

This document comprises a registration document (the “**Registration Document**”) relating to Alphawave IP Group plc (the “**Company**”) prepared in accordance with the Prospectus Regulation Rules of the Financial Conduct Authority (the “**FCA**”) made under section 73A of the Financial Services and Markets Act 2000 (as amended) (the “**FSMA**”). A copy of this Registration Document has been filed with, and approved by, the FCA as competent authority under Regulation (EU) 2017/1129 as it forms part of retained EU law (the “**UK Prospectus Regulation**”), and has been made available to the public in accordance with the Prospectus Regulation Rules. The FCA only approves this Registration Document as meeting the standards of completeness, comprehensibility and consistency imposed by the UK Prospectus Regulation; such approval should not be considered as an endorsement of the Company that is the subject of this Registration Document.

The directors of the Company, whose names appear on page 31 of this Registration Document (the “**Directors**”), and the Company accept responsibility for the information contained in this Registration Document. To the best of the knowledge of the Company and the Directors, the information contained in this Registration Document is in accordance with the facts and this Registration Document makes no omission likely to affect its import.

**This Registration Document should be read in its entirety. See Part I: “Risk Factors” for a discussion of certain risks relating to the Company and its Group.**

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## Alphawave IP

# Alphawave IP Group plc

*(incorporated under the Companies Act 2006 and registered in England and Wales with registered number 13073661)*

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This Registration Document may be combined with a securities note and summary to form a prospectus in accordance with the Prospectus Regulation Rules. A prospectus is required before an issuer can offer transferable securities to the public or request the admission of transferable securities to trading on a regulated market. However, this Registration Document, where not combined with the securities note and summary to form a prospectus, does not constitute an offer or invitation to sell or issue, or a solicitation of an offer or invitation to purchase or subscribe for, any securities in the Company in any jurisdiction, nor shall this Registration Document alone (or any part of it), or the fact of its distribution, form the basis of, or be relied upon in connection with, or act as any inducement to enter into, any contract or commitment whatsoever with respect to any offer or otherwise.

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This Registration Document speaks only as at the date hereof. The definitions commencing on page 138 of this Registration Document apply throughout this entire document, including the cover page, except where the context indicates otherwise.

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## PART I RISK FACTORS

*The risk factors described below are not an exhaustive list or an explanation of all risks relating to the Group and should be used as guidance only. Additional risks and uncertainties relating to the Group that are not currently known to the Directors, or that they currently deem immaterial, may individually or cumulatively also have a material adverse effect on the Group's business, financial condition, results of operations and prospects.*

*This Registration Document contains "forward-looking" statements that involve risks and uncertainties. The actual results may differ significantly from the results discussed in the forward-looking statements. Factors that might cause such differences include those discussed below and elsewhere in this Registration Document. See "Information Regarding Forward Looking Statements" in Part II: "Presentation of Information on the Group".*

### **Risks Related to the Group and its Business**

***Demand for the Group's IP solutions is driven by a number of factors, and its operating and financial performance could deteriorate significantly if demand for its IP solutions declines in the future.***

The Group designs and licenses high-performance configurable wired connectivity IP platforms for customers that operate in various markets, and their end-market customers, including data centre, artificial intelligence ("AI"), 5G wireless infrastructure, data networking, autonomous vehicles and solid-state storage. It targets a variety of customers in these markets, including large semiconductor device suppliers, system-level original equipment manufacturers ("OEMs") and outsourced semiconductor wafer foundries who service their own customers. The Group seeks to provide technologically leading products and must constantly innovate in order to meet evolving industry trends and customer demands, and it must ensure that its IP solutions gain and maintain market acceptance despite changes in customer and end-product requirements. Currently, the industries that the Group serves are experiencing the following key trends:

- Exponential growth of IP traffic and data generation;
- Rapid proliferation of Internet of Things ("IoT") connected devices;
- Strong growth and expansion of data centres around the world;
- Increasing cost and complexity in design and manufacturing of integrated circuits;
- Disintegration of chip design into multiple chips and chiplets, driven by complexity and yield challenges as manufacturing nodes become smaller;
- Increased reliance on third-party specialists for high-speed connectivity IP; and
- Increasing ambitions amongst OEMs to design their own chips for proprietary differentiation.

Although these trends have supported the Group's growth, and the Company expects these will support its projected growth, future demand for the Group's IP solutions is dependent on its development and innovation capabilities, as well as broader market factors and customer trends, such as the growth and development of its target markets, its customers' performance and operating strategies and market growth for the end-products utilising the Group's IP solutions, as described below:

*Failure to drive innovation through research and development ("R&D"), or timely bring new technologies to market, may harm the Group's future growth and competitiveness.*

The Group and its customers operate in market segments that are characterised by technologically advanced applications, such as innovative complex AI chips and high-density networking switches. To compete successfully, the Group must respond quickly and successfully to industry trends and to competitor and in-house product developments, improve its existing products and processes and develop new products and processes on a schedule that, at least, keeps pace with technological developments and requirements. If the Group is unable to develop new, innovative and differentiated technologies to respond to evolving customer demands, or if it is unable to do so on a timely and cost-effective basis, its products may become obsolete or less competitive and may fail to achieve continued market acceptance.

If the Group is unable to respond quickly and successfully to end-customer needs, it may lose its competitive position, and its products or technologies may become obsolete or prove less competitive and suffer a loss of market share. The Group operates in highly competitive industries (see "*The Group's business, operating results and prospects could be negatively affected by existing or emerging competitors*"), and its IP platforms and product offerings must be enhanced periodically to reduce the

likelihood that a competitor surpasses the capabilities that it offers. In addition, as significant portions of the Group's revenue have historically been derived from a limited number of customers (see "*The Group depends on a limited number of customers for a substantial majority of its revenue. If the Group fails to retain or diversify its customer relationships or if its customers cancel or reduce their purchase commitments, the Group's revenue could decline significantly*"), and the Group's targeted growth will require it to develop deep relationships with new customers in the coming years, continued technological advances are essential for the Group to meet its growth targets.

The Group may face a number of risks that could negatively impact its R&D activities and capabilities, such as loss of key employees, prolonged IT disruptions or outages and supplier interruptions, and it may not respond adequately to evolving industry trends or requirements. In addition, if the cost of R&D activities were to increase significantly in the future, it may negatively impact the Group's ability to invest in technological advances, which could exacerbate risks related to meeting customer needs and offering solutions that meet evolving industry trends. Any failure by the Group to consistently drive innovation and develop commercially successful products, to time these developments with market demand or to achieve market acceptance for its innovations may prevent it from recouping or realising a return on its investment in R&D or capitalising on market opportunities.

The Group's ability to drive innovation through its R&D activities is also dependent on its ability to protect its intellectual property and ensure its R&D and design operations do not violate third-party intellectual property protections (see "*The Group risks harming its business and competitive position as it may not be able to protect its intellectual property, including its proprietary technology, its development and know-how from competitors or public disclosure*").

*The Group's target markets may not grow or develop as it currently expects, and if it fails to penetrate new markets and scale successfully within those markets, its revenue and financial condition would be harmed.*

The Group addresses a variety of end-markets, and each of these markets presents distinct and substantial challenges and risks and, in many cases, requires the Group to develop new customised solutions to address the particular end-market requirements. As a result, the Group's continued success will depend significantly on its ability to accurately anticipate changes in industry standards and to continue to appropriately fund development efforts to enhance its existing products or introduce new products in a timely manner.

The Group may be unable to predict the timing or development of trends in these end-markets with any accuracy and new developments in its target markets may not be beneficial to it. If the Group fails to accurately predict market requirements or market demand for its solutions and capitalise on this (including through successful R&D and product development), its business will suffer. For example, the Group's design and development activities and its targeted growth includes migration in key markets to advanced process nodes such as 7nm and 5nm and below, and for high-speed (112G and 224G) connectivity for chip interfaces. Although market technology needs are expected to require these advances in the coming months and years, the Group's revenue and financial condition would be harmed if demand falls below expectations. The Group aims to continue developing IP solutions for anticipated industry needs (which allows it to maintain existing customers and win new customers). However, it may not always correctly evaluate future market needs and there can be no assurance that the Group will always be able to develop solutions on a cost-effective basis or at all.

