under these arrangements with revenue recognised on an over time basis using the cost to cost method.

Contract assets are recognised for bespoke customer products prior to billing, which typically occurs when the goods are delivered to the customer or for supplier managed inventory arrangements from the earlier of a specified backstop date following delivery or when the product is drawn from inventory by the customer.

Intellectual Property Licenses

Intellectual property license income relates to the sale of finite and perpetual period licenses.

Revenue is recognised for intellectual property licenses with a right to use over a finite period when control of the license is transferred to the customer in accordance with the terms of the relevant licensing agreement and collection of the resulting receivable is reasonably assured.

Revenue is recognised for perpetual intellectual property licenses with a right to use when a signed agreement or other persuasive evidence of an arrangement exists, the intellectual property has been delivered, the license fee is fixed or determinable and collection of the resulting receivable is reasonably assured.

2.22 Segmental reporting

Operating segments are reported in a manner consistent with the internal reporting provided to the Executive Directors, who oversee the allocation of resources and the assessment of operating segment performance.

A business segment is a group of assets and operations engaged in providing a product or service that are subject to risks and returns that are different from those of other business segments.

A geographical segment is engaged in providing products or services within a particular economic environment that are subject to risks and returns that are different from those of components operating in other economic environments.

2.23 Pension costs

The Group operates defined contribution pension schemes. A defined contribution plan is a pension plan under which the Group pays fixed contributions into a separate entity. Contributions are charged in the Consolidated Income Statement as they become payable in accordance with the rules of the scheme. The Group has no further obligations once the contributions have been made.

2.24 Share based payments

The Group operates a number of equity-settled share based compensation plans under which the Group receives services from employees as consideration for equity instruments in IQE plc. The fair value of the employee services received in exchange for the grant of the options is recognised as an expense in the consolidated income statement and as a credit in other reserves in the consolidated statement of changes in equity except for the social security element of the award which is treated as cash settled with the liability recognised in other taxation and social security within trade and other payables in the consolidated balance sheet. The total amount to be expensed is determined by reference to the fair value of the options granted including any market performance conditions (for example, an entity's share price); excluding the impact of any service and non-market performance vesting conditions (for example, profitability, sales growth targets and remaining an employee of the entity over a specified time period) and including the impact of any non-vesting conditions (for example, the requirement for employees to save or hold shares for a specific period of time).

Non-market performance and service conditions are included in assumptions about the number of options that are expected to vest. The total expense is recognised over the vesting period, which is the period over which all of the specified vesting conditions are to be satisfied. At the end of each reporting period, the Group revises its estimates of the number of options that are expected to vest based on the non-market vesting conditions. It recognises the impact of the revision to original estimates, if any, in the consolidated income statement, with a corresponding adjustment to equity.

When the options are exercised, the company issues new shares. The proceeds received net of any directly attributable transaction costs are credited to share capital (nominal value) and the balance to share premium. In the company's own financial statements, the grant of share options to the employees of subsidiary undertakings is treated as a capital contribution. Specifically, the fair value of employee services received (measured at the date of grant) is recognised over the vesting period as an increase to investment in subsidiary undertakings, with a corresponding credit to equity in the parent entity financial statements.

The social security contributions payable in connection with the grant of the share options is considered an integral part of the grant itself, and the charge will be treated as a cash-settled transaction.

2.25 Foreign currency

Items included in the financial statements of each subsidiary are measured using the currency of the primary economic environment in which the subsidiary operates ("the functional currency"). The consolidated financial statements are presented in sterling, which is the Group's presentational currency.

Foreign currency transactions are translated into the subsidiaries functional currency at the rates of exchange ruling at the date of the transaction, or at the forward currency hedged rate where appropriate. Monetary assets and liabilities in foreign currencies are translated into the subsidiaries functional currency at the rates ruling at the balance sheet date. All exchange differences are taken to the income statement.

The balance sheets of overseas subsidiaries are translated into sterling at the closing rates of exchange at the balance sheet date, whilst the income statements are translated into sterling at the average rate for the period. The resulting translation differences are taken directly to reserves.

Foreign exchange gains and losses on the retranslation of foreign currency borrowings that are used to finance overseas operations are accounted for on the 'net investment' basis and are recorded directly in reserves provided that the hedge is effective.

2.26 Current and deferred tax

Income tax for the year comprises current and deferred tax. Tax is recognised in the income statement, except to the extent that it relates to items recognised in other comprehensive income or directly in equity, respectively.

Current tax is the expected tax payable on the taxable income for the year using rates substantially enacted at the balance sheet date, and any adjustments to tax payable in respect of prior years.

Amounts receivable from tax authorities in relation to research and development tax relief under the RDEC scheme are recognised within operating profit in the period in which the research and development costs are treated as an expense. Where amounts are outstanding at the year end and have not been formally agreed, an appropriate estimate of the amount is included within other receivables.

Deferred tax is provided in full on temporary differences between the carrying amounts of assets and liabilities in the financial statements and the amounts used for taxation purposes. Deferred tax is calculated at the tax rates that have been enacted or substantially enacted at the balance sheet date.

Deferred tax assets are only recognised to the extent that it is probable that future taxable profits will be available against which deductible temporary differences can be utilised. Deferred tax liabilities are recognised for taxable temporary differences, unless specifically exempt. Deferred tax assets and liabilities are offset when there is a legally enforceable right to set off current taxation assets against current taxation liabilities and it is the intention to settle these on a net basis.

2.27 Investment in subsidiaries

Investments in subsidiaries are held at cost of investment less provision for impairment in the parent company financial statements.

2.28 Other equity investments

Other equity investments are held at cost less provision for impairment in both the parent company and Group financial statements on the basis that the Group (and Company) does not have the ability to exert significant influence or control over the strategic and operating activities of the other equity investments.

2.29 Alternative performance measures

Alternative performance measures are disclosed separately in the financial statements after a number of adjusted exceptional, non-cash, one-off or non-operational items where it is deemed necessary by the Directors to do so to provide further understanding of the financial performance of the Group. Adjusted items are material items of income or expense that have been shown separately due to the significance of their nature or amount. The tax impact of adjusted items is calculated applying the relevant enacted tax rate for each adjusted item. Details of the adjusted items are included in note 5.

2.30 Change in accounting policy - IFRS 15 'Revenue from contracts with customers'

IFRS15 'Revenue from contracts with customers' deals with revenue recognition and establishes principles for reporting useful information to users of financial statements about the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. Revenue is recognised when a customer obtains control of a good or service and thus has the ability to direct the use and obtain the benefits from the good or service.

The standard replaces IAS 18 'Revenue' and IAS 11 'Construction Contracts', and related interpretations and is effective for annual periods beginning on or after 1 January 2018.

The Group has adopted IFRS 15 'Revenue from contracts with customers' using the retrospective method with the practical expedient for completed contracts. The comparative financial information contained in the financial statements for the twelve months ended 31 December 2017 has been restated. Implementation of IFRS 15, 'Revenue from contracts with customers' has resulted in changes in the recognition of revenue in circumstances where the Group produces bespoke customer products with a guaranteed contractual right to payment. In these situations revenue is recognised on an over time basis earlier in the manufacturing process than was historically the case where revenue was typically recognised on delivery and acceptance of the goods by the customer.

The comparative financial information as at and for the twelve months ended 31 December 2017 has been restated to reflect the impact of this change in accounting policy. Brought forward retained earnings at 1 January 2017 in the balance sheet and statement of changes in equity have been restated by £191,000 and brought forward other reserves at 1 January 2017 in the balance sheet and statement of changes in equity have been restated for the impact of foreign exchange by £4,000. Revenue in the income statement for the twelve month period has been restated to include a net credit of £73,000 and cost of sales has been restated to include an additional net credit of £102,000 with an associated reduction in inventory of £663,000, increase in contract assets of £1,029,000 and foreign exchange impact in other reserves of £4,000 recorded in the balance sheet.

The adjustment has increased net assets at 31 December 2017 by £366,000 and is summarised in the tables below.

Impact on the condensed consolidated Income statement for the 12 months ended 31 December 2017	Reported	Opening IFRS 15	Closing IFRS 15	Restated
	31-Dec	31-Dec	31-Dec	31-Dec
	2017	2017	2017	2017
	£'000	£'000	£'000	£'000
Revenue	154,480	(956)	1,029	154,553
Cost of sales	(115,857)	765	(663)	(115,755)
Gross profit	38,623	(191)	366	38,798
Operating profit	17,019	(191)	366	17,194
Profit before tax	14,920	(191)	366	15,095
Income tax expense	(435)	-	-	(435)
Profit for the period	14,485	(191)	366	14,660

Impact on the condensed consolidated balance sheet as at 31 December 2017	Reported	Opening IFRS 15	Closing IFRS 15	Restated
	31-Dec	31-Dec	31-Dec	31-Dec
	2017	2017	2017	2017
	£'000	£'000	£'000	£'000
Non-current assets	224,836	-	-	224,836
Inventories	33,707	-	(663)	33,044
Trade and other receivables	32,240	-	1,029	33,269
Cash and cash equivalents	45,612	-	-	45,612
Total assets	336,395	-	366	336,761
Current liabilities	(44,916)	-	-	(44,916)
Non-current liabilities	(666)	-	-	(666)
Total liabilities	(45,582)	-	-	(45,582)
Net assets	**290,813**	**-**	**366**	**291,179**
Equity				
Retained earnings at 1 January	83,582	191	**-**	83,773
Profit for the period	14,385	(191)	366	14,560
Retained earnings at 31 December	97,967	-	366	98,333
Other reserves	192,846	-	-	192,846
Total equity	**290,813**	**-**	**366**	**291,179**

Impact on the opening condensed consolidated balance sheet as at 31 December 2016	Restated Reported	Closing IFRS 15	Restated
	31-Dec	31-Dec	31-Dec
	2016	2016	2016
	£'000	£'000	£'000
Non-current assets	214,043	-	214,043
Inventories	28,498	(778)	27,720
Trade and other receivables	30,868	973	31,841
Cash and cash equivalents	4,957	-	4,957
Total assets	278,366	195	278,561
Current liabilities	(51,522)	-	(51,522)
Non-current liabilities	(39,021)	-	(39,021)
Total liabilities	(90,543)	-	(90,543)
Net assets	**187,823**	**195**	**188,018**
Equity			
Retained earnings at 1 January	65,723	-	65,723
Profit for the period	17,859	191	18,050
Retained earnings at 31 December	83,582	191	83,773
Other reserves	104,241	4	104,245
Total equity	**187,823**	195	**188,018**

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3. Critical accounting judgements and key sources of estimation uncertainty

The Group's principal accounting policies are described in note 2. The application of these policies necessitates the use of estimates and judgements in a number of areas. Accordingly, the actual amounts may differ from these estimates. The main areas involving significant judgement and estimation are set out below:

(a) Critical accounting judgements in applying the Group's accounting policies

Joint Ventures - Evaluation of rights, levels of control and influence

The determination of the level of influence or control that the Group has over a business is a mix of contractually defined and subjective factors that can be critical to the appropriate accounting treatment of an entity in the Group's consolidated financial statements. Control or influence is achieved through Board representation and by obtaining rights of veto over significant decisions relevant to the activities of the entity.

Compound Semiconductor Centre Limited ('CSC')

On 9 July 2015 the Group entered into a joint venture agreement with Cardiff University to create the CSC in the United Kingdom. The commercial purpose of the CSC is the research, development and manufacture by MOVPE of advanced compound semiconductor materials.

The manufacturing and technical capability of the CSC was established with the Group contributing fixed assets, transferring employees (including the current Managing Director of the CSC) and licensing intellectual property with Cardiff University contributing cash. The Group also entered into an agreement with CSC that conveyed to the Group the right to use the CSC's assets, establishing the Group as the CSC's cornerstone customer during the early stages of the development of the CSC's business (see Note 29).

The Shareholder Agreement establishes that the CSC is jointly controlled by the shareholders. Key decisions, defined as part of contractually agreed Board reserved matters, require approval from directors representing each joint venture partner who have equal Board representation and voting rights.