The Group may experience difficulties demonstrating the value to customers of newer products if they believe existing products are adequate to meet end-customer expectations. If the Group is unable to license new generations of products (including if end-customers do not demand the underlying technological advances), this could slow down the stream of licensing revenue and targeted royalty revenue and limit the ability of the Group to increase royalty rates for new product generations. In addition, a market shift towards an industry standard that the Group may not support could significantly decrease the demand for its solutions. If the Group is unable to anticipate such changes or to invest sufficient time and resources into pursuing innovations and advances to meet industry demand, it may lose existing customers or be unable to win new customers.

Meeting the technical requirements and securing design wins in new markets targeted by the Group will require a substantial investment of time and resources. The Group may not secure design wins or achieve meaningful revenue from licence arrangements in these or other new markets. If any of these markets do

not develop as the Group currently anticipates or if it is unable to penetrate and scale successfully in them, it may not attain projected revenue levels.

*The Group's customers (and their end-market customers) may be negatively affected by macroeconomic or other conditions.*

The Group's financial performance is influenced by its customers' demand sensitivity to broader economic and social conditions. These can include wide-ranging factors from domestic and global geopolitical events to macroeconomic and health conditions in significant countries or globally, which may have an impact on demand for consumer and other products that utilise the Group's solutions. In particular, factors in recent years such as the COVID-19 pandemic, the United Kingdom's exit from the European Union, trade disputes and other geopolitical tensions have created economic uncertainty, which has at various times and to varying degrees negatively impacted consumer demand and confidence, global investment and broader economic conditions. As the Group and its customers operate in a number of jurisdictions globally, the impact of these factors can be significant if they occur across a large number of countries simultaneously. If these factors are severe, or continue for a prolonged period of time, they may have a significant impact on demand for the Group's customers' products and services, which could negatively affect their need for existing Group solutions and their demand for new technological advances. See "*The international scope of the Group's operations exposes it to a number of global and regional economic, political, legal, regulatory and other risks*".

*The Group's operating and financial performance is dependent on design and other business activities of its customers and their success in commercialising their products that incorporate the Group's IP.*

The Group does not sell its IP solutions directly to end-users. Instead, it licenses its technology primarily to semiconductor companies and electronic equipment manufacturers, who then incorporate the Group's technology into the products they develop and sell. Because the Group's IP solutions are integrated into end-products, if semiconductor companies and electronic equipment manufacturers do not incorporate the Group's solutions into their end-products or if the end-products of its customers do not achieve market acceptance, the Group may not be able to generate adequate revenue.

The Group's customers' planning and purchasing decisions can also be influenced by the level of fees associated with use of the Group's IP solutions, including upfront licence fees, which may deter customers from undertaking product development activities that incorporate the Group's technologies and, as a result, negatively impact revenue over the longer term. See "*The Group depends on market acceptance of its third-party semiconductor intellectual property.*"

Further, because the Group does not control the business practices of its customers, it does not influence the degree to which they promote the Group's technology or set the prices at which they sell products incorporating its technology, which can impact both licence fee revenue and royalty revenue over the longer term. The Group's customers may not devote satisfactory efforts to promote their end-products that incorporate the Group's IP solutions, which would negatively affect the Group's ability to enter into new licence arrangements and could, in the longer term, hinder its ability to achieve broader market acceptance of its IP solutions and innovations and lead to lower revenue than targeted.

In addition, the Group's royalties from licences are generally dependent upon the success of its customers in introducing products incorporating its technology and the success of those products in the marketplace. All of the industries the Group licenses into are highly competitive and may be subject to significant economic downturns at various times. These downturns are characterised by production overcapacity and reduced revenue levels, which at times may encourage semiconductor companies or electronic product manufacturers to reduce their expenditure on the Group's technology or the adoption of newer technology. To the extent that customers experience lower sales levels than anticipated, whether due to market or other factors, it would negatively impact the level of revenue that the Group derives from those relationships. If the Group's existing customers and other participants in the end-user markets, where the Group and its customers operate, reduce their use of the Group's existing IP solutions or do not incorporate new innovations into their products, it may lead to a significant reduction in demand for the Group's existing products and limit the Group's ability to meet its growth targets.

*If the Group's products do not conform to, or are not compatible with, existing or emerging industry standards, demand for its existing solutions may decrease, which in turn would harm the Group's business and operating results.*

The Group designs certain of its products to comply with a variety of current industry standards and so do its customers. Some industry standards may not be widely adopted or implemented uniformly and competing standards may emerge that may be preferred by the Group's customers and its customers' customers. In addition, existing standards may be challenged as infringing upon the intellectual property rights of other companies or may be superseded by new innovations or standards.

The Group's ability to compete in the future will depend on its ability to identify and ensure compliance with evolving industry standards in its target markets, including in the data centres and wireless infrastructure markets. The emergence of new industry standards could render its products incompatible with those developed by its customers or their other third-party providers. If the Group's customers adopt new or competing industry standards with which its solutions are not compatible, or if industry groups fail to adopt standards with which the Group's solutions are compatible, the Group's products would become less desirable to its current or prospective customers. As a result, the Group's financial performance would suffer and it could be required to make significant expenditures to develop new solutions.

*The Group depends on market acceptance of its third-party semiconductor intellectual property.*

The Group expects its future growth will depend on the level of market acceptance of its third-party licensable IP model, the variety of IP offerings available on the market, and a continued shift in customer preference away from in-house development of wired connectivity IP towards licensing outsourced connectivity IP cores and platforms. In particular, a number of the Group's customers have established in-house design and development capabilities, the development of which has required these customers to invest significant time and resources over a number of years. Although the Group's design wins and growth in recent years have evidenced that some customers with in-house design and development capabilities are willing to license third-party IP, these customers may invest additional resources in in-house capabilities, aim to increase usage of existing in-house design and development capabilities or for cost or other reasons beyond the Group's control attempt to in-source design and development activities that are currently undertaken by the Group. Furthermore, the Group's third-party licensable IP model is highly dependent on the market adoption of new end customer products, such as higher-density switches, next-generation 5G wireless infrastructure equipment, AI integrated circuits, and high-speed storage solutions, as well as other advanced solutions. Such market adoption is important because the increased cost associated with more complex architectures needed for these advanced products may encourage companies to license third-party IP rather than design it in-house. If the above-referenced market shifts do not materialise, or third-party connectivity IP does not achieve market acceptance, the Group's business, results of operations and financial condition could be materially harmed.

*The cyclical nature of the analogue semiconductor industry may limit the Group's ability to maintain or improve entry into new customer agreements and profitability.*

The semiconductor industry, including the segments in which the Group's customers and their customers compete, is highly cyclical and is prone to significant downturns from time to time. Cyclical downturns can result from a variety of market forces including constant and rapid technological change, rapid product obsolescence, price erosion, evolving standards, short product life cycles and wide fluctuations in product supply and demand, all of which can result in significant declines in demand for semiconductors and component technologies. Downturns may be characterised by diminished product demand, erosion of average selling prices ("ASP(s)") and other factors that impact the Group's customers and demand for its technologies, while significant or unexpected upturns in end-market demand may allow the Group's competitors to gain market share or introduce competing IP solutions if the Group is unable to satisfy the needs of existing and potential customers.

If the Group is unable to meet evolving industry and customer demands for advanced IP solutions, it could have a material adverse effect on its business, financial condition, results of operations and prospects.

***The COVID-19 pandemic may have a significantly negative impact on the Group's operating and financial performance.***

COVID-19, a potentially deadly respiratory tract infection caused by the SARS-CoV-2 virus, has spread rapidly through most of the world, causing a global public health crisis. On 11 March 2020, the COVID-19 outbreak was declared a pandemic by the World Health Organization. The pandemic has resulted in national and local governments in affected countries around the world implementing stringent measures to help control the spread of the virus, including quarantines and nationwide lockdowns, which have been subject to change, sometimes at short notice, since the start of the pandemic.