The Group does not control the CSC such that its 50% equity investment in the joint venture is accounted for using the equity method in accordance with the accounting policies set out in note 2.

Compound Semiconductor Development Centre Private Limited ('CSDC')

On 23 March 2015 the Group entered into a joint venture agreement with WIN Semiconductors Corp ('WIN') and Nangyang Technological University and four representatives of the University ('NTU') to create the CSDC in Singapore. The commercial purpose of the CSDC is the research, development and manufacture by MBE of advanced compound semiconductor materials.

The manufacturing and technical capability of the CSDC was established with the Group transferring employees (including the current Managing Director of the CSDC) and licensing the use of intellectual property and plant and equipment. NTU contributed technical expertise whilst WIN, via the contractual agreements entered into by the parties committed to minimum purchase guarantees, establishing WIN as the CSDC's cornerstone customer during the early stages of the development of the CSDC's business (see Note 29).

The Shareholder Agreement establishes that the CSDC is jointly controlled by the shareholders. Key decisions, defined as part of contractually agreed Board reserved matters, require approval from directors representing each joint venture partner who have equal Board representation and voting rights.

The Group does not control the CSDC such that its 51% equity investment in the joint venture is accounted for using the equity method in accordance with the accounting policies set out in note 2.

Joint Ventures – Classification of preference share debt

The Group classifies its preference share financial assets due from the CSC as debt instruments rather than treating the preference shares as part of the Group's net investment in the CSC on the basis that the preference share funding that has been provided is not deemed to be long term in nature or tantamount to equity.

Preference share funding was provided to the CSC by the joint venture partners to accelerate the development and growth of the CSC's business. The contractual arrangements between the joint venture partners and the CSC require that any surplus cash generated by the CSC as the business develops is used to redeem the preference share funding provided by the joint venture partners, something that the CSC business plan contained within the Joint Venture Shareholder Agreement forecasts.

Joint Ventures – Right of use asset

The Group established the CSC on 9 July 2015 with its joint venture partner as a centre of excellence for the development and commercialisation of advanced compound semiconductor wafer products in Europe.

On establishment of the joint venture the Group contributed assets valued at £12,000,000 as part of its initial investment and entered into an agreement with the joint venture that conveys to the Group the right to use the assets of the joint venture for a minimum five year period. This agreement that contains rights attaching to the use of the joint venture's assets has been treated as an operating lease in accordance with IFRIC 4 'Determining whether an arrangement contains a lease' in the application of the Group's accounting policies. The requirements of IAS17 have been considered in determining whether this lease should be classified as an operating lease or a finance lease, including consideration of the lease term which is not for the major part of the expected useful economic life of the assets and the present value of the minimum lease payments which does not represent substantially all of the fair value of the assets. On this basis the Group has concluded that it has an operating lease.

(b) Critical accounting estimates and key sources of estimation uncertainty

3.1 Useful economic lives and residual values of property, plant and equipment

The useful economic life and residual value of property, plant and equipment is reviewed annually. The useful economic life and residual value of an asset is assessed by considering the expected usage, estimated technical obsolescence, physical wear and tear and the operating environment in which the asset is located.

No adjustments have been made to the assessed useful economic lives or residual values of property, plant and equipment in the current year with the exception of certain property, plant and equipment that has been impaired as a result of the decision to close the Group's manufacturing site in New Jersey, USA (see note 5).

Differences between estimated useful economic lives and residual values of property, plant and equipment and actual results may have a material impact on the amount of the carrying values of the property, plant and equipment and future rates of depreciation.

The depreciation charge for property, plant and equipment in the current year was £6,773,000. If useful economic lives of the Group's significant epitaxial reactors, included within plant and machinery was reduced by 1 year across the whole portfolio of assets the impact on current year depreciation would be to increase the charge by £294,000 to £7,067,000. If residual values of the reactors were decreased by 10% across the whole portfolio of assets the impact on current year depreciation would be to increase the charge by £190,000 to £6,963,000.

3.2 Useful economic lives of development cost intangible assets

The periods of amortisation used for product and process development cost assets require judgements to be made on the estimated useful economic lives of the intangible assets to determine an appropriate rate of amortisation. Capitalised development costs are amortised in line with the expected production volume profile of the products to which they relate over the period during which economic benefits are expected to be received which is typically between 3 – 8 years.

The amortisation charge for development cost intangible assets in the current year is £4,702,000. If useful economic lives of development cost intangible assets were reduced by 1 year across the whole portfolio of assets the impact on current year amortisation would be to increase the charge by £747,000 to £5,449,000.

3.3 Impairment of preference share debt

The Group classifies its preference share financial assets as debt instruments.

The carrying value of the preference share financial assets are subject to review for impairment on an annual basis or if events or circumstances provide an indication that the carrying value may no longer be recoverable from future estimated cash flows.

The carrying value of the preference share debt due from CSC has been reviewed for impairment based upon a combination of the progress and milestones that CSC has achieved against its original business plan, current cash flow forecasts and the capacity for CSC to redeem the debt. In light of the progress that CSC has made against its original business plan, current cash flow forecasts and the assessed ability of CSC to redeem shareholder preference debt the Board has concluded that the amortised cost carrying value of the preference share debt is not impaired.

The CSC Board approved 2019 budget and CSC management's 2020 forecast have been used for the first two years of the impairment review. Growth rates assumed in the original business plan, adjusted to reflect the stage of development of CSC's business have been used for years three to five with a long term growth rate of 2% and a discount rate of 10% applied. If growth rates were restricted to the long term rate from year three no impairment would arise.

3.4 Deferred tax assets

Deferred tax assets are only recognised to the extent that it is probable that future taxable profits will be available against which deductible temporary differences can be utilised. This necessitates an assessment of future trading forecasts, capital expenditure and the utilisation of tax losses for each relevant tax jurisdiction where the Group operates.

The Group has recognised significant deferred income tax assets in relation to historical tax losses in its operations in the United Kingdom (£34,139,000) and United States of America (£87,910,000) which require judgement to determine the extent of the assets recoverability at each balance sheet date. The Group assesses recoverability of its deferred tax assets by reference to Board approved budgets and cash flow forecasts which are also used as the basis for the Group's impairment and going concern reviews (note 13).

If growth rates in the cash flow forecasts were restricted to the long term growth rate from year three onwards no impairment of deferred tax assets in either the United Kingdom or United States of America would arise.

3.5 Onerous lease provision

A provision for onerous leases was made in 2014 following the restructuring of the Group's operations in Singapore. The provision for unused and unlet space at the manufacturing site has been reassessed in the current year and extended to the end of the lease obligation in 2022.

The extension of the onerous lease provision to the end of the lease obligation has resulted in the Group incurring an additional exceptional charge of £4,404,000 in the current year (see note 5).

3.6 Share based payments

Share based payment charges associated with long term incentive plans are calculated taking account of an assessment of the achievability of relevant performance conditions. The share based payment charge for long term incentive awards would be £2,184,000 greater in 2018 if it was assumed that all performance criteria for existing awards would be met.

3.7 Adjustments to Profit

Alternative performance measures are disclosed separately in the financial statements after a number of adjusted exceptional, non-cash, one-off or non-operational items where it is deemed necessary by the Director's to do so to provide further understanding of the financial performance of the Group. Details of the adjusted items are included in note 5.

4. Segmental analysis

The Chief Operating Decision Maker is defined as the executive directors. The executive directors consider that the Wireless, Photonics, Infra-red and CMOS++ markets are the Group's primary reporting segments. The executive directors assess the performance of these operating segments based on their adjusted operating profit.

Further detail on the nature of the segments is provided in the Strategic Report.

Revenue	2018 £'000	Restated 2017 £'000
Wireless	97,754	91,666
Photonics	43,819	47,676
Infra-Red	13,096	11,955
CMOS++	1,622	1,382
Total Segment Revenue	**156,291**	**152,679**
License income from sales to joint ventures	-	1,874
Total Revenue	**156,291**	**154,553**
Adjusted operating profit		
Wireless	11,896	13,736
Photonics	11,495	18,355
Infra-Red	3,396	3,259
CMOS++	(1,295)	(1,677)
Central corporate costs	(9,452)	(9,013)
Segment adjusted operating profit	**16,040**	**24,660**
Profit from license income from sales to joint ventures	-	1,874
Adjusted operating profit	**16,040**	**26,534**
Adjusted items (see note 5)	(7,380)	(9,340)
Operating profit	**8,660**	**17,194**
Share of losses of joint venture accounted for using the equity method	(2,000)	-
Finance income / (costs)	87	(2,099)
Profit before tax	**6,747**	**15,095**

The comparative financial information for the year ended 31 December 2017 has been restated. Details of the restatement are set out in note 2.30.

Finance costs are not allocated to the segments because treasury is managed centrally.

Measures of total assets and liabilities for each reportable segment are not reported to the chief operating decision maker and therefore have not been disclosed.

In the years set out below, certain customers accounted for greater than 10% of the Group's total revenues:

Customer	Segment	2018 £'000	2018 % revenue	Restated 2017 £'000	Restated 2017 % revenue
Customer 1	Wireless	33,806	22%	27,441	18%
Customer 2	Wireless	22,727	15%	23,702	15%
Customer 3	Photonics	16,438	11%	23,410	15%

There are no customers in the Infra-Red or CMOS++ segments that accounted for greater than 10% of the Group's total revenues.

Geographical information

Revenue by location of customer	2018 £'000	Restated 2017 £'000
Americas	**96,101**	**95,107**
United States of America	95,851	95,044
Rest of Americas	250	63
Europe, Middle East & Africa (EMEA)	**14,694**	**14,332**
France	323	498
Germany	6,692	6,697
Israel	3,106	1,843
United Kingdom	2,850	2,570
Rest of EMEA	1,723	2,724
Asia Pacific	**45,496**	**45,114**
People's Republic of China	4,033	1,246
Japan	1,686	5,057
Taiwan	32,802	31,400
Rest of Asia Pacific	6,975	7,411
Total revenue	**156,291**	**154,553**

The comparative financial information for the year ended 31 December 2017 has been restated. Details of the restatement are set out in note 2.30.

Non-current assets by location

	Property, plant and equipment		Intangible assets	
By location	2018 £'000	2017 £'000	2018 £'000	2017 £'000
USA	49,051	50,025	79,042	73,528
Singapore	7,642	7,704	10,158	9,761
Taiwan	16,951	13,100	3,748	2,579
UK	50,801	19,971	28,827	22,645
	124,445	**90,800**	**121,775**	**108,513**

5. Adjusted profit measures

The Group's results report certain financial measures after a number of adjusted items that are not defined or recognised under IFRS including adjusted operating profit, adjusted profit before income tax and adjusted earnings per share. The Directors believe that the adjusted profit measures provide a more useful comparison of business trends and performance and allow management and other stakeholders to better compare the performance of the Group between the current and prior year, excluding the effects of certain non-cash charges and one-off or non-operational items. The Group uses these adjusted profit measures for internal planning, budgeting, reporting and assessment of the performance of the business.

The tables below show the adjustments made to arrive at the adjusted profit measures and the impact on the Group's reported financial performance.