The measures implemented by various authorities in response to the COVID-19 pandemic have caused the Group to change its business practices, including those related to where employees work, the distance between employees in the Group's facilities, limitations on in-person meetings between employees and with customers, suppliers, service providers and stakeholders, as well as restrictions on business travel to domestic and international locations and to attend trade shows, investor conferences and other events, which have resulted in inefficiencies, delays and additional costs in the Group's product development, sales, marketing, and customer service efforts. Although transmission rates have shown signs of slowing at various points during the course of the pandemic, and the potential for the roll-out of vaccines and other therapeutic treatments are anticipated to lessen the severity of the pandemic in the coming months and years, considerable uncertainty regarding the economic impact of the COVID-19 pandemic is likely to result in sustained market turmoil and severe global economic disruption. Although a number of vaccines have been introduced in recent months, distribution globally and within countries has been uneven and there remains significant uncertainty whether or how quickly they will support lifting of governmental and social measures and anticipated return of economic growth in the future. Continuation of governmental restrictions, continued spread of the virus (including the emergence of vaccine-resistant variants) or prolonged disruption in global markets could cause the Group's customers and end-users of its and their products to suffer significant economic hardship, including reduced demand for its customers' products, or issues in their supply chains that slow production rates, and therefore reduced demand for the Group's solutions and revenue.

The impact of the COVID-19 pandemic continues to evolve and its duration and ultimate disruption to the Group's business and the businesses of its customers and end-users, the overall demand for the Group's products, its supply chain and the related financial impact to the Group, as well as any similar disruptions that may result from any future pandemic, epidemic or other outbreak of infectious disease, will depend on future developments, which are highly uncertain and cannot be predicted, including, but not limited to, the duration and spread of the pandemic, its severity, the effectiveness of vaccines and other actions to contain the virus or treat its impact and how quickly and to what extent normal economic and operating conditions can resume, among others. As new information regarding COVID-19 variants continues to emerge, it is difficult to predict the full extent to which the disease will adversely impact the Group's operating and financial performance. Even after the COVID-19 pandemic has lessened or subsided, the Group may continue to experience adverse impacts as a result of its global economic impact. Weaker economic conditions, generally, could result in impairment in value of the Group's tangible or intangible assets. Furthermore, any disruption in credit markets impacted by COVID-19 could negatively impact the Group's customers and their suppliers or, in the longer term, impede the Group's ability to invest in research and development and sales and marketing initiatives, any of which could have a negative impact on the Group's business. The longer any such disruption continues, however, the more severe and adverse the effect of the pandemic is expected to be on the Group's business, financial condition, results of operations and prospects.

***The Group depends on a limited number of customers for a substantial majority of its revenue. If the Group fails to retain or diversify its customer relationships or if its customers cancel or reduce their purchase commitments, the Group's revenue could decline significantly.***

The Group has historically derived, and continues to derive, its revenue from a limited number of customers, which totalled 14 as at 31 March 2021. The Group's largest customer accounted for 20.6 per cent. of its total revenue for the year ended 31 December 2020. Measured as at that date, approximately 47 per cent. of the Group's cumulative bookings since its founding in 2017 were derived from its top three customers, and an additional 29 per cent. was derived from the next three largest customers. As a result of its customer concentration and the size of its existing customer base, the Group's revenue could fluctuate materially and could be materially and disproportionately impacted by the purchasing decisions of its largest customer and other significant customers, including due to the following factors:

- the Group's customers' sales levels for products that incorporate the Group's IP solutions and their demand for new design and development incorporating the Group's technologies;

- one or more significant customers discontinuing product lines that incorporate the Group’s technology, or a change in direction of their business;
- evolution or other changes in key customers’ needs as a result of developments in the market sectors where they operate;
- consolidation among key customers, which may increase a customer’s negotiating leverage or result in a change in strategy or needs that reduces its demand for the Group’s IP solutions, and increase the Group’s exposure to customer concentration risks; and
- potential customers may be deterred from awarding the Group design wins or purchasing the Group’s semiconductor solutions due to the Group’s relationships with existing customers.

If the Group is unable to diversify its customer base, it will continue to be susceptible to risks associated with customer concentration. In particular, the Group’s customer contracts are typically structured as master or framework agreements with associated statements of work (“SOWs”), under which the customer may place purchase orders over a specified time period, and these contracts do not generally include exclusivity or minimum order commitments. Although the Group believes that its proprietary technologies cannot be easily or quickly replicated, and that its customers will continue to be reliant on the Group’s IP solutions for their products, these key customers may develop or locate alternative IP providers and there is no guarantee that the Group’s existing customers will continue to use its IP solutions when developing new products or new generations of existing products. The Group expects that a significant portion of its future revenue will continue to be generated by a limited number of customers and, as a result, the loss of a key customer, the inability to deepen its relationship with key customers or the impact of other concentration-related risks could have a material adverse effect on the Group’s business, results of operations, financial condition and prospects.

***The Group’s business, operating results and prospects could be negatively affected by existing or emerging competitors.***

The Group is engaged in an intensely competitive segment of the global semiconductor industry. Its competitive landscape is characterised by rapid technological change in product design and manufacturing, price declines and customers that make decisions based on a mix of factors of varying importance. The Group competes on the basis of connectivity IP performance, power consumption, flexibility, footprint and overall chip cost. The relative importance placed on each of these factors varies from customer-to-customer and from market-to-market. The Group’s ability to compete in this environment depends on many factors, including its ability to identify emerging markets and technology trends in an accurate and timely manner, introduce new and innovative products, implement new manufacturing technologies at a sustainable pace and maintain the performance and quality of its products, as well as its competitors’ performance and general economic and industry market conditions.

Many of the Group’s competitors have attempted to increase their share of the wired connectivity IP market and may reduce their licensing and royalty fees to attract customers and win market share at the Group’s expense in the future. Given the long-term benefits that may arise from embedding a given technology in a significant volume of products, competitors may also engage in prolonged price competition in an attempt to establish their technology as an industry standard, which could create significant pricing competition in the short term as the Group works to maintain its existing customers and grow market share and have material negative impacts in the long term if industry standards develop in a direction away from the Group’s IP solutions. The following industry players are key competitors and can impact competitive dynamic:

- third-party IP providers, such as Cadence, Synopsys, Rambus and Credo Semiconductor;
- IP providers who mostly deliver their IP with design services for application specific integrated circuits, (“ASICs”), such as Broadcom and Marvell;
- IP providers, such as Cadence and Synopsys, that engage in bundling of products and services; and
- internal engineering teams at large semiconductor suppliers.

Often the Group competes against larger companies that possess substantial financial, technical, development, engineering, manufacturing and marketing resources. Varying combinations of these resources provide advantages to these competitors that enable them to influence industry trends and adapt quickly to these trends and sustain higher levels of investment or longer periods of lower pricing. Such competitors may be able to develop innovative or competing products, adopt aggressive pricing policies and/or devote greater resources to the marketing, manufacturing and sale of their products, which may allow them to respond more quickly to emerging market opportunities or changes in customer demands and requirements. If any of the Group’s



competitors implement new technologies before it does, those competitors may be able to provide products that are more effective or at lower prices, which could adversely impact the Group's revenue and market share. Competitors may also strategically leverage their existing customer relationships, for example, by bundling their connectivity IP solutions with other products or services that the Group does not offer, such as design services. This may discourage the Group's customers from purchasing its products or cause them to replace the Group's products with competitors' products. Competitors may also be able to influence industry acceptance of their products better than the Group does, to realise technological innovations sooner or to deliver products with performance comparable or superior to that of the Group's products at a lower cost. Any consolidation among competitors could enhance their manufacturing capabilities and efficiency, innovation capabilities, product and service offerings and financial and other resources, which would strengthen their competitive position.

A strong competitive response from one or more of the Group's competitors to its marketplace efforts, or a shift in customer preferences to competitors' products, could result in increased pressure on the Group to lower its prices more rapidly than anticipated, increased sales and marketing expense and/or market share loss. To the extent the Group's profitability is negatively impacted by competitive pressures and reduced pricing, it may have a material adverse effect on the Group's business, financial condition, results of operations and prospects.

***The sales cycle for the Group's IP solutions is lengthy and unpredictable, which makes forecasting customer orders and revenue difficult.***

The sales cycle for the Group's IP solutions is lengthy, often lasting six to nine months from first contact with the customer, including while the customer conducts technical evaluations (including laboratory testing and customer trials) of the Group's technology, as well as competing technologies, to the point that the customer signs an agreement with the Group. In addition, purchasing decisions also may be delayed by a customer's internal budget approval process. Even once an agreement is reached, there is typically a lengthy period, in some cases multiple years, before the customer's product incorporating the Group's design reaches market production.