(All figures £'000s)	Adjusted Results	Adjusted Items	2018 Reported Results	Restated Adjusted Results	Adjusted Items	Restated 2017 Reported Results
Revenue	156,291	-	**156,291**	154,553	**-**	**154,553**
Cost of sales	(119,536)	696	(118,840)	(110,738)	(5,017)	(115,755)
Gross profit	36,755	696	**37,451**	43,815	(5,017)	**38,798**
Other income	**-**	1,097	1,097	-	-	-
SG&A	(20,715)	(9,173)	(29,888)	(17,259)	(4,323)	(21,582)
Profit on disposal of PPE	-	-	-	(22)	-	(22)
Operating profit	16,040	(7,380)	**8,660**	26,534	(9,340)	**17,194**
Share of JV losses	(2,000)	-	(2,000)	-	-	-
Finance costs	(66)	153	87	(2,019)	(80)	(2,099)
Profit before tax	13,974	(7,227)	**6,747**	24,515	(9,420)	**15,095**
Taxation	(2,745)	(2,813)	(5,558)	483	(918)	(435)
Profit for the period	11,229	(10,040)	**1,189**	24,998	(10,338)	**14,660**

(All figures £'000s)	Pre tax Adjustment	Tax Impact	2018 Adjusted Results	Pre tax Adjustment	Tax Impact	2017 Adjusted Results
Share based payments	1,044	(3,607)	**(2,563)**	(7,526)	5,439	**(2,087)**
Amortisation of acquired intangibles	(518)	109	**(409)**	(1,429)	563	**(866)**
Restructuring	(3,337)	701	**(2,636)**	-	-	**-**
Insurance income	1,097	(197)	**900**	-	-	**-**
Patent dispute legal fees	(1,262)	227	**(1,035)**	-	-	**-**
Onerous property lease	(4,404)	-	**(4,404)**	-	-	**-**
Discounting	153	(46)	**107**	(80)	14	**(66)**
Non cash rent charge	-	-	**-**	(385)	69	**(316)**
Change in US tax rate	-	-	**-**	-	(7,003)	**(7,003)**
Total	(7,227)	(2,813)	**(10,040)**	(9,420)	(918)	**(10,338)**

The comparative financial information for the year ended 31 December 2017 has been restated. Details of the restatement are set out in note 2.30.

The nature of the adjusted items is as follows:

- Share based payments – The credit (2017: charge) recorded in accordance with IFRS 2 'Share based payment', of which £696k (2017: £5,017k charge) has been classified within cost of sales in gross profit and £348k (2017: £2,509k charge) has been classified as selling, general and administrative expenses in operating profit. The charge is non-cash.
- Amortisation of acquired intangibles – The amortisation of customer contract intangible assets which arose in respect of fair value exercises associated with previous acquisitions. The charge of £518k (2017: £1,429k) has been classified as selling, general and administrative expenses within operating profit and is non-cash.

- Restructuring – The charge relates to the closure of the Group's manufacturing facility in New Jersey, USA and the transfer of the associated trade and assets to the Group's manufacturing facility in Massachusetts, USA. Cash costs, none of which have has been defrayed in 2018 total £1,134k and comprise severance and reactor decommissioning costs with non-cash costs of £2,203k relating to asset impairments. The charge has been classified as selling, general and administrative expenses within operating profit.
- Insurance income – The income relates to insurance proceeds received following the death of the Chief Financial Officer, Phillip Rasmussen, in April 2018. Obligations payable to Phillip Rasmussen's estate and fees associated with the recruitment of Phillip Rasmussen's successor totalling £1,037k (2017: £nil), of which £589k has been defrayed in 2018 have been netted off the gross insurance proceeds of £2,134k (2017: £nil). The net insurance proceeds have been classified as other income within operating profit.
- Patent dispute legal costs – The charge relates to legal fees incurred in respect of a patent dispute defence. Costs of £1,262k (2017: £nil), of which none has been defrayed in 2018 have been classified within selling, general and administrative expenses within operating profit.
- Onerous property lease - A provision for an onerous property lease was made in 2014 following the restructuring of the Group's operations in Singapore. The provision for unused and unlet space at the manufacturing site has been reassessed in the current year and extended to the end of the lease obligation in 2022.The extension of the onerous lease provision has resulted in a charge of £4,404k which has been classified within selling, general and administrative expenses within operating profit. Cash costs associated with the annual rental for the unused and unlet space total £1,539k.
- Discounting – This relates to the unwind of discounting on long term financial assets of £257k (2017: £235k) and the unwinding of discounting on long term liabilities of £104k (2017: £155k). Discounting is non-cash and has been classified as finance costs within profit before tax.
- Non-cash property rent charge – The charge associated with rent free periods on leased property (New foundry in Newport) classified as selling, general and administrative expenses within operating profit in the prior period (2017: £385k) has been included as part of the on-going commissioning cost of the foundry in 2018. The charge is non cash.
- Change in US tax rate – This refers to a deferred tax charge of £nil (2017: £7,003k) relating to the impact of the change in US Federal tax rates from 35% to 21% and the associated reduction in value of the Group's US deferred tax asset.

The cash impact of adjusted items in the consolidated cash flow statement represents the cash costs defrayed in 2018 in respect of net insurance proceeds (£1,545k income) and the annual rental associated with the onerous property lease provision (£1,539k payment).

Adjusted EBITDA (adjusted earnings before interest, tax, depreciation and amortisation) has been calculated as follows:

	2018 £'000	Restated 2017 £'000
Profit attributable to equity shareholders	966	14,560
Non-controlling interest	223	100
Finance (income) / costs	(87)	2,099
Tax	5,558	435
Depreciation of property, plant and equipment	6,773	5,637
Amortisation of intangible fixed assets	6,109	6,388
Loss on disposal of fixed assets	-	22
Share based payments	(1,044)	7,526
Adjusted Items	7,906	385
Restructuring	3,337	-
Insurance income	(1,097)	-
Patent dispute legal costs	1,262	-
Onerous property lease	4,404	-
Non cash property lease charge	-	385
Adjusted EBITDA	**26,404**	**37,152**

The comparative financial information for the year ended 31 December 2017 has been restated. Details of the restatement are set out in note 2.30.

6. Operating profit

	2018 £'000	2017 £'000
The operating profit is stated after charging/(crediting):		
Depreciation of property, plant and equipment	6,773	5,637
Amortisation of intangible assets	6,109	6,388
Services provided by auditors*	232	247
Operating lease rentals	8,799	8,715
Research and development	26	69
Exchange (losses) / gains	(77)	1,434
Share based payments	(1,044)	7,526
Cost of raw materials consumed	68,250	64,116
Loss on disposal of fixed assets	-	22
Adjusted items	7,906	385

Operating lease rentals includes the variable cash costs of production based on usage that are payable to the Group's joint venture, CSC, associated with the Group's right of use of the joint ventures assets (note 3 and 30).

*A schedule of services provided by the Group's auditors and related fees is disclosed in the Corporate Governance Report.

7. Employee costs

	2018 £'000	2017 £'000
Employee costs (including directors' remuneration)		
Wages and salaries	34,611	32,783
Social security costs	3,872	3,621
Other pension costs	1,576	1,286
Share based payments	(1,044)	7,526
	39,015	**45,216**

	2018 Number	2017 Number
Average number of employees (including directors)		
Manufacturing	423	400
Selling, general and administrative	233	191
	656	**591**

Directors' emoluments, share options and other long term incentive plan details, including details of all outstanding options and long term incentive awards and the value of director pension contributions paid are set out in the Remuneration Report on pages 64 to 78 where the relevant disclosures have been highlighted as audited.

Key management within the Group comprises the executive and non-executive directors, members of the management board and business unit leaders. Compensation to key management, including pensions of £158,000 (2017: £253,000), was £5,234,000 (2017: £4,997,000) and the credit for share-based payments was £2,292,000 (2017: £5,792,000 charge).

8. Finance income / (costs)

	2018 £'000	2017 £'000
Bank and other loans	(66)	(2,019)
Unwind of discount on long term balances	153	(80)
	87	**(2,099)**

9. Taxation

Income tax expense	2018 £'000	2017 £'000
Current tax on profits for the year	880	505
Total current tax charge	**880**	**505**
Origination and reversal of temporary differences	4,678	(70)
Total deferred tax charge/(credit)	**4,678**	**(70)**
Total tax charge	**5,558**	**435**

The tax on the Group's profit before tax differs from the theoretical amount that would arise from applying the standard rate of corporation tax in the UK of 19.00% (2017: 19.25%) as follows:

	2018 £'000	Restated 2017 £'000
Profit on ordinary activities before taxation	6,747	15,095
Tax charge at 19.00% thereon (2017: 19.25%)	(1,282)	(2,906)
Effects of :		
Expenses not deductible for tax purposes	(668)	(1,063)
Overseas tax rate differences	(800)	309
Recognition of previously unrecognised tax losses	-	3,957
Tax losses utilised for which no deferred tax asset was recognised	-	1,250
Share option schemes	(3,607)	5,439
Other deferred tax movements	75	(11)
Income not subject to tax	444	-
Pre-measurement of deferred tax – change in UK tax rate	280	(407)
Impact on deferred tax as a result of changes in tax rates	-	(7,003)
Total tax charge for the year	**(5,558)**	**(435)**

The share option schemes amount shown above represents the change in the expected tax impact on the exercise of options, principally reflecting the reduction in future corporation tax deductions associated with the decrease in share price and a reduction in the number of options where performance criteria are expected to be achieved.

Finance (No.2) Bill 2016, which was substantively enacted in September 2016, included legislation to reduce the main rate of corporation tax from 20% to 19% from 1 April 2017 with a further reduction to 17% from 1 April 2020. No further amendments to the main rate of corporation tax were announced as part of Finance (No.2) Bill 2017 or Finance (No.2) Bill 2018. Accordingly, the closing UK deferred tax asset in the financial statements has been recognised in accordance with the rate reductions enacted as part of the Finance (No.2) Bill 2016.

The US tax Reform Bill, H.R.1, which was substantively enacted on 22 December 2017, included legislation to reduce the main rate of US Federal tax from 35% to 21% from 1 January 2018. Accordingly, the closing US deferred tax asset in the financial statements has been recognised on this basis in 2017 and 2018. Deferred tax is measured at the tax rates that are expected to apply in the relevant territory in the period when the asset is realised or the liability is settled, based on tax rates and tax laws that have been substantively enacted at the balance sheet date.

Amounts recognised directly in equity	2018 £'000	2017 £'000
Aggregate current and deferred tax arising in the period and not recognised in net profit or loss or other comprehensive income but directly debited or credited to equity:		
Deferred tax: Share options	(437)	683
Total tax (charge) / credit to equity for the year	**(437)**	**683**

10. Deferred Taxation

Deferred tax asset	2018 £'000	2017 £'000
At 1 January	17,768	18,181
Income statement (charge)/credit recognised in the year	(4,678)	70
Tax (charge)/credit relating to components of other comprehensive income	(437)	683
Exchange differences	591	(1,166)
At 31 December	**13,244**	**17,768**

The current portion of the deferred tax asset is £4,835,000 (2017: £5,000,000) in relation to utilisation of tax losses. The movement in deferred tax assets and liabilities during the year, without taking into consideration the offsetting of balances within the same tax jurisdiction, is as follows:

Group

Deferred tax liabilities	Accelerated Capital Allowances £'000	Intangibles £'000	Total £'000
At 1 January 2017	**(10,693)**	**(7,848)**	**(18,541)**
Credited to income statement	3,228	3,098	6,326
Exchange differences	683	249	932
At 31 December 2017	**(6,782)**	**(4,501)**	**(11,283)**
Credited/(charged) to income statement	(2,218)	387	(1,831)
Exchange differences	(330)	(21)	(351)
At 31 December 2018	**(9,330)**	**(4,135)**	**(13,465)**

Deferred tax assets	Tax Losses £'000	Other £'000	Total £'000
At 1 January 2017	**33,410**	**3,312**	**36,722**
Credited/(charged) to income statement	(8,933)	2,677	(6,256)
Credited to equity	-	683	683
Exchange differences	(2,075)	(23)	(2,098)
At 31 December 2017	**22,402**	**6,649**	**29,051**
Credited/(charged) to income statement	1,114	(3,961)	(2,847)
Charged to equity	-	(437)	(437)
Exchange differences	936	6	942
At 31 December 2018	**24,452**	**2,257**	**26,709**

Deferred tax assets are recognised for tax losses carried forward to the extent that the realisation of the related tax benefit through future taxable profits from the same trade is probable.

The Group did not recognise deferred income tax assets of £473,000 (2017: £505,000) in respect of losses amounting to £2,491,000 (2017: £2,805,000) that can be carried forward against future taxable income. The deferred tax asset would be recognised if sufficient profits from the same trade arise in future periods.