Given current market conditions, the Group also has less ability to predict the timing of its customers' purchasing cycle and potential unexpected delays in such a cycle. See *"The Group's revenue and operating results are difficult to predict accurately and may fluctuate significantly from period to period, including for a number of reasons beyond its control"*. The Group's revenue in a particular reporting period varies due to a number of factors, including potential order delays, uncertainty in the size of customer orders and end-market demand trends, the impact of which can be exacerbated by the Group's dependence on a limited number of customers to generate a significant amount of revenue. If orders forecasted for a specific customer for a particular period do not occur in that period, the Group's revenue and operating results for that particular period could suffer.

***The nature of the design win process requires the Group to incur expenses without any guarantee that research and development efforts will lead to new licence agreements, or targeted customer wins, which could adversely affect its financial results.***

The Group licenses its wired connectivity IP solutions to its customers who incorporate the Group's IP into their end-products. The selection process associated with the Group's licensing arrangements, called a "design win", is often competitive and long, and may require the Group to incur significant expenditures and dedicate valuable engineering resources to the development of new products without any assurance that it will achieve any design wins. As design wins are often a critical step in winning new customers and new business with existing customers, consistently achieving design wins is critical to the Group's strategy and growth targets.

Because the Group's customers use a particular IP design for an extended period, which typically lasts years in a single end-product or successive generations of the end-product, the Group's revenue in future years may be dependent on design wins that it has been awarded in prior years. While a design win typically results in a licence fee and non-recurring engineering ("NRE") revenue that is paid by the customer, a large part of future revenue at the Group may be based on product royalties. These royalties typically do not begin until the customer has completed the design, manufacturing and testing of its end-product and then commenced shipping its product in high volumes. In most cases, this is at least 18 to 24 months from the time of the original design win and entry into a licence agreement. As a result, the Group's revenue from a particular design win may generally, over the longer term, be significantly dependent on the customer's utilisation of the specific IP solution, which depends on a number of factors outside the Group's control, including demand for the customer's end-product. See *"Demand for the Group's IP solutions is driven by a number of factors, and its operating and financial performance could deteriorate significantly if demand for its IP solutions declines in*

*the future*". If the Group does not continue to achieve design wins in the short term, its revenue in future years will deteriorate.

Further, because of the significant costs associated with qualifying new suppliers, customers are likely to use the same or an enhanced version of semiconductor products from existing suppliers across a number of similar and successor products for a lengthy period of time. As a result, if the Group fails to secure an initial design win, it may lose the opportunity to enter into future licensing agreements for those technologies to that customer for a significant period of time. Failure to achieve initial design wins may also weaken the Group's position in future competitive selection processes because the Group may not be perceived as an industry leader.

The Group's strategy to expand its business model toward greater licensing of chiplet designs may expose the Group to additional risks from the design win process. In particular, as chiplet design and the process of integrating chiplets into a customer's device may be significantly more complex than core IP solutions, the chiplet licensing process may involve lengthier sales cycles, more time intensive design processes and higher levels of investment at the design stage when pursuing design wins than its current IP model. As a result, as the Group develops its chiplet offering and targets growth in this portion of its business, it may face greater risks arising from the design win process, including significant investment in design and engineering stages that do not result in corresponding revenue levels in future periods.

If the Group fails to anticipate or respond to technological shifts or market demands, or to develop new or enhanced products or technologies in a timely manner, it could result in decreased revenue and the loss of design wins to its competitors. Due to the interdependence of various components in the systems within which the Group's products and the products of its competitors operate, customers are unlikely to change to another design upon initial adoption, until the next generation of technology. As a result, if the Group fails to introduce new or enhanced products that meet the needs of its customers or penetrate new markets in a timely fashion, and the Group's designs do not gain acceptance, it will lose market share and its competitive position, which may have a material adverse effect on the Group's business, result of operations, financial conditions and prospects.

***The Group may not generate timely or targeted revenue or margins from its design wins.***

After incurring significant design and development expenditures and dedicating engineering resources to achieve a single initial design win for a product, there can be a significant degree of uncertainty regarding the customer's use of the design, including the volume of production and time period over which the design is utilised, which influence the Group's revenue, in particular royalty revenue, following a design win. The reasons for any such volume uncertainty and/or delay include, among other things, the following:

- changing customer requirements, resulting in an extended development cycle for the product;
- changes in the geopolitical environment and regulatory environment, resulting in customers using solutions from other providers;
- delay in the ramp-up of volume production of the customer's products into which the Group's solutions are designed;
- delay or cancellation of the customer's product development plans;
- competitive pressures on the Group to reduce the selling price for its products;
- the discovery of design flaws, defects, errors or bugs in the products;
- lower than expected customer acceptance of the solutions designed for the customer's products;
- lower than expected acceptance of the Group's customers' products; and
- higher prototyping and development costs than anticipated.

If the Group does not continue to achieve design wins in the short term, or its design wins do not lead to customer order levels or customer end-product production to the extent anticipated, then the Group may not be able to achieve expected revenue levels associated with these design activities. Moreover, even if a customer selects the Group's product, it cannot guarantee that this will result in any new licensing arrangements, as the customer may ultimately change or cancel its product plans, any of which may have a material adverse effect on the Group's business, result of operations, financial conditions and prospects.

***The Group's business is currently significantly dependent on licensing revenue, which may vary period to period.***

Although the Group is targeting growth of the proportion of its revenue derived from royalties in the future, a significant portion of the Group's revenue in the years since its founding, and substantially all of its revenue in the year ended 31 December 2020, has been, by the nature of its business model, derived from entry into licence agreements with customers (including amounts earned for NRE, support and maintenance and related fees). The Group has a diverse business model with licence fee, NRE, support and maintenance, and royalty as key revenue streams. However, in the year ended 31 December 2020, 69 per cent. of the Group's total bookings and substantially all of the Group's revenue was derived from licence and other non-royalty fees. Licence fees have historically formed a component of all of the Group's customer arrangements. These agreements cover the use of a particular IP solution, with the licence fee typically due upon execution of the agreement, subject to a payment schedule, which varies by customer, and receipt of licence fees reflects the timing of entry into new licence agreements with existing or new customers rather than the customer's usage of the design over the longer term. Licence fees are not recognised immediately upon payment, but are recognised over time as required by IFRS. As a result, revenue recognised from licensing arrangements varies significantly from period to period, depending on the number and size of deals closed during a quarter, and are difficult to predict. In addition, the Group's entry into licence agreements will not necessarily be indicative of the amount of bookings or of revenues, including royalty revenues, in any future period.

The Group's ability to succeed in its licensing efforts will depend on a variety of factors, including the performance, quality, breadth and depth of its current and future products, as well as its sales and marketing skills. In addition, some of the Group's licensees may in the future decide to satisfy their needs through in-house design and production. Any failure to obtain future licensing customers would impede the Group's targeted revenue growth and could materially harm its business.

***Royalty rates could decrease for existing and future licence agreements, which could materially adversely affect the Group's operating results.***

Even though the majority of the Group's revenue in recent years has been based on licensing revenue, it expects royalty payments may comprise a material portion of its revenue in the future. Royalties can fluctuate for a number of reasons related to the Group's relationship with a customer and the customer's utilisation of the Group's IP design. For example, ASPs, total bill of materials or percentage of gross margin for semiconductor products may vary during the lifespan of a product, which could negatively impact Group royalties calculated across all of these metrics. In addition, some customers may not be willing to pay royalties at all. In addition, in the future, the Group may be pressured to renegotiate existing licence agreements with its customers, as customers aim to reflect any pricing pressure on an end-product over the lifespan of a particular technology. Certain of the Group's licence agreements provide that royalty rates may decrease in connection with larger quantities of products incorporating its technology. Furthermore, the Group's competitors may lower the royalty rates for comparable products to win market share, which may force the Group to lower its royalty rates as well, even where it has an existing agreement with a set rate. Moreover, royalty rates may be negatively affected by macroeconomic trends (including from the global impact of the COVID-19 pandemic). As a consequence of the above referenced factors, as well as unforeseen factors in the future, the royalty rates the Group expects to receive for use of its technology could decrease, thereby decreasing future anticipated revenue and cash flow.