Tax losses in the UK totalling £36,630,000 (2017: £32,931,000) have no date of expiry. Tax losses in the US can be carried forward against future taxable income for 20 years before expiring. Of the Group's total US tax losses of £87,909,000 (2017: £79,493,000) losses amounting to £1,000 and £6,931,000 expire in 2019 and 2020.

Deferred tax liabilities have not been recognised for the withholding tax and other taxes that would be payable on the unremitted earnings of certain subsidiaries. Such amounts are permanently reinvested.

A credit of £324,000 (2017: £487,000) has been recognised within operating profit in relation to claims made under the R&D Expenditure Credit Scheme (RDEC) in the UK.

Company

Deferred tax assets	Tax Losses £'000	Share Options £'000	Other Timing Differences £'000	Total £'000
At 1 January 2017	**-**	**-**	**-**	**-**
Credited to income statement	-	4,974	32	5,006
Credited to equity	-	246	-	246
At 31 December 2017	**-**	**5,220**	**32**	**5,252**
Credited to income statement	-	(3,673)	(5)	(3,678)
Credited to equity	-	(209)	-	(209)
At 31 December 2018	**-**	**1,338**	**27**	**1,365**

11. Dividends

No dividend has been paid or proposed in 2018 (2017: £nil).

12. Earnings per share

Basic earnings per share is calculated by dividing the profit attributable to ordinary shareholders by the weighted average number of ordinary shares in issue during the year.

Diluted earnings per share is calculated by dividing the profit attributable to ordinary shareholders by the weighted average number of shares and the dilutive effect of 'in the money' share options in issue. Share options are classified as 'in the money' if their exercise price is lower than the average share price for the year. As required by IAS 33, this calculation assumes that the proceeds receivable from the exercise of 'in the money' options would be used to purchase shares in the open market in order to reduce the number of new shares that would need to be issued.

The directors also present an adjusted earnings per share measure which eliminates certain adjusted items in order to provide a more meaningful measure of underlying profit. The adjustments are detailed in note 5.

	2018 £'000	Restated 2017 £'000
Profit attributable to ordinary shareholders	966	14,560
Adjustments to profit after tax (note 5)	10,040	10,338
Adjusted profit attributable to ordinary shareholders	**11,006**	**24,898**

	2018 Number	2017 Number
Weighted average number of ordinary shares	761,750,145	689,537,776
Dilutive share options	37,072,892	47,142,160
Adjusted weighted average number of ordinary shares	**798,823,037**	**736,679,936**
Adjusted basic earnings per share	1.44p	3.61p
Basic earnings per share	0.13p	2.11p
Adjusted diluted earnings per share	1.38p	3.38p
Diluted earnings per share	0.12p	1.98p

The comparative financial information for the year ended 31 December 2017 has been restated. Details of the restatement are set out in note 2.30.

13. Intangible assets

Group	Goodwill £'000	Patents £'000	Development costs £'000	Software £'000	Customer contracts £'000	Total £'000
Cost						
At 1 January 2018	64,408	3,043	57,621	6,800	7,427	139,299
Additions	-	4,160	9,854	958	-	14,972
Foreign exchange	3,222	21	1,936	17	401	5,597
At 31 December 2018	**67,630**	**7,224**	**69,411**	**7,775**	**7,828**	**159,868**
Accumulated amortisation and impairment						
At 1 January 2018	-	340	22,083	1,812	6,551	30,786
Charge for the year	-	95	4,702	794	518	6,109
Foreign exchange	-	4	807	12	375	1,198
At 31 December 2018	**-**	**439**	**27,592**	**2,618**	**7,444**	**38,093**
Net book value						
At 31 December 2018	**67,630**	**6,785**	**41,819**	**5,157**	**384**	**121,775**
At 31 December 2017	64,408	2,703	35,538	4,988	876	108,513

Group	Goodwill £'000	Patents £'000	Development costs £'000	Software £'000	Customer contracts £'000	Total £'000
Cost						
At 1 January 2017	69,574	2,195	44,899	5,265	8,129	130,062
Additions	-	874	15,434	1,548	-	17,856
Reclassified to investments	-	-	(75)	-	-	(75)
Foreign exchange	(5,166)	(26)	(2,637)	(13)	(702)	(8,544)
At 31 December 2017	**64,408**	**3,043**	**57,621**	**6,800**	**7,427**	**139,299**
Accumulated amortisation and impairment						
At 1 January 2017	-	291	18,847	1,268	5,684	26,090
Charge for the year	-	55	4,349	555	1,429	6,388
Foreign exchange	-	(6)	(1,113)	(11)	(562)	(1,692)
At 31 December 2017	**-**	**340**	**22,083**	**1,812**	**6,551**	**30,786**
Net book value						
At 31 December 2017	**64,408**	**2,703**	**35,538**	**4,988**	**876**	**108,513**
At 31 December 2016	69,574	1,904	26,052	3,997	2,445	103,972

Customer contract intangible assets relate to customer contracts acquired as part of a business combination.

The amortisation charge of £6,109,000 (2017: £6,388,000) has been charged to selling, general and administrative expenses in the Consolidated Income Statement.

Impairment tests for goodwill

Goodwill is tested for impairment annually and whenever there is an indication of impairment at the level of the cash-generating unit (CGU) or group of CGUs to which it is allocated. Multiple production facilities are included in a single CGU reflecting that production can (and is) transferred between sites for different operating segments to suit capacity planning and operational efficiency. Given the interdependency of facilities, goodwill is therefore tested for impairment by grouping operational sites into a CGU or CGUs based on type of production. This gives rise to the following allocation of goodwill:

	2018 £'000	2017 £'000
Allocation of goodwill by CGU		
III/V Epitaxy	60,121	57,284
Substrates	7,509	7,124
Total Goodwill	**67,630**	**64,408**

The recoverable amount of the CGUs has been determined based on value in use calculations, using cash flow projections for a five year period plus a terminal value based upon a long term growth rate of 2% (2017: 2%). The discount rate used is based on a common risk profile across the Group.

The Board approved 2019 budget has been used for the first year of the forecast with the mid-point of the guidance published in 2018 used as the growth rate for each of the Group's operating segments in years two to five. In 2017 the Board approved 2018 budget was used for the first year of the forecast with EBITDA growth of 10% per annum assumed in years two to five. The discount factor applied to the forecast in 2017 was 10%.

The key assumptions applied in the 2018 cash flow forecast are summarised below:

	Year 1 %	Year 2 %	Year 3 %	Year 4 %	Year 5 %
Pre-tax weighted average cost of capital discount rate	10	10	10	10	10
Photonics growth rate	2019 Budget	50	50	50	50
Wireless growth rate	2019 Budget	3.0	3.0	3.0	3.0
Infrared growth rate	2019 Budget	10.0	10.0	10.0	10.0

The recoverable amount of the III/V Epitaxy CGU determined based on value in use cash flow projections exceeds the carrying amount of the associated goodwill by greater than £1bn.

The recoverable amount of the Substrate CGU determined on a value in use basis exceeds the carrying amount of the associated goodwill by greater than £70m.

No impairment would arise if the discount rate for the III/V Epitaxy or Substrate CGU was increased from 10% to 15%.

No impairment would arise if the growth rate in each operating segment in the forecast period after 2019 for both the III/V Epitaxy and substrates CGU's was restricted to zero.

No impairment would arise if the discount rate for the III/V Epitaxy and substrate CGU was increased from 10% to 15% and the growth rate in each operating segment in the forecast period after 2019 for both the III/V Epitaxy and Substrates CGU's was restricted to zero.

Company	Patents £'000	Software £'000	Total £'000
Cost			
At 1 January 2018	1,599	564	2,163
Additions	4,016	237	4,253
At 31 December 2018	**5,615**	**801**	**6,416**
Accumulated amortisation			
At 1 January 2018	-	87	87
Charge for the year	-	66	66
At 31 December 2018	**-**	**153**	**153**
Net book value			
At 31 December 2018	**5,615**	**648**	**6,263**
At 31 December 2017	1,599	477	2,076

Company	Patents £'000	Software £'000	Total £'000
Cost			
At 1 January 2017	1,372	416	1,788
Additions	227	148	375
At 31 December 2017	**1,599**	**564**	**2,163**
Accumulated amortisation			
At 1 January 2017	-	40	40
Charge for the year	-	47	47
At 31 December 2017	**-**	**87**	**87**
Net book value			
At 31 December 2017	**1,599**	**477**	**2,076**
At 31 December 2016	1,372	376	1,748

14. Property, plant and equipment

Group	Land and buildings £'000	Short leasehold improvEments £'000	Fixtures and fittings £'000	Plant and machinery £'000	Total £'000
Cost					
At 1 January 2018	8,731	32,112	5,635	153,642	200,120
Additions	2,495	914	701	34,752	38,862
Disposals	-	-	-	-	-
Foreign exchange	270	1,927	351	6,776	9,324
At 31 December 2018	**11,496**	**34,953**	**6,687**	**195,170**	**248,306**
Accumulated depreciation					
At 1 January 2018	3,728	17,376	3,999	84,217	109,320
Charge for the year	195	965	495	5,118	6,773
Impairment	-	-	-	1,651	1,651
Foreign exchange	45	863	50	5,159	6,117
At 31 December 2018	**3,968**	**19,204**	**4,544**	**96,145**	**123,861**
Net book value					
At 31 December 2018	**7,528**	**15,749**	**2,143**	**99,025**	**124,445**
At 31 December 2017	5,003	14,736	1,636	69,425	90,800

Property, plant and equipment includes assets in the course of construction with a net carrying value of £37,675,000 (2017: £9,989,000) primarily relating to leasehold improvements, plant and equipment purchased for the Group's manufacturing site at Newport, United Kingdom and buildings, plant and equipment purchased for the Group's manufacturing site at Hsinchu, Taiwan.

Group	Land and buildings £'000	Short leasehold improvements £'000	Fixtures and fittings £'000	Plant and machinery £'000	Total £'000
Cost					
At 1 January 2017	8,682	34,400	5,437	149,022	197,541
Additions	321	70	367	15,628	16,386
Disposals	-	-	-	(1,638)	(1,638)
Foreign exchange	(272)	(2,358)	(169)	(9,370)	(12,169)
At 31 December 2017	**8,731**	**32,112**	**5,635**	**153,642**	**200,120**
Accumulated depreciation					
At 1 January 2017	3,610	17,774	3,817	87,339	112,540
Charge for the year	182	547	335	4,573	5,637
Disposals	-	-	-	(1,615)	(1,615)
Foreign exchange	(64)	(945)	(153)	(6,080)	(7,242)
At 31 December 2017	**3,728**	**17,376**	**3,999**	**84,217**	**109,320**
Net book value					
At 31 December 2017	**5,003**	**14,736**	**1,636**	**69,425**	**90,800**
At 31 December 2016	5,072	16,626	1,620	61,683	85,001

Company	Fixtures and fittings £'000
Cost	
At 1 January 2018	87
Additions	18
At 31 December 2018	**105**
Accumulated depreciation	
At 1 January 2018	77
Charge for the year	13
At 31 December 2018	**90**
Net book value	
At 31 December 2018	**15**
At 31 December 2017	10

Company	Fixtures and fittings £'000
Cost	
At 1 January 2017	76
Additions	11
At 31 December 2017	**87**
Accumulated depreciation	
At 1 January 2017	71
Charge for the year	6
At 31 December 2017	**77**
Net book value	
At 31 December 2017	**10**
At 31 December 2016	5

15. Investments

Group	Equity investments £'000
Cost	
At 1 January 2018	75
At 31 December 2018	**75**

Group	Equity investments £'000
Cost	
At 1 January 2017	-
Reclassified from intangible assets	75
At 31 December 2017	**75**

The reclassification in 2017 relates to the reclassification of the investment in Seren Photonics Limited.