***Calculation of bookings, backlog and pipeline are subject to certain estimates and assumptions, and bookings may not be fully realised as revenue in future periods.***

The Group calculates bookings as the total value of licence fee, NRE, support and maintenance and some royalties that are expected by the Group based on the customer contracts it has entered into either since its founding (which are referred to as cumulative bookings) or in a given period, in each case whether or not those amounts have yet been recognised as revenue. However, the Group's bookings amount as of any date is not necessarily a definitive predictor of future revenue or results of operations as contracts included in the bookings, or payments thereunder, may be subject to cancellation, revision or delay.

The Group's customer contracts may or may not include customer volume-based royalties, prepaid royalties, "bullet" royalties, or other royalty arrangements, depending on its projected earnings under a given customer contract. As a result, in determining its reported bookings, the Group's management is required to make estimates and assumptions regarding customer requirements and demand levels under the terms of relevant contractual arrangements, including significant judgements about the timing and amount of future revenue levels under these contracts. Although the Group's management bases these estimates on historical experience,

communications with customers and other inputs and assumptions that management believes to be reasonable under the circumstances, customer demand may vary significantly from the Group's expectations for a variety of reasons (see "*Demand for the Group's IP solutions is driven by a number of factors, and its operating and financial performance could deteriorate significantly if demand for its IP solutions declines in the future*"). Furthermore, some of the Group's customers could experience liquidity issues, which could ultimately lead to a customer seeking to postpone or cancel a payment obligation, or repudiate, cancel or renegotiate a contract or going into bankruptcy. Any of the events could result in revenue generated being lower than that anticipated by the Group's reported bookings as of a given date.

As the Group calculates its backlog as the expected value of contracted revenue that has yet to be recognised as at a given date (or bookings less recognised revenue as at that date), its reported backlog is subject to the same assumptions regarding projected revenues and, as a result, may fluctuate or not be recognised as revenue for any of the reasons described above. In addition, these factors influence the Group's bookings pipeline, which generally reflects projected future bookings for approximately 18 to 24 months, based on customer discussions. As these pipeline amounts comprise targeted revenues from contracts that have not been, and may not ultimately be, signed, they are subject to fluctuate as discussions commence or cease, and as customer contracts are entered into and undertaken by the Group.

If the Group's bookings, backlog or pipeline fluctuate significantly or do not reflect revenues recognised in subsequent periods, including for any of the reasons described above, it could have a material adverse effect on the Group's business, financial condition, results of operations and prospects. Readers are therefore cautioned that bookings, backlog and, in particular, pipeline figures are subject to inherent uncertainty.

***Reductions in the average selling prices of the Group's products could have a negative impact on its gross margins and operating margins.***

The market for the Group's products is generally characterised by declining ASPs resulting from factors such as increased competition, the introduction of new products and increased bundling by competitors. The Group may in the future experience substantial period-to-period fluctuations in operating results due to declining ASPs. The Group anticipates that ASPs may decrease in the future in response to the introduction of new products by the Group or its competitors, or due to other factors, including pricing pressures from existing customers and new customers, which would negatively impact the Group's gross and operating margins.

The Group may be unable to reduce the cost of its products sufficiently to enable the Group to compete with others. The Group's cost reduction efforts may not allow it to keep pace with competitive pricing pressures and could adversely affect its gross margins. The Group maintains an infrastructure of facilities and human resources in several locations around the world and, as a result, has limited ability to reduce its operating costs. Accordingly, in order to remain competitive, the Group must continually reduce the cost of developing its products through design and engineering changes. The Group may not be successful in redesigning its products and bringing redesigned products to market in a timely manner, or associated costs may result in an inability to remain competitive or maintain or improve the Group's gross margins and operating margins. To the extent the Group is unable to reduce the prices of its products and remain competitive, its revenue will likely decline, resulting in further pressure on the Group's gross margins and operating margins.

In addition, the costs related to the Group's business model typically include significant NRE costs that customers pay based on the completion of milestones. The Group's operating margin may decline if its customers do not agree to pay for NREs or if they do not pay enough to cover the costs the Group incurs in connection with NRE activities. In addition, the Group's operating margin may decline if it is unable to sell products in sufficient volumes to cover the development costs that it has incurred.

Changes in product mix or customer mix may also lead to a deterioration of the Group's operating margins, even if revenue levels increase in future years. For example, if new customers have significantly different requirements than existing customers, and resulting new licensing arrangements are at lower ASPs and royalty rates than the Group's historical agreements, it could negatively impact the Group's operating margins. Similarly, the Group could experience declining operating margins if efforts to deepen its relationships with existing customers significantly impact product mix, for example if customers retain existing Group technologies for certain products for a lengthy period of time, at declining ASPs and royalty rates, while only implementing newer (and higher-ASP) Group solutions into a limited range of newer designs, or not implementing new Group solutions at all. Although the Group has no plans to shift its design strategy and product offering away from cutting-edge designs and technologies toward commodified solutions, it could experience declining operating margins if ASPs and royalty rates for these technologies fall across the industry, which they could do for reasons beyond the Group's control. Furthermore, consolidation among the Group's

customers may increase their negotiating leverage to extract concessions from the Group in royalty rates, licensing fees or other revenue streams, which could negatively impact the Group's revenues and operating margins.

If the Group's gross margins and operating margins are significantly negatively influenced by any of these factors, it could have a material adverse effect on the Group's business, financial condition and results of operations and its ability to grow its business.

***Because the Group's IP solutions are complex, the detection of errors in its products may be delayed, and delivery of products with defects could harm its credibility, decrease market acceptance of its products or lead to product liability claims against the Group.***

The Group's IP solutions are complex and may contain errors, defects and bugs when introduced. If the Group delivers product designs with errors, defects or bugs, its credibility and the market acceptance of its products could be significantly harmed. Furthermore, the nature of the use of the Group's products may also delay the detection of any such error or defect. As the Group expands its chiplet offering in the coming years, it may face increased risks of errors, given the higher level of complexity inherent in these types of products than existing core IP. If the Group's IP solutions or other products contain errors, defects and bugs, then it may be required to expend significant capital and resources to alleviate these problems either as a legal or reputational matter. This could result in the diversion of technical and other resources from the Group's other development efforts. Any actual or perceived defects, errors or failure in the Group's products could lead to product liability claims or lawsuits against the Group or against its customers. A successful product liability claim could result in substantial cost and divert management's attention and resources, which could have a material adverse effect on the Group's business financial condition, results of operations and prospects.

***The Group may be unable to obtain in a timely manner and at a reasonable cost equipment that is necessary for it to remain competitive.***

The Group's operations and ongoing expansion plans depend on its ability to obtain an appropriate amount of equipment and related services from a limited number of suppliers in a market that is characterised from time to time by limited supply and long delivery cycles. During such times, supplier-specific or industry-wide lead times for delivery can be as long as six months or more. To better manage its supply chain, the Group has implemented various business models and risk management contingencies with suppliers to shorten the procurement lead time. However, the growing complexities, especially in high-speed test equipment and high-speed board fabrication equipment, may delay the timely availability of the equipment and parts needed to exploit time sensitive business opportunities and also increase the market price for such equipment and parts. If the Group is unable to obtain equipment in a timely manner to fulfil the Group's customers' demand on technology and production capacity, or at a reasonable cost, it could have a material adverse effect on the Group's business, financial condition, results of operations and prospects.

***Demand instability for foundry services may result in a lower rate of return on investments than previously anticipated and the Group's business and operating results may be adversely affected.***

The demand for foundry services by integrated device manufacturers ("IDM(s)"), fabless semiconductor companies and systems companies has been increasing since the macroeconomic recovery of 2009. The Group has made significant investments in anticipation of the continuation of this trend and, as such, any reversal of this trend will likely result in a lower rate of return on its investments, as new design wins decline and royalty payments for existing products decline over time. As a result, if these factors cause the Group's customers to ship lower product volumes, the Group's business and operating results could be adversely affected.

***Failure to attract and retain key members of the Group's senior management team and its key employees may impair the Group's ability to operate its business effectively.***

The Group's success depends, in large part, on the continued contributions of its senior management team, and in particular, the services of Tony Pialis, its President and Chief Executive Officer, and John Lofton Holt, its Executive Chairman, who have guided the Group's growth through its early stages and are instrumental in developing both its technical capabilities and growth strategy, along with Dan Aharoni, its Chief Financial Officer, and other members of the senior management team. If key members of the senior management team were to leave the Group, it could have a significant impact on its strategy, customer relationships and prospects.

In the industries in which the Group operates, there is significant competition for highly qualified management and technical personnel. In addition to its founders and senior management team, the Group's success depends

to a significant extent upon certain of its key employees who have the technical skills critical to the effective operation of its business, the loss of which could materially harm its business. If the Group is unsuccessful in motivating and retaining its key employees in the future, it could negatively affect existing customer relationships and the Group's ability to continue its research and development and other operating activities.

Effective succession planning is also important for the Group's long-term success. Failure to ensure effective transfers of knowledge and smooth transitions involving key employees and, in particular, senior management could hinder the Group's strategic planning and execution. The Group also faces risks identifying and attracting qualified personnel. The Group's growth strategy will require it to continue developing cutting-edge IP solutions in order to bring innovative and advanced technological solutions to market. As such, the Group's future operations will require it to continue to recruit talented personnel, such as engineers and researchers for its research and development teams. Competition for highly skilled technical employees in the Group's field is intense, and the Group may not be able to hire new personnel to support its operations and planned growth at compensation levels consistent with its existing compensation and salary structure, or at all.

Any inability to successfully retain existing key personnel, or to recruit personnel with relevant technical skills and experience in line with its growth strategy, could be significantly detrimental to the Group's product development programmes and could have a material adverse effect on its business, results of operations, financial condition and prospects.

***If the Group is unable to manage its growth effectively, it may not be able to execute its business plans and its operating results could suffer.***

In order to succeed in executing the Group's business plan, the Group will need to manage its growth effectively as it makes significant investments in research and development and sales and marketing, and expand its operations and infrastructure in Canada, Mexico, India, the United Kingdom, China and elsewhere. If the Group's revenue does not increase to offset these increases in its expenses, it may not achieve or maintain profitability in future periods.

Achieving targeted growth levels may require longer term investment in the Group's design and development, IT, engineering and other capabilities, which could involve substantial managerial and financial resources. Any failure to successfully implement such enhancements and improvements could have a negative impact on the Group's ability to grow its IP offerings and customer relationships. If the Group is unable to manage its growth effectively, it may not be able to take advantage of market opportunities or develop new semiconductor solutions, and it may fail to satisfy customer product or support requirements, maintain the quality of its solutions, execute its business plan or respond to competitive pressures, any of which could negatively affect its brand, results of operations and overall business.

***The Group's revenue and operating results are difficult to predict accurately and may fluctuate significantly from period to period, including for a number of reasons beyond its control.***

The Group's revenue and operating results have fluctuated in the past and may fluctuate from period to period in the future due to a variety of factors, many of which are beyond its control. Factors relating to the Group's business, the industry in which it operates and the broader macroeconomic environment may contribute to these fluctuations. These factors include the following, as well as other factors described elsewhere in this Registration Document:

- the gain or loss of significant licensees, partly due to the Group's dependence on a limited number of customers generating a significant amount of annual revenue;
- any delay in execution of any anticipated licensing arrangement;
- delays in revenue recognition for some licence agreements based on percentage of completion of customised work or other accounting reasons;
- the timing and volume of orders and production by the Group's customers, as well as fluctuations in royalty revenue resulting from fluctuations in unit shipments by its licensees;
- royalty pricing pressures and reduction in royalty rates due to an increase in volume shipments by customers, end-product price erosion and competitive pressures;
- earnings or other financial announcements by the Group's major customers that include shipment data or other information that implicates expectations for its future royalty revenue;
- the mix of revenue among licensing and related revenue, and royalty revenue;

- the timing of the introduction of new or enhanced technologies by the Group and its competitors, as well as the market acceptance of such technologies;
- the discontinuation, or public announcement thereof, of product lines or market sectors that incorporate the Group's technology by its significant customers;
- the Group's lengthy sales cycle and specifically in the third quarter of any fiscal year during which summer vacations slow down decision-making processes of the Group's customers in executing contracts;
- delays in the commercialisation of end-products that incorporate the Group's technology;
- currency fluctuations, mainly the USD-CaD pairing and the USD-GBP pairing;
- fluctuations in operating expenses and gross margins associated with the introduction of, and research and development investments in, new or enhanced technologies and adjustments to operating expenses resulting from restructurings;
- the impact of new accounting pronouncements, including the new revenue recognition rules;
- statutory changes associated with research tax benefits applicable in Canada and the United Kingdom for technology companies;
- the Group's ability to scale its operations in response to changes in demand for its technologies;
- entry into new end-markets that utilise the Group's wired connectivity IPs;
- changes in the Group's pricing policies and those of its competitors;
- restructuring, asset and goodwill impairment and related charges, as well as other accounting changes or adjustments;
- general political conditions, including global trade wars resulting from tariffs, export controls, and business restrictions and bans imposed by government entities, as well as other regulatory actions and changes that may adversely affect the business environment;
- general economic conditions, including effects on the semiconductor industry and sales of consumer products into which the Group's technologies are incorporated;
- delays in final product delivery due to unexpected issues introduced by the Group's service or electronic design automation ("EDA") tool providers; and
- delays in ratification of standards that can affect the introduction of new products.

Each of the above factors is difficult to forecast, and these or other factors unknown to the Group could harm the Group's business, financial condition and results of operations. Moreover, the semiconductor industry remains volatile, which makes it extremely difficult for the Group and its customers to accurately forecast financial results and plan for future business activities. As a result, the Group's past operating results should not be relied upon as an indication of future performance.

***The Group has a limited operating history. It may not sustain historical growth levels or targeted future growth and it may not be successful in achieving its strategic objectives.***

The Group commenced operations in 2017 and has experienced significant growth in its operations and financial performance since that time. However, as a relatively young business, the Group is subject to various risks inherent in the development of a new business, including as a result of establishing its reputation, fostering existing customer relationships and winning new customers, and building and maintaining key personnel.

The Group's limited operating history reflects the development of its DSP-based IP architecture, introduction of new wired-connectivity IP capabilities and acceleration in customer growth over the period since its founding in 2017. Although the Group's growth strategy aims to leverage its existing IP capabilities and customer relationships to drive continued growth, the length of time since the Group's founding may make it difficult for readers to evaluate the Group's ability to successfully implement or execute its business plan over the longer term, including its aims to maintain its existing technical leadership for key IP solutions, win new customers and deepen its relationships with existing customers, expand its addressable markets and grow its operations. In the coming years, the Group may face challenges managing its growth and implementing its strategy, including broadening its product portfolio, growing its chiplet offering (including, in the future, into potential production of chiplet silicon devices), diversifying its business model and expanding its global operating footprint. In

particular, expansion of the Group's operating footprint will comprise a key component of its growth strategy, including further development of its channel strategy in China and other Asia-Pacific region markets and its product partnership with Wise Road Capital (which, through affiliate funds, owns approximately 10 per cent. of the Company's issued ordinary share capital), and, in the future, additional investment in onshore capabilities. This strategy may include establishment or acquisition of production capacity in China, which would require significant investment levels to set-up and operate, potentially creating further risks to the Group's operating and financial results and performance.

Continued growth may place a significant strain on the Group's management and key employees, as well as its operating and financial systems and administrative resources, which could require the Group to hire additional personnel or acquire additional resources to support essential activities. The Group's growth strategies, including investment in new development and design capabilities, wired connectivity technologies and operating activities (including expanding its footprint into China) may not be successful or support targeted financial returns. If the Group cannot effectively manage its expanding operations and costs, it may not be able to grow as quickly or as profitably as expected or at all.

The Group's targeted growth and strategic plans to operate and expand its business depends on the availability of adequate capital, which in turn depends on cash flow generated by its business. The Group believes that its existing cash resources will be sufficient to finance its continued operations, growth strategy and planned capital expenditures. However, over the longer term, the Group may require further resources to continue to adapt to changing technologies and technical requirements, to pursue new developments that meet industry development trends and demands or perceived opportunities, or to acquire other businesses, products or technologies, which it may be unable to do on commercially acceptable terms or the desired timing. Although the Group does not have plans to seek material debt funding, it may in the longer term seek to raise financing to fund future acquisitions, strategic growth opportunities and other investment in its business; any such debt would result in increased expenses and could result in covenants that would restrict the Group's operations and its ability to incur additional debt or engage in other capital-raising activities.