Company	Investments in subsidiaries £'000	Other equity investments £'000	Total £'000
Cost			
At 1 January 2018	120,118	75	120,193
Subsidiaries share based payments charge	1,067	-	1,067
At 31 December 2018	**121,185**	**75**	**121,260**
Provisions for impairment			
At 1 January 2018	32,032	-	32,032
Reversal of impairment	-	-	-
At 31 December 2018	**32,032**	**-**	**32,032**
Net book value			
At 31 December 2018	**89,153**	**75**	**89,228**
At 31 December 2017	88,086	75	88,161

Company	Investments in subsidiaries £'000	Other equity investments £'000	Restated Total £'000
Cost			
At 1 January 2017	119,997	75	120,072
Subsidiaries share based payments charge	121	-	121
At 31 December 2017	**120,118**	**75**	**120,193**
Provisions for impairment			
At 1 January 2017	71,514	-	71,514
Reversal of impairment	(39,482)	-	(39,482)
At 31 December 2017	**32,032**	**-**	**32,032**
Net book value			
At 31 December 2017	**88,086**	**75**	**88,161**
At 31 December 2016	48,483	75	48,558

Details of the company's subsidiaries are set out in note 28.

Investments are reviewed for impairment annually. Where the net realisable value is lower than the investment carrying value an impairment charge is recognised in the income statement. Indicators that impairment losses might have reversed are assessed annually. Where events or circumstances indicate that the impairment loss no longer exists, a reversal of the impairment charge is recognised in the income statement.

Provisions for impairment associated with the company's investment in its subsidiaries, EPI Holding Limited and Wafer Technology Limited were reversed in 2017 based upon actual and forecast performance of the underlying trading businesses. The recoverable amount of each investment was determined based on value in use calculations, using cash flow projections for a five year period plus a terminal value assuming no subsequent growth. The Board approved 2018 budget was used for the first year of the forecast. The cash flow projections were consistent with the cash flow projections used for the goodwill impairment review performed in 2017.

16. Inventories

	2018 £'000	Restated 2017 £'000
Raw materials and consumables	29,001	25,067
Work-in-progress and finished goods	6,708	7,977
	35,709	**33,044**

The comparative financial information for the year ended 31 December 2017 has been restated. Details of the restatement are set out in note 2.30

The directors are of the opinion that the replacement values of inventories are not materially different to the carrying values stated above. These carrying values are stated net of impairment provisions of £6,415,000 (2017: £6,273,000). £1,419,000 (2017: £440,000) of inventories were written down during 2018 and an expense recognised in the income statement.

17. Trade and other receivables

Current	2018 Group £'000	2018 Company £'000	Restated 2017 Group £'000	2017 Company £'000
Trade receivables	18,615	-	18,440	-
Amounts owed by group undertakings	-	146,607	-	114,138
Other receivables	5,280	583	3,712	-
Contract assets	12,173	-	8,346	-
Prepayments	1,947	138	2,771	91
	38,015	**147,328**	**33,269**	**114,229**

Non-current	2018 Group £'000	2018 Company £'000	2017 Group £'000	2017 Company £'000
Financial assets	7,937	-	7,680	-

The comparative financial information for the year ended 31 December 2017 has been restated. Details of the restatement are set out in note 2.30.

Contract assets relate to bespoke manufactured customer products where the Group has a guaranteed contractual right of payment. Contract assets are transferred to receivables at the point that manufactured products are delivered to customers, except for supplier managed inventory arrangements where contract assets are transferred to receivables from the earlier of a specified contractual date following delivery or when the product is drawn from inventory by the customer. All contract assets at 31 December 2017 have been transferred to receivables during 2018.

As at 31 December 2018, 86% (2017: 80%) of trade receivables were within terms. Of the other trade receivables, 89% (2017: 69%) were less than 30 days past due. An allowance has been made for estimated irrecoverable amounts from the sale of goods of £224,000 (2017: £222,000). This allowance has been determined by reference to past default experience.

Trade receivables are with established customers. We monitor customer D&B credit ratings and have had no material defaults in the past. None of our receivables are with customers where we have had any history of default. The maximum exposure to credit risk at the reporting date is the carrying value of each class of receivable as set out above. In terms of trade receivables, the terms of sale provide that the Group has recourse to the products sold in the event of non-payment by a customer.

Amounts owed by Group undertakings are unsecured and repayable on demand. Interest is charged at a rate of 5% per annum (2017: 5% per annum).

Financial assets relate to £8,800,000 of Preferred 'A' shares (2017: £8,800,000) issued by the Compound Semiconductor Centre Limited ('CSC'), a joint venture between the Group and Cardiff University (see note 29 for further details). The preference shares carry the following rights:

- No voting rights;
- Dividend equivalent to the HSBC Bank PLC base rate for the applicable period on the amount paid up, subject to CSC having available profits;
- Repayable in proportion to the outstanding principle from surplus cash generated.

The carrying values of trade and other receivables also represent their estimated fair values.

18. Trade and other payables

Current	2018 Group £'000	2018 Company £'000	2017 Group £'000	2017 Company £'000
Trade payables	25,343	970	23,554	1,139
Amounts owed by group undertakings	-	15,106	-	14,351
Other taxation and social security	1,931	1,628	4,778	4,151
Other payables	10,843	1,389	5,580	-
Accruals and deferred income	7,791	1,613	9,260	1,595
	45,908	**20,706**	**43,172**	**21,236**

Accruals and deferred income includes no contract liabilities (2017: £nil)

Amounts owed to group undertakings are unsecured and repayable on demand. Interest is charged at a rate of 5% per annum (2017: 5% per annum).

The carrying values of trade and other payables also represent their estimated fair values.

There are no foreign currency exchange contracts held at 31 December 2018 or 31 December 2017.

19. Borrowings

Group and company	2018 £'000	2017 £'000
Non-current borrowings:		
Bank borrowings	-	-
	-	**-**
Current borrowings:		
Bank borrowings	-	-
	-	**-**
Total borrowings	**-**	**-**

Bank borrowings

	2018 £'000	2017 £'000
Bank borrowings fall due for repayment as follows:		
Within one year	-	-
Between one and five years	-	-
After five years	-	-
	-	**-**

On 24 January 2019, the Company agreed a new £27,300,000 ($35,000,000) multi-currency revolving credit facility, provided by HSBC which is secured over the assets of IQE plc and certain subsidiary companies. The facility has a three-year term and an interest rate margin of between 1.45 and 1.95 per cent per annum over LIBOR on any drawn balances.

20. Provisions for other liabilities and charges

Group	Restructuring £'000	Onerous Lease £'000	2018 Total £'000	Onerous Lease £'000	2017 Total £'000
As at 1 January	-	2,200	**2,200**	3,588	**3,588**
Charged to the income statement	1,091	4,404	**5,495**	-	**-**
Utilised during the year	-	(1,539)	**(1,539)**	(1,372)	**(1,372)**
Foreign exchange	43	191	**234**	(16)	**(16)**
As at 31 December	1,134	5,256	**6,390**	2,200	**2,200**

Group	Restructuring £'000	Onerous Lease £'000	2018 Total £'000	Onerous Lease £'000	2017 Total £'000
Current	1,134	1,420	**2,554**	1,534	**1,534**
Non-current	-	3,836	**3,836**	666	**666**
Total	1,134	5,256	**6,390**	2,200	**2,200**

During 2014, as part of the re-organisation and rationalisation of the Group's operations the Group restructured its activities in Singapore and established with its joint venture partners the Compound Semiconductor Development Centre. The Group sub-lets space at its Singapore manufacturing facility to its joint venture (see note 30) and established an onerous lease provision for vacant space at the property following the re-organisation. The provision for unused and unlet space at the manufacturing site has been reassessed in the current year and extended to the end of the lease obligation in 2022 given the low level of interest from external parties to sublet the residual unused space**.** The onerous lease provision is expected to be utilised over the period to 2022 and has been discounted using a risk free rate of 2.5%.

The restructuring provision relates to costs associated with the closure of the Group's manufacturing facility in New Jersey, USA and the transfer of the trade and assets to the Group's manufacturing facility in Massachusetts, USA. The provision principally comprises severance and reactor decommissioning costs and is expected to be utilised during 2019.

21. Financial Instruments

Financial instruments by category

Trade and other receivables (excluding prepayments) and cash and cash equivalents are classified as financial assets at amortised cost. Borrowings and trade and other payables are classified as financial liabilities at amortised cost. Both categories are initially measured at fair value and subsequently held at amortised cost. All financial instruments are classified as level 2 per the fair value hierarchy with the exception of the preference share instruments which are classified as level 3.

Derivatives (forward exchange contracts) are classified as derivatives used for hedging and accounted for at fair value with gains and losses taken to reserves through the consolidated statement of comprehensive income.

Financial risk and treasury policies

The Group's finance team maintains liquidity, manages relations with the Group's bankers, identifies and manages foreign exchange risk and provides a treasury service to the Group's businesses. Treasury dealings such as investments, borrowings and foreign exchange are conducted only to support underlying business transactions. The Group has clearly defined policies for the management of foreign exchange rate risk. The Group finance team does not undertake speculative foreign exchange dealings for which there is no underlying exposure. Exposures resulting from sales and purchases in foreign currency are matched where possible and the net exposure may be hedged by the use of forward exchange contracts.

Credit risk

Credit risk is the risk of financial loss to the Group if a customer or counterparty to a financial instrument fails to meet its contractual obligations, and arises principally from the Group's receivables from customers and monies on deposit with financial institutions.

Customer credit risk is managed at the Group and site level with credit risk assessments completed for all customers. If no independent credit rating is available the credit quality of the customer is assessed by reference to the customers' financial position, past experience and other relevant factors. Individual credit limits are set based on internal or external ratings in accordance with the Group's credit risk policies. Where the Group assesses a potential credit risk, this is dealt with either by up-front payment prior to the shipment of goods or by other credit risk mitigation measures. The Group has historically experienced low levels of payment default.

Counterparty risk associated with monies on deposit with financial institutions is managed at the Group level in accordance with the Group's treasury policies. The credit quality of banks has been assessed by reference to external credit ratings, based on reputable credit agencies long term issuer ratings.

The maximum exposure to credit risk at the reporting date is the carrying value of each class of financial asset as set out below. In terms of trade receivables, the terms of sale provide that the Group has recourse to the products sold in the event of non-payment by a customer.

Assets as per balance sheet	2018 Group £'000	2018 Company £'000	Restated 2017 Group £'000	2017 Company £'000
Carrying amount				
Cash and cash equivalents	20,807	4,582	45,612	31,281
Trade receivables	18,615	-	18,440	-
Amounts owed by group undertakings	-	146,607	-	114,138
Other receivables excluding prepayments	17,453	583	12,058	-
Financial Assets (Preference share receivables)	7,937	-	7,680	-
	64,812	**151,772**	**83,790**	**145,419**

Included in other receivables are contract assets of £12,173,000 (2017: £8,346,000).

The Group is exposed to credit concentration risk with its three largest customers which represent 63% (2017: 64%) of outstanding trade receivables and contract asset balances. Customer credit risk is managed according to strict credit control policies. The majority of the Group's revenues are derived from large multinational organisations that are established customers of the Group with no prior history of default such that credit risk is considered to be low. The Group monitors customer D&B credit ratings and has had no material defaults in the past. None of the receivables are with customers where we have had any history of default.

	Gross	Provision	Net	Gross	Provision	Net
	2018 £'000	2018 £'000	2018 £'000	2017 £'000	2017 £'000	2017 £'000
Not past due	16,163	-	16,163	15,012	-	15,012
Past due 0-30	2,387	-	2,387	2,513	-	2,513
Past due more than 30	289	224	65	1,137	222	915
	18,839	**224**	**18,615**	**18,662**	**222**	**18,440**

An allowance has been made for estimated irrecoverable amounts from the sale of goods of £224,000 (2017: £222,000). This allowance has been determined on an expected credit loss basis by reference to past default experience. The individually impaired receivables mainly relate to a number of independent customers. A portion of these receivables is expected to be recovered.