If the Group is unable to manage these risks or to successfully implement its growth strategy, it may not be able to satisfy anticipated market needs or realise targeted demand levels for its IP solutions, which could have a material adverse effect on its business, results of operations, financial condition and prospects.

***The Group is subject to risks associated with the Product Partnership.***

In March 2021, the Group entered into a non-binding term sheet for a product partnership with Wise Road Capital in relation to a licence agreement covering specified Alphawave IP solutions and a non-binding investments framework in respect of onshore development and licensing activities (the "**Product Partnership**") to better enable it to serve existing and targeted customers in the Asia-Pacific region, in particular China, Taiwan and Macau. Definitive agreements covering the licence arrangements and investments framework are being negotiated. There can be no assurance that definitive agreements will be reached or, if they are, that the Group will realise its targeted objectives from these arrangements. In particular, while the Group believes that the partnership with Wise Road Capital, assuming definitive agreements are entered into, will support growth in customer use of the Group's IP solutions in China and the Asia-Pacific region and, as a result, the Group's future financial performance, there is no guarantee that the arrangements will lead to material growth in customer numbers or increased royalties. In addition, the Group cannot provide any assurance that a desirable development or investment opportunity will be identified with Wise Road Capital and, as a result, that it will be able to fulfil its strategic growth objectives in the Asia-Pacific region on the timeframe it has targeted. Any of the foregoing risks could materially reduce the expected return on potential investment pursuant to the Product Partnership and adversely affect the Group's business operations, financial performance or prospects.

***The Group risks harming its business and competitive position as it may not be able to protect its intellectual property, including its proprietary technology, its development and know-how from competitors or public disclosure.***

The Group's success also depends on its ability to protect its intellectual property, which is accomplished through a combination of trade secrets, contractual provisions, confidentiality agreements, licences and other methods, to protect the Group's proprietary technologies.

In particular, the Group primarily relies on trade secrets and contractual restrictions on disclosure and use (such as confidentiality agreements or licences) of its intellectual property with various parties. However, the Group cannot be certain that its trade secrets, know-how or other proprietary information will not become known or that its competitors will not independently develop their own proprietary technology or effective competing



technologies. Consequently, disputes may arise concerning the ownership of intellectual property, the use of proprietary technology, trade secrets, know-how or other proprietary information or the applicability of confidentiality agreements and the Group may be forced to initiate legal proceedings to enforce its intellectual property rights or its ability to exploit its proprietary technology, which may be costly and divert efforts and attention of its management.

Monitoring such unauthorised use, misappropriation or disclosure is difficult and, despite the Group's efforts, unauthorised parties may or may attempt to copy or otherwise obtain and use its proprietary technology, trade secrets, know-how or other proprietary information. The Group could also face challenges that its designs and technology developments infringe the patent, trade secret or other intellectual property rights of others, which could require the Group to obtain the right to use such IP or, in extreme circumstances where it is unable to do so on commercially acceptable terms or at all, require the Group to abandon the relevant development efforts.

Any failure to protect, maintain and enforce the Group's intellectual property and other proprietary information could impair its competitiveness, which could have a material adverse effect on its business, results of operations, financial condition and prospects.

***Assertions by third parties of infringement of their intellectual property rights may result in damage claims and litigation costs, force the Group to modify its products or processes or prevent it from selling its products.***

The Group cannot rule out that competitors or other companies may assert claims that its products infringe their intellectual property rights (including patents, trademarks or other forms of intellectual property) or that its customers will claim indemnification resulting from infringements. Such litigation may involve patent holding companies or other adverse patent owners who have no relevant product revenue. As the Group seeks to develop and implement new products, technologies and processes, it may not always be in the position to adequately identify such third-party rights or assess the scope and validity of these third-party rights due to the large and complex international intellectual property landscape. In addition, there is also a "black-out period" between the priority date of a patent and the subsequent publication, and during this "black-out period" the Group may not be aware of any infringement of intellectual property. Claims for infringement of intellectual property rights may also result from joint R&D projects, if it is unclear who owns the resulting technology.

Any action to determine the validity of claims alleging infringement of patents and other intellectual property rights, whether or not with merit, determined in the Group's favour or settled by it, may subject it to protracted and expensive litigation, which could divert attention and resources of its management and technical personnel from operating its business. Such matters could also involve disputes between third parties that relate in part to the Group's intellectual property and result in the Group becoming directly or indirectly involved in such matters. If claims are successfully asserted against the Group, or otherwise limit its ability to use its intellectual property, the Group could be required to pay substantial damages and could be prevented from selling some of its products. The Group may also be obligated to indemnify its customers or other business partners in any such litigation. Furthermore, the Group may need to obtain licences from third parties alleging infringement or substantially re-engineer or rename its products in order to avoid infringement, which it may not be capable of doing on commercially acceptable terms or at all. In the course of such infringement claims, trade secrets, know-how or other proprietary information could be compromised.

If the Group is prevented from selling some or all of its products, it may be subject to a loss of revenue and customers, as well as reputational damage, which could negatively affect its business, results of operations, financial condition and prospects. Any significant impairment of the Group's intellectual property rights from any litigation it faces could harm its business and its ability to compete. In addition, any litigation put forth against the Group could be expensive, time-consuming and may divert the efforts of the Group's technical staff and management, which could harm its business, whether or not such litigation results in a determination favourable to the Group. Furthermore, any enforcement of the Group's patents or other intellectual property may provoke third parties to assert counterclaims against the Group, resulting in further costs.

***The success of the Group's wired connectivity IP is closely tied to leading manufacturing processes at key third-party foundries.***

The Group's proprietary wired connectivity IP design is closely tied to the success of a limited number of third-party wafer fabrication contract manufacturers such as Taiwan Semiconductor Manufacturing Company ("TSMC") and Samsung Electronics Co., Ltd. ("Samsung"). The Group works closely with TSMC and Samsung on next-generation advanced manufacturing processes, such as N7, N6, N5 and N3 for TSMC and Samsung 7nm FinFET and 5nm FinFET technologies, as well as other technologies. These manufacturing

technologies are critical for the Group's products to maintain attractive performance, power management and footprint characteristics. The Group's customers rely on TSMC and Samsung for the fabrication of semiconductor wafers used to manufacture products that incorporate the Group's IP. If either TSMC or Samsung were to no longer support the Group's designs in their manufacturing processes, it would limit the ability of the Group's customers to incorporate the Group's IP into products manufactured by TSMC or Samsung, which would harm its business. In addition, if TSMC and Samsung are not successful in their technology development and innovation, the performance of the Group's future products may be affected, greatly impacting its business and financial performance.

The Group's innovation is dependent on deep collaborative relationships with its third-party wafer fabrication contract manufacturers. Converting or transferring the Group's technology to other contract manufacturers may take significant qualification and design time, and may not be competitive with TSMC and Samsung. In addition, if TSMC and Samsung do not grow their foundry customer base in the future for any reason, the adoption of the Group's wired connectivity IP solutions and its revenue levels may be lower than anticipated.

***If the Group's customers encounter sustained yield problems or other delays at their third-party wafer fabrication facilities or in the final assembly and test of their products, they may lose sales and damage their customer relationships, which could impact the Group's business and financial performance.***

The manufacture of the Group's customers' products, including the fabrication of semiconductor wafers and the assembly and testing of final products, involves highly complex processes. For example, minute levels of contaminants in the manufacturing environment, difficulties in the wafer fabrication process or other factors can cause a substantial portion of the components on a wafer to be non-functional. These problems may be difficult to detect at an early stage of the manufacturing process and often are time-consuming and expensive to correct. Moreover, an increase in the rejection rate of products during the quality control process before, during or after manufacture and/or shipping of such products, results in lower yields and margins. Poor manufacturing yields over a prolonged period of time could adversely affect the Group's customers' ability to deliver their products on a timely basis and harm their relationships with customers, which could have a material adverse effect on the Group's customers' business, financial condition, results of operations and prospects. As a result, the Group's business and financial performance may suffer and its royalties may decrease due to its customers' manufacturing disruption.