The carrying values of trade and other receivables also represent their estimated fair values. Trade receivables and contract assets are primarily denominated in US dollars, as are trade payables (note 18) limiting the exposure of the Group to movements in foreign exchange rates. Based on the balances held at 31 December 2018 a 1 cent movement in the US dollar to Sterling rate would impact the net value of these instruments by £12,000 (2017: £13,000).

Liquidity risk

Liquidity risk is the risk that the Group will not be able to meet its financial obligations as they fall due. The Group manages its funding to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the Group's reputation.

The Group uses weekly cash flow forecasts to monitor cash requirements and to optimise its borrowing position. The Group ensures that it has sufficient borrowing facilities to meet foreseeable operational expenses. At the year end the Group had available facilities of £1.0m (2017: £1.0m).

The following shows the contractual maturities of financial liabilities, including interest payments, where applicable and excluding the impact of netting agreements on an undiscounted basis:

Analysis of contractual cash flow maturities - Other financial liabilities at amortised cost	Carrying amount	Contractual Cash flows	Less than 12 months	1 –2 Years	2–5 Years	5+ Years
31 December 2018	**£'000**	**£'000**	**£'000**	**£'000**	**£'000**	**£'000**
Trade and other payables	36,186	36,186	36,186	-	-	-
	36,186	**36,186**	**36,186**	**-**	**-**	**-**

Analysis of contractual cash flow maturities - Other financial liabilities at amortised cost	Carrying amount	Contractual Cash flows	Less than 12 months	1 – 2 Years	2 – 5 Years	5+ Years
31 December 2017	**£'000**	**£'000**	**£'000**	**£'000**	**£'000**	**£'000**
Trade and other payables	29,134	29,134	29,134	-	-	-
	29,134	**29,134**	**29,134**	**-**	**-**	**-**

Financial risk management

Market risk

Foreign Exchange Risk
The Group operates internationally and is exposed to foreign exchange risk arising from various currency exposures, primarily with respect to the US dollar, Taiwanese dollar, Singapore dollar, Japanese yen and Euro. Foreign exchange risk arises from future commercial transactions, recognised assets and liabilities and net investments in foreign operations.

The Group's presentational currency is sterling. The majority of the Group's sales are denominated in US dollars and therefore the Group's cash flows are affected by fluctuations in the rate of exchange between Sterling and the US dollar. This exposure is managed by a natural currency hedge because a significant portion of the Group's cost base is also denominated in US dollars. In particular, the majority of the Group's raw materials are purchased in US dollars and a significant portion of labour and overheads are also denominated in US dollars as four of the Group's principal subsidiaries are situated in North America. To a lesser extent, the Group also generates sales in other currencies including Yen and Euros which are also partially hedged where possible by purchases of some raw materials in these currencies.

Taking into account the extent of the natural hedge within the business model, management periodically use forward exchange contracts to mitigate the impact of the residual foreign currency exposure. As at 31 December 2018 and 31 December 2017 there were no contracts in place.

The Group has certain investments in foreign operations in North America, Taiwan and Singapore, whose net assets are exposed to foreign currency translation risk. Translation exposures that arise on converting the results of overseas subsidiaries are not hedged. As a guide to the sensitivity of the Group's results to movements in foreign currency exchange rates, a one cent movement in the US dollar to Sterling rate would impact annual earnings by approximately £13,000 (2017: £8,000).

Cash flow and fair value interest rate risk

The Board is aware of the risks associated with changes in interest rates and does not speculate on future changes in interest rates or currencies. Historically the Group has not undertaken any hedging activity in this area however the board keeps this under regular review.

The Group's interest rate risk arises from its cash and cash equivalents and its preference share financial assets following repayment of all the Group's bank borrowings during 2017. Cash and cash equivalents, including foreign currency cash deposits earn interest at prevailing variable market rates of interest whilst the preference share debt earns interest at HSBC Bank Plc base rate.

Prior to the repayment of all the Group's bank borrowings during 2017 the Group's borrowings consisted of a series of variable and fixed rate term loans, a revolving credit facility, overdrafts and an asset lending facility. Bank loans, the revolving credit facility and overdrafts were secured against the assets of the Group and the asset lending facility was secured against the specific assets to which it related.

The fixed rate US dollar term loans, which had a principal outstanding of £2.4m at 1 January 2017 bore interest of 5% and was repayable by monthly instalment prior to full repayment of the outstanding balance in 2017.

The US Dollar acquisition facility, which had a principal outstanding of £6.5m at 1 January 2017 bore interest of between 2.5% to 2.95% over LIBOR and was repayable by quarterly instalments prior to full repayment of the outstanding balance in 2017.

The US Dollar revolving credit facility was a multi-currency facility of up to $63 million, committed until 2018 that bore interest of between 1.75% and 1.90% over LIBOR prior to full repayment of the outstanding balance in 2017.

The UK Sterling capital expenditure facility, which had a principal outstanding of £5.0m at 1 January 2017 bore interest at 1.90% over the bank of England base rate and was repayable by monthly instalment prior to full repayment of the outstanding balance in 2017.

The UK asset lending facility, which was drawn down during 2017 bore interest at 1.7% per annum over LIBOR and was repayable by monthly instalment prior to full repayment of the outstanding balance in 2017.

The Group's policy is to regularly review its exposure to interest rate risk, and in particular the mix between fixed and floating rate financial assets and financial liabilities. The percentage of financial assets bearing variable rate interest was 100% (2017: 100%). The Group had nil (2017: nil) interest bearing financial liabilities at 31 December 2018.

As a guide to the sensitivity of the Group's results to movements in interest rates, a 50 basis point (0.5%) movement in interest rates on the interest bearing financial assets held at 31 December 2018 would impact annual interest income by approximately £40,000. At 31 December 2017 the Group had interest bearing financial liabilities. A 50 basis point (0.5%) movement in interest rates on the interest bearing financial liabilities held at 31 December 2017 would have impacted the annual interest charge prior to the redemption of the bank borrowings by approximately £230,000.

Capital risk management

The Group's main objectives when managing capital are to safeguard the Group's ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital.

The Group sets the amount of capital in proportion to risk. The Group manages the capital structure and makes adjustments to it in the light of changes in economic conditions and the characteristic of the underlying assets. The Group monitors capital by reviewing net debt against shareholders' funds. The position of these indicators and the movement during the year is shown in the Five Year Financial Summary.

The Group defines total capital as equity in the consolidated balance sheet plus net debt or less net funds. Total capital at 31 December 2018 was £290,471,000 (2017: £245,567,000).

Consistent with others in the industry, the Group monitors capital on the basis of the gearing ratio. This ratio is calculated as net debt plus deferred consideration divided by total capital. At 31 December 2018 the gearing ratio was nil% (2017: nil%).

All covenants in relation to the Group's borrowing facilities were complied with prior to the repayment of the borrowings during the prior year.

Fair values

The fair values of financial assets and liabilities, together with the carrying amounts shown in the balance sheet, are as follows:

	2018	2018	Restated 2017	Restated 2017
	Carrying amount £'000	Fair value £'000	Carrying amount £'000	Fair value £'000
Cash and cash equivalents	20,807	20,807	45,612	45,612
Trade receivables	18,615	18,615	18,440	18,440
Other receivables	5,280	5,280	3,712	3,712
Contract assets	12,173	12,173	8,346	8,346
Financial Assets (Preference share receivables)	7,937	7,704	7,680	7,680
Trade and other payables	(36,186)	(36,186)	(29,134)	(29,134)
	28,626	**28,393**	**54,656**	**54,656**

Basis for determining fair value
The following summarises the significant methods and assumptions used in estimating the fair values of financial instruments reflected in the table above.

Cash and cash equivalents
Cash and cash equivalents earn interest at prevailing variable market rates of interest such that the carrying value of cash and cash equivalents is deemed to reflect fair value.

Trade receivables, other receivables and contract assets
Trade receivables, other receivables and contract assets are short term assets with a remaining life of less than one year such that the amortised cost carrying value of the assets is deemed to reflect fair value.

Trade and other payables
Trade and other payables are short term liabilities with a remaining life of less than one year such that the amortised cost carrying value of the liabilities is deemed to reflect fair value.

Financial Assets (Preference share receivables)
The fair value of preference share receivables was calculated by discounting the expected cash flows.

22. Share capital

Group and Company	2018 Number of shares	2018 £'000	2017 Number of shares	2017 £'000
Allotted, called up and fully paid				
Ordinary shares of 1p each	776,699,681	7,767	756,050,549	7,560

The movement in the number of ordinary shares during the year was:

	2018 Number	2017 Number
At 1 January	756,050,549	675,506,061
Employee share schemes	16,386,876	12,602,907
Translucent equity consideration	4,262,256	-
Equity placing	-	67,941,581
At 31 December	**776,699,681**	**756,050,549**

20,649,132 ordinary shares (2017: 80,544,488 ordinary shares) were issued during the year as follows:

	2018 Number of shares	2018 Consideration	2017 Number of shares	2017 Consideration
Equity share placing	-	-	67,941,581	1.40p
Employee share schemes	16,386,876	Nil to 50.3p	12,602,907	Nil to 50.3p
Translucent consideration	4,262,256	83.7p	-	-
	20,649,132		**80,544,488**	

The share premium arising from consideration received from employee share scheme exercises of £813,000 (2017: £2,541,029) was £1,694,000 (2017: £2,415,000). The share premium arising from the non-cash equity consideration paid to Translucent for the purchase of the cREO(TM) technology and IP portfolio was £3,526,000 (2017: £nil). This amount, along with the share capital value of £42,623 has been recognised as an intangible asset addition within patents (note 13). The share premium arising from the equity share placing consideration received in 2017 of £95,118,000 was £94,439,000. Costs associated with the share placing totalling £2,006,366 were debited to share premium.

23. Share based payments

The total amount credited to the income statement in 2018 in respect of share based payments was £1,044,000 (2017: £7,526,000 charge). Included within the share based payments credit is a £2,315,000 (2017: £5,668,000 charge) credit relating to the Company's Long Term Incentive Plan.

Long term incentive plan
IQE plc operates a long term incentive plan for executive directors. Details of the long term incentive plan are set out in the Remuneration Report set out on pages 63 to 78.

Share option scheme
The IQE Plc Share Option Scheme was adopted on 26 May 2000 and amended by shareholders at the Annual General Meeting on 17 May 2002. Under the scheme, the Remuneration Committee can grant options over shares in the company to employees of the Group.

Options are granted with a contractual life of ten years and with a fixed exercise price equal to the market value of the shares under option at the date of grant or as otherwise disclosed in the remuneration report. Options become exercisable between one and four years from the date of grant subject to continued employment and the achievement of performance conditions, including growth in EBITDA and earnings per share against various targets. The Group has no legal or constructive obligation to repurchase or settle the options in cash.

Long term incentive awards and share options are valued using either the Black-Scholes option-pricing model or the Monte Carlo simulation model with the total fair value of the award that is to be expensed charged to the income statement over the vesting period of the long term incentive award or share option. The principal assumptions used in the calculation of the fair value of long term incentive awards and share options are as follows:

Principal assumptions	2018	2017
Weighted average share price at grant date	**24.57p**	**24.56p**
Weighted average exercise price	**7.40p**	**8.93p**
Weighted average vesting period (years)	**3**	**3**
Option life (years)	**10**	**10**
Weighted average expected life (years)	**3**	**3**
Weighted average expected volatility factor	**55%**	**56%**
Weighted average risk free rate	**0.9%**	**1.20%**
Dividend yield	**0%**	**0%**

The expected volatility factor is based on historical share price volatility over the three years immediately preceding the grant of the option. The expected life is the average expected period to exercise. The risk free rate of return is the yield of zero-coupon UK government bonds of a term consistent with the assumed option life.

Non-market performance conditions are incorporated into the calculation of fair value by estimating the proportion of share options that will vest and be exercised based on a combination of historical trends and future expected trading performance. These are reassessed at the end of each period for each tranche of unvested options.

The fair value of long term incentive awards and share options granted during the year ended 31 December 2018 was £1,672,000 (2017: £3,998,000).

The movements on long term incentive awards and share options during the year were as follows:

	2018 Number of options	2018 Average exercise price (pence)	2017 Number of options	2017 Average exercise price (pence)
At 1 January	57,351,945	7.29p	60,557,376	9.42
Granted	1,642,968	35.78p	10,382,654	6.42
Exercised	(15,376,590)	4.73p	(11,468,580)	15.68
Cancelled/lapsed	(4,824,445)	1.29p	(2,119,505)	18.63
At 31 December	38,793,878	11.02p	57,351,945	7.29

The weighted average share price at the date share options were exercised was 87.35p (2017: 94.50p).

10,474,151 long term incentive awards were exercised during the year (2017: Nil). As at 31 December 2018, the total number of long term incentive awards and share options held by employees was 38,793,878 2017: 57,351,945) as follows:

Option price pence/share	Option period ending	2018 Number of options	2017 Number of options
16.10p - 16.10p	31 December 2018	-	1,496,029
3.65p - 17.07p	31 December 2019	3,017,694	3,354,566
0.01p – 45.58p	31 December 2020	770,625	913,777
9.15p – 50.25p	31 December 2021	2,484,306	3,121,379
0.01p – 28.17p	31 December 2022	3,898,940	5,210,518
0.01p – 27.75p	31 December 2023	7,132,690	9,509,225
0.01p – 23.83p	31 December 2024	2,843,851	3,799,428
18.42p – 25.17p	31 December 2025	322,500	370,000
0.01p – 37.92p	31 December 2026	9,379,249	19,206,869
0.01p – 169.50p	31 December 2027	7,641,116	10,370,154
0.01p – 143.30p	31 December 2028	1,302,907	-
At 31 December		**38,793,878**	**57,351,945**

24. Parent company profit and loss

As permitted by Section 408 of the Companies Act 2006, the income statement of the parent company is not presented as part of these financial statements. The parent company's profit for the financial year amounted to £2,304,000 (2017: £40,387,000).

25. Cash generated from operations

Group	2018 £'000	Restated 2017 £'000
Profit before tax	6,747	15,095
Finance costs	(87)	2,099
Depreciation of property, plant and equipment	6,773	5,637
Amortisation of intangible assets	6,109	6,388
Loss on disposal of fixed assets	-	22
Impairment of property, plant & equipment	1,651	-
Non-cash provision movements	5,495	-
Non cash rent charges on rent free periods on leased property	-	385
Share based payments	(1,044)	7,526
Cash inflow from operations before changes in working capital	**25,644**	**37,152**
Increase in inventories	(1,387)	(6,506)
Increase in trade and other receivables	(4,032)	(6,822)
(Decrease) / increase in trade and other payables	(3,237)	5,893
Cash inflow from operations	**16,988**	**29,717**

Company	2018 £'000	2017 £'000
Profit before tax	5,982	35,381
Finance income	(6,299)	(5,246)
Finance costs	-	1,846
Foreign exchange	(1,861)	(2,498)
Depreciation	13	6
Amortisation	66	47
Reversal of impairment	-	(39,482)
Share based payments	(1,898)	6,921
Cash (outflow)/inflow from operations before changes in working capital	**(3,997)**	**(3,025)**
Increase in trade and other receivables	(28,425)	(13,024)
Increase / (decrease) in trade and other payables	2,090	(5,736)
Cash outflow from operations	**(30,332)**	**(21,785)**

26. Reconciliation of net cash flow to movement in net funds / (debt)

	2018 £'000	2017 £'000
(Decrease)/increase in cash in the year	(25,292)	40,904
Increase in borrowings	-	(27,864)
Repayment of borrowings	-	68,697
Repayment of leases	-	6,733
Net movement resulting from cash flows	**(25,292)**	**88,470**
Net funds/ (debt) at 1 January	**45,612**	**(39,549)**
Net movement resulting from cash flows	(25,292)	88,470
Non-cash movements	487	(3,309)
Net cash at 31 December	**20,807**	**45,612**

27. Analysis of net funds

	At 1 January 2018 £'000	Cash flow £'000	Other non-cash movements £'000	At 31 December 2018 £'000
Bank borrowings due after one year	-	-	-	-
Bank borrowings due within one year	-	-	-	-
Total borrowings	-	-	-	-
Cash and cash equivalents	45,612	(25,292)	487	20,807
Net funds	**45,612**	**(25,292)**	**487**	**20,807**

Cash and cash equivalents at 31 December 2017 and 31 December 2018 comprised balances held in instant access bank accounts and other short term deposits with a maturity of less than 3 months.

28. Subsidiary undertakings

Name of company	Class of capital	Proportion of shares held	Activity	Country of incorporation	Registered Office
IQE (Europe) Limited	Ordinary shares of £1	100%*	Manufacture of advanced semiconductor materials	UK	Pascal Close, St Mellons, Cardiff CF3 0LW, UK
IQE Inc	Common stock of $0.001	100%*	Manufacture of advanced semiconductor materials	USA	119 Technology Drive, Bethlehem, PA 18015, USA
IQE KC LLC	Limited liability company	100%*	Manufacture of advanced semiconductor materials	USA	200 John Hancock Road, Taunton, MA 02780, USA
IQE Taiwan ROC**	Ordinary shares of NT$10	90%	Manufacture of advanced semiconductor materials	Taiwan	No. 2-1, Li-Hsin Road Hsinchu Science Park Hsinchu 300, Taiwan
IQE RF LLC	Limited liability company	100%*	Manufacture of advanced semiconductor materials	USA	265 Davidson Avenue Somerset, NJ 08873, USA
IQE Silicon Compounds Limited	Ordinary shares of £1	100%	Manufacture of silicon epitaxy	UK	Pascal Close, St Mellons, Cardiff CF3 0LW, UK
MBE Technology Pte Ltd	Preferred shares of S$1 Ordinary shares of S$1	100% 100%	Manufacture of advanced semiconductor materials	Singapore	30 Tampines industrial Avenue 3 Singapore 528775
Wafer Technology Limited	Ordinary shares of £1	100%*	Manufacture of semiconductor compounds and ultra high purity materials	UK	Pascal Close, St Mellons, Cardiff CF3 0LW, UK
NanoGaN Limited	Ordinary shares of £0.001	100%	Development of advanced semiconductor materials	UK	Pascal Close, St Mellons, Cardiff CF3 0LW, UK
Galaxy Compound Semiconductors Inc	Common stock of $0.00 par value	100%*	Manufacture of semiconductor compounds and ultra high purity materials	USA	9922 E Montgomery Avenue, #7, Spokane, WA 99206, USA
EPI Holding Limited	Ordinary shares of £1	100%	Dormant holding company	UK	Pascal Close, St Mellons, Cardiff CF3 0LW, UK
KTC Wireless LLC	Limited liability company	100%	Dormant holding company	USA	119 Technology Drive, Bethlehem, PA 18015, USA
IQE USA Inc	Limited liability company	100%	Dormant holding company	USA	119 Technology Drive, Bethlehem, PA 18015, USA
IQE Solar LLC	Limited liability company	100%*	Dormant company	USA	119 Technology Drive, Bethlehem, PA 18015, USA
IQE Properties Inc	Limited liability company	100%*	Property holding company	USA	119 Technology Drive, Bethlehem, PA 18015, USA
Wafer Technology International Limited	Ordinary shares of £1	100%	Dormant holding company	UK	Pascal Close, St Mellons, Cardiff CF3 0LW, UK

* Indirect holdings
** The consolidated results of the Group include revenue of £32,400,000 (2017: £28,844,000), EBITDA of £6,235,000

(2017: £4,302,000) and net assets of £35,480,000 (2017: £32,290,000) relating to IQE Taiwan ROC
The proportion of voting rights of subsidiaries held by the Group is the same as the proportion of shares held.

All UK subsidiaries are exempt from the requirements to file audited financial statements by virtue of section 479A of the Companies Act 2006. In adopting the exemption IQE plc has provided statutory guarantee to these subsidiaries in accordance with section 479C of the Companies Act 2006.

29. Joint Ventures

The Group holds investments in two joint ventures as follows:

Name of company	Class of capital	Proportion of shares held	Activity	Country of incorporation	Registered Office
Compound Semiconductor Centre Limited.	Common stock of £1 par value	50%*	Research, development and Manufacture of semiconductor materials	UK	Pascal Close, St Mellons, Cardiff CF3 0LW, UK
CSDC Private Limited.	Common stock of $1 par value	51%*	Research, development and Manufacture of semiconductor materials	Singapore	30 Tampines industrial Avenue 3 Singapore 528775

* Indirect holdings

Compound Semiconductor Centre Limited ('CSC')

On 9 July 2015 the Group entered into a joint venture agreement with Cardiff University to create the CSC in the United Kingdom. The shareholder agreement establishes that the CSC is jointly controlled by the shareholders who have an equal share of the voting rights such that the Group's investment in the joint venture is accounted for using the equity method in accordance with the accounting policies set out in note 2 and note 3.

The commercial purpose of the CSC is the research, development and manufacture by metal organic vapour phase epitaxy ('MOVPE') of advanced compound semiconductor materials in Europe.

The business was set-up by the joint venture partners to provide a bridge between early stage research and high volume manufacturing and was established in a manner to provide the CSC with the capability to deliver specialist compound semiconductor product development, prototyping and early stage manufacturing services to academic and industrial customers from its own compound semiconductor foundry.

On the formation of the joint venture the Group contributed fixed assets, independently valued at £12,000,000, transferred employees and licensed intellectual property to establish the CSC's manufacturing and technical capability whilst at the same time entering into an agreement with CSC that conveys to the Group the right to use the assets of the CSC for a minimum five year period following formation of the joint venture (see note 3a). Cardiff University contributed cash.

The intellectual property license relates to technical know-how and is licensed to the CSC under the terms of a perpetual licence that can only be terminated in a limited number of circumstances, none of which currently apply as the CSC is not in breach of the license agreement. The Group has no obligation to enhance or develop the licensed intellectual property. The licence fee of £20,000,000, mutually agreed by the Group and Cardiff University was recognised as license income in accordance with the Group's revenue recognition policy for perpetual licenses (see note 2) in 2015 and 2016 when the intellectual property was transferred to the CSC.
The contractual right granted by the CSC to the Group to use its assets provides the Group with access to manufacturing capacity and de-risks the initial establishment of the CSC as the Group operates as a cornerstone customer during the early stages of the development of the CSC's business when it is required to fund running costs associated with its foundry whilst developing its business and own independent revenue streams.

Costs associated with the right to use the assets of the CSC are charged to the Group at a mutually agreed price by the Group and Cardiff University. The price reflects the Group's right to use the assets and is variable based on the CSC's cash cost of production (including direct labour, materials and other foundry costs) providing the CSC with a low cost, low risk route to build its business whilst covering its manufacturing related operating costs.

The arrangements between the joint venture parties, structured in the first five years to provide the Group with its required level of manufacturing capacity and to provide the CSC with sufficient flexibility to develop its business envisaged that reliance on the Group as the cornerstone customer will reduce. The CSC continues to achieve key business milestones, including the development of its own independent commercial customer relationships and funded collaborative research and development projects which has resulted in its reliance on the Group reducing as these independent relationships and revenue streams continue to increase in number and value with external revenue totalling £1,104,000 (2017: £302,000).

The CSC's financial year end is 31 December which is co-terminus with the Group and has been used to prepare the consolidated Group financial statements and the summary CSC financial information set out below. No dividend has been received by the Group from the CSC (2017: £nil).

Summary information for Compound Semiconductor Centre Limited

Summary income statement	2018 £'000	2017 £'000
Revenue	7,759	6,369
EBITDA / (LBITDA)	60	(478)
Loss from continuing operations	(5,944)	(6,287)
Loss for the period	(5,944)	(6,287)
Total comprehensive expense for the period	**(5,944)**	**(6,287)**

Summary balance sheet	2018 £'000	2017 £'000
Non-current assets	30,034	34,268
Current assets	592	413
Current Liabilities	(1,784)	(1,013)
Non-current Liabilities	(20,387)	(19,371)
Equity attributable to Joint Venturers	**8,455**	**14,297**

Carrying value of equity interest in CSC Ltd	2018 £'000	2017 £'000
Net assets of CSC Ltd	8,455	14,297
Proportion of the Groups ownership interest	50%	50%
Groups share of net assets	4,228	7,148
Elimination of unrealised gains on transactions with CSC Ltd	(12,000)	(12,000)
Cumulative unrecognised losses	7,772	4,852
Carrying amount of the Groups interest in the JV	**-**	**-**

Summary of cumulative unrecognised losses	2018 £'000	2017 £'000
Unrecognised losses brought forward	(7,566)	(4,423)
Unrecognised unrealised gains on transactions with CSC Ltd	-	-
Unrecognised losses in the year	(2,920)*	(3,143)
Cumulative unrecognised losses carried forward	**(10,486)****	**(7,566)****

The comparative financial information has been adjusted to reflect the final signed 31 December 2017 statutory financial statement position for CSC.

* Includes share of total comprehensive expense for the period (£2,972,000) and share of CSC transactions with owners recognised directly in equity (£52,000).
** Includes £2,714,000 (2017: £2,714,000) prior period unrecognised unrealised gains on transactions with CSC.

Compound Semiconductor Development Centre Private Limited ('CSDC')

On 23 March 2015 the Group entered into a joint venture agreement with an existing customer, WIN Semiconductors Corp ('WIN') and Nangyang Technological University and four representatives of the University ('NTU') to create the CSDC in Singapore. The shareholder agreement establishes that CSDC is jointly controlled by the shareholders with the Group's investment in the joint venture accounted for using the equity method in accordance with the accounting policies set out in note 2 and note 3.

The commercial purpose of the CSDC is the research, development and manufacture by molecular beam epitaxy ('MBE') of advanced compound semiconductor materials in Asia.

The business was set-up by the joint venture partners to develop intellectual property associated with advanced compound semiconductor materials, provide product development, prototyping and early stage manufacturing services to academic and industrial customers and provide manufacturing services to shareholders and other non-shareholder customers.

On the formation of the joint venture the Group transferred employees and licensed the use of certain intellectual property and equipment to establish the CSDC's manufacturing and technical capability whilst at the same time entered into a manufacturing agreement with the CSDC that contained minimum expenditure and pricing commitments consistent with purchase and pricing commitments made by WIN under the terms of its manufacturing agreement with the Group. NTU contributed technical expertise governed by a formal framework collaboration agreement with the CSDC.

The contractual arrangements entered into by the joint venture partners provide NTU with a route to commercialise intellectual property and provides WIN with access to manufacturing capacity in a manner that de-risks the initial establishment of the CSDC as WIN operates as the cornerstone customer during the early stages of the CSDC's business development.

The Group licenses its intellectual property and plant and equipment under finite period licenses. The licenses provided the CSDC with the option to extend the initial license period, an option which was exercised in the current year. License fees are mutually agreed by the joint venture partners with license revenue recognised as income on an accruals basis in accordance with the Group's revenue recognition policy (see note 2).

The arrangements between the joint venture parties, structured to provide the CSDC with sufficient flexibility to develop its business, envisaged that reliance on WIN as the ultimate cornerstone customer, via the back to back minimum purchase guarantee commitments between the Group and CSDC and the Group and WIN, would reduce. During the year the Group made payments on behalf of CSDC, totalling £2.0m, during a period when CSDC has required funding following a significant reduction in revenues which has coincided with increased investment in new customer engagements as CSDC continued to develop its business working with twelve new Chinese customers across a range of product qualifications.

The CSDC's financial year end is 31 December which is co-terminus with the Group and has been used to prepare the consolidated Group financial statements and the summary CSDC financial information set out below. No dividend has been received by the Group from the CSDC (2017: £nil).

Summary information for CSDC Private Ltd

Summary income statement	2018 £'000	2018 SG$'000	2017 £'000	2017 SG$'000
Revenue	4,428	7,908	10,373	18,199
LBITDA	(4,791)	(8,556)	(1,469)	(2,577)
Loss from continuing operations	(5,006)	(8,939)	(1,431)	(2,511)
Loss for the period	(5,006)	(8,939)	(1,431)	(2,511)
Total comprehensive expense for the period	**(5,006)**	**(8,939)**	**(1,431)**	**(2,511)**

Summary balance sheet	2018 £'000	2018 SG$'000	2017 £'000	2017 SG$'000
Non-current assets	-	-	-	-
Current assets	2,374	4,165	2,854	5,189
Current Liabilities	(1,236)	(2,169)	(1,646)	(2,993)
Non-current Liabilities	(9,944)	(17,446)	(4,789)	(8,707)
Deficit attributable to Joint venturers	**(8,806)**	**(15,450)**	**(3,581)**	**(6,511)**

Carrying value of equity interest CSDC Private Ltd	2018 £'000	2018 SG$'000	2017 £'000	2017 SG$'000
Net liabilities of CSDC Private Limited	(8,806)	(15,450)	(3,581)	(6,511)
Proportion of the Groups ownership interest	51%	51%	51%	51%
Groups share of net liabilities	(4,491)	(7,880)	(1,826)	(3,320)
Share of losses recognised in income statement	2,000	3,571	-	-
Cumulative unrecognised losses	2,491	4,309	1,826	3,320
Carrying amount of the Groups interest in the JV	**-**	**-**	**-**	**-**

Summary of cumulative unrecognised losses	2018 £'000	2018 SG$'000	2017 £'000	2017 SG$'000
Cumulative unrecognised losses brought forward	(1,826)	(3,320)	(1,096)	(2,010)
Unrecognised losses in the year	(665)*	(989)	(730)	(1,310)
Cumulative unrecognised losses carried forward	**(2,491)**	**(4,309)**	**(1,826)**	**(3,320)**

* Includes foreign exchange loss of £110,000 associated with retranslation of opening net liabilities at the closing year end exchange rate.

The comparative financial information has been adjusted to reflect the final signed 31 December 2017 statutory financial statement position for CSDC.

30. Related party transactions

The Group incurred professional fees and expenses during the year of £31,250 (2017: £125,000) payable to Horton Corporate Finance and £nil (2017: £35,420) payable to Fishstone Limited. Dr G H H Ainsworth, who is a director of IQE Plc, is the managing partner of Horton Corporate Finance. S J Gibson, who was a director of IQE Plc during 2017 was also a director of Fishstone Limited. An amount of £nil (2017: £37,500) was outstanding to these parties at the year-end.

At 31 December 2017 IQE plc held a fixed asset investment in Seren Photonics Limited represented by 69 “B” ordinary shares at a cost of £50,000 (2017: £50,000) and £25,000 (2017: £25,000) Convertible Loan Stock. During 2018 Seren Photonics Limited underwent a capital reconstruction. At 31 December 2018 IQE plc holds a fixed asset investment in Seren Photonics Limited at a cost of £75,000 (2017: £75,000) represented by 791 A ordinary shares. Dr G H H Ainsworth is a Director of IQE plc and was a director of Seren Photonics Limited until his resignation from the Board in 2018. During the year the Group did not trade with Seren Photonics Limited and as at the 31 December 2018 no balances were receivable from or payable to Seren Photonics Limited.

The Group purchased services during the year from Newport Wafer Fab Limited totalling £97,000 (2017: £nil). Newport Wafer Fab Limited is wholly owned by Neptune 6 Limited. Dr AW Nelson is a director of Neptune 6 Limited and in conjunction with his close family Dr AW Nelson owns a controlling interest in Neptune 6 Limited.

Transactions with Joint Ventures

Compound Semiconductor Development Centre Private Limited

CSDC was established by the Group and its joint venture partners as a centre of excellence for the development and commercialisation of advanced compound semiconductor wafer products in Asia and on its formation entered into an agreement to license certain intellectual property and plant and equipment from the Group.

The activities of CSDC include research and development into advanced compound semiconductor wafer products and the provision of contract manufacturing services for compound semiconductor wafers to a subsidiary of the IQE plc Group, MBE Technology Pte Limited.

CSDC operates from space within the Group’s manufacturing facility in Singapore. During the year the Group sub-let space at its manufacturing facility to CSDC for £565,000 (2017: £672,000) at a rental cost per square foot equivalent to the cost paid by the Group on the head lease associated with the property.

The Group licenses intellectual property and equipment to the joint venture and recognised revenue in the year of £nil (2017: £1,874,000) and purchased advanced compound semiconductor wafer products from CSDC for £4,429,000 (2017: £10,373,000). Intellectual property and equipment is licensed to CSDC and wafer products are procured from CSDC at prices mutually agreed by the Group, WIN and NTU.

During the year payments of £2,000,000 have been made on behalf of CSDC which in accordance with the Group’s accounting policy (see note 2.4) has been recognised in the income statement as the Group’s share of losses in CSDC exceeds the carrying value of its investment.

An amount of £nil was due from (2017: £25,575 due from) CSDC Private Limited at 31 December 2018.

Compound Semiconductor Centre Limited

CSC was established by the Group and its joint venture partner as a centre of excellence for the development and commercialisation of advanced compound semiconductor wafer products in Europe. On its formation the Group contributed assets to the joint venture valued at £12,000,000 as part of its initial investment.

The activities of CSC include research and development into advanced compound semiconductor wafer products, the provision of contract manufacturing services for compound semiconductor wafers to certain subsidiaries within the IQE plc Group and the provision of compound semiconductor manufacturing services to other third parties.

CSC operates from its manufacturing facilities in Cardiff, United Kingdom and leases certain additional administrative building space from the Group. During the year the CSC leased this space from the Group for £115,000 (2017: £115,000) and procured certain administrative support services from the Group for £235,000 (2017: £235,000). As part of the administrative support services provided to CSC the Group procured goods and services, recharged to CSC at cost, totalling £3,130,000 (2017: £4,497,000).

CSC granted the Group the right to use its assets following its formation for a minimum five year period. Costs associated with the right to use the CSC’s assets are treated by the Group as operating lease costs (see note 3a) and are charged by the CSC at a price which reflects the CSC’s cash cost of production (including direct labour, materials and site costs) but excludes any related depreciation or amortisation of the CSC’s property, plant and equipment and intangible assets respectively under the terms of the joint venture agreement between the parties. Costs associated with the right to use the CSC’s assets totalled £6,655,000 (2017: £6,050,165) in the year.

During 2017 the Group received a short term loan of £600,000 from CSC which was fully repaid in 2017. At 31 December 2018 an amount of £586,000 (2017: £104,646 owed to) was owed from the CSC at year end.

During 2017 CSC issued 800 A preference shares of £1,000 each to the Group. In the Groups year-end balance sheet 'A' Preference Shares with a nominal value of £8,800,000 (2017: £8,800,000) are included in financial assets at an amortised cost of £7,937,000 (2017: £7,680,000) and the Group has a shareholder loan of £237,000 (2017: £234,000) due from CSC.

31. Operating lease commitments

The Group was committed at 31 December 2018 and 31 December 2017 to making the following aggregate payments in respect of non-cancellable operating leases:

	2018 £'000	2017 £'000
Due within one year	10,741	8,770
Due between two and five years	17,261	21,588
Due after five years	18,124	8,184
	46,126	**38,542**

Operating leases relate to various building, equipment and vehicle leases and includes the committed variable cash costs of production based on assessed usage that are payable to the Group's joint venture, CSC, associated with the Group's right of use of the joint ventures assets (note 3 and 30).

32. Commitments

The Group had capital commitments at 31 December 2018 of £11,500,000 (2017: £5,875,000) primarily relating to plant and equipment purchased for the Group's manufacturing site at Newport, United Kingdom, its manufacturing site at Hsinchu, Taiwan and its manufacturing site in Massachusetts, United States of America.