***A disruption or wafer supply shortage at third-party wafer fabrication facilities that service the Group's customers (or, potentially in the future, the Group), could impact production efficiency and operations for the Group and its customers.***

Many of the Group's customers rely on a limited number of third-party wafer fabrication contract manufacturers, such as TSMC and Samsung, for the fabrication of semiconductor wafers used in the manufacture of products that incorporate the Group's IP. Furthermore, the Group has ongoing partnership agreements related to customers manufacturing products based on its IP, with both TSMC and Samsung. A disruption of wafer supply at fabrication facilities owned by TSMC and Samsung may require the Group's customers to transfer manufacturing processes to a new location or facility, or suspend operations entirely. Significant disruptions at the Group's customers' third-party wafer fabrication facilities could occur as a result of a number of events, including, for example, the recent COVID-19 pandemic and certain natural disasters, such as tsunamis, typhoons or earthquakes (particularly in Taiwan, where TSMC is located, and elsewhere in the Pacific Rim close to fault lines). Converting or transferring such fabrication processes from one of the Group's customers' primary facilities to an alternative or backup facility due to a disruption would likely be expensive and could take substantial time, given the Group's customers' highly complex manufacturing and fabrication processes, which incorporate its proprietary technologies. Given such a transition, the Group's customers may attempt to meet customer demand through their existing inventories, or may attempt to modify partially finished goods to meet the required fabrication specifications. Given the rapid obsolescence timeline to which the Group's customers' products are typically subject, they may not maintain significant levels of excess inventory and, as a result, it is unlikely that existing inventory will be sufficient to meet their customer demand during such a transition. As a result, the Group's customers may not be able to meet their customer needs during such a transition, which would negatively impact their sales and potentially damage their customer relationships and reputation, any of which could also have a material adverse effect on the Group's customers' business, financial condition, results of operations and prospects. As a result, the Group's business and financial performance may suffer and its royalties may decrease due to its customers' manufacturing disruption.

Wafer shortages and general supply disruptions at TSMC and Samsung may significantly impact operations for the Group's customers, and therefore impact entry into new licensing arrangements with these customers, and

royalties collected from these customers. Furthermore, in the event of disruptions at TSMC and Samsung, the Group and its customers may not be able to find an alternative wafer supplier quickly.

The Group's customers' foundry partners may experience supply shortages due to high demand for silicon wafers. If this elevated demand is not offset by an increase in foundry capacity, the foundries' supply of wafers and other materials could become limited. Such shortages raise the likelihood of potential wafer price increases, wafer shortages or shortages in materials at production and test facilities, resulting in potential inability to address customer product demands in a timely manner, which may negatively impact the Group's customers' sales and potentially damage its business and financial performance.

In addition, if the Group decides in the future to market finished products, a disruption at any of its wafer suppliers may have a direct impact on its ability to service its customers.

***The international scope of the Group's operations exposes it to a number of global and regional economic, political, legal, regulatory and other risks.***

The Group conducts a substantial portion of its business with respect to its operations, customers and third-party suppliers outside of the United Kingdom. In the year ended 31 December 2020, substantially all of the Group's revenue was derived from customers located outside of the United Kingdom and Canada. As a result, the Group's operations rely on a global network of distributors, including production facilities in Asia/Pacific and partnerships, and the Group's exposure to China is expected to increase significantly in the coming years as a result of the Product Partnership. Although the Group's exposure to an international customer base supports its targeted development in the coming years, it also exposes the Group to increased risks such as the performance of national economies where its customers and their customers operate and sell end-products, difficulties in managing foreign operations, political and economic instability and unexpected changes in regulatory requirements.

***The Group's international operating footprint and the global nature of its customer base exposes it to risks that could have a material adverse effect on its business, financial condition and results of operations.***

The international diversification of the Group's business exposes it to a number of risks, both globally and regionally, as described below:

*The Group's international operations and customer base expose it to global geopolitical factors.*

A variety of global geopolitical factors have at times in recent years negatively influenced the industries in which the Group and its customers operate, including international disputes that have created disruptions in international trade, in particular between the United States and China, resulting in the imposition of trade barriers, tariffs, and the ongoing uncertainty in trade relations, particularly with respect to entities in China having access to foundries and design tools required for semiconductor fabrication and design. It is uncertain the extent to which these and other protectionist measures will be implemented globally in the future, including any changes to sanction and penalty regimes that could arise as a result and potentially dampen investment globally and create obstacles to the Group's targeted growth. If these disputes intensify, for example, if regulatory changes were to limit the Group's ability to sell products to large customers or to customers in high-demand jurisdictions such as China, and no exemptions to continue trading were available, they could lead to a significant reduction in revenue levels for the Group. Conversely, if geopolitical tensions ease and result in a relaxation of trade restrictions between the United States and China, in particular in technology sectors, the Group could face increased competition in China from US semiconductor companies, which could limit the effectiveness of its growth strategy in the coming years.

As a UK company, the Group is also subject to the impact on trading, regulatory and other conditions resulting from the United Kingdom's departure from the European Union. Following its formal departure from the European Union on 31 January 2020, the United Kingdom ceased trading as part of the European Union on 31 December 2021 following entry by the United Kingdom and the European Union into the EU-UK Trade and Cooperation Agreement (the "EU-UK TCA"). The impact of the changes in the trading relationship between the United Kingdom following entry into and implementation of the EU-UK TCA is uncertain and may continue to change in the coming years, and the Group faces uncertainties regarding the tax, legal and regulatory framework that applies to trade between the United Kingdom and the European Union, the United States and other countries in the future.

*The political, legal, administrative and regulatory systems and other domestic conditions in certain of the countries where the Group and its customers operate may create or heighten operational risks.*

The Group's operating and financial performance can also be influenced by domestic economic, political or social instability or volatility, interference or unexpected changes by government authorities in the business or regulatory environment in the countries where it and its customers operate. The Group also faces risks in some of its geographical markets related to underdeveloped or otherwise insufficient legal and administrative systems. These risks relate to potential difficulties enforcing contracts, difficulties in enforcing patents or adequately protecting its intellectual property, sudden or unexpected increases in wages and national and regional labour strikes, difficulty ascertaining the creditworthiness of new customers and in collecting on accounts receivable, bribery and corruption as well as crime and fraud.

In addition, the Group may be subject to:

- limitations on repatriation of earnings or the conversion of foreign currencies;
- changes in foreign tax law;
- reduced protection of intellectual property rights and heightened exposure to intellectual property theft in some countries;
- longer collection periods for receivables and greater difficulty in collecting accounts receivable;
- inability to continue to offer competitive compensation in certain growing regions, and differing employment practices and labour issues;
- licensing requirements for exports by the various governments, which may lengthen the sales cycle or restrict or prohibit the licensing of certain products; and
- public health emergencies, such as the recent coronavirus outbreak and the subsequent public health measures, affecting the Group's employees, suppliers, customers and its ability to provide services and maintenance in the affected regions.

These and other domestic conditions in countries where the Group and its customers operate could lead to variations in costs or expenses associated with the Group's international operations.

These and other risks related to the international nature of the Group's business may often be impossible to predict. The Group's inability to manage these and other risks could have a material adverse effect on its business, results of operations, financial position and prospects.

***The Group may make acquisitions in the future that could disrupt its business, cause dilution to its shareholders and harm its business.***

In the future, the Group may acquire other businesses, products or technologies. The Group's ability to make acquisitions and successfully integrate personnel, technologies or operations of any acquired business is unproven. If it completes acquisitions, the Group may not achieve the combined revenue, cost synergies or other benefits from the acquisition that it anticipates, strengthen its competitive position or achieve its other goals in a timely manner, or at all, and these acquisitions may be viewed negatively by its customers, financial markets or investors. In addition, any acquisitions the Group undertakes may lead to difficulties in integrating personnel, technologies and operations from the acquired businesses and in retaining and motivating key personnel. Acquisitions may disrupt the Group's ongoing operations, divert management from their primary responsibilities, subject the Group to additional liabilities, increase its expenses and adversely affect its business, results of operations and financial condition. Acquisitions could also result in an increase in amortisation expense related to identifiable assets acquired, potentially dilutive issuances of equity securities or the incurrence of debt, any of which could harm the Group's business. In addition, potential future acquisitions may result in impairments of goodwill and other acquired intangible assets, which could lead to the recognition of significant losses if developments are contrary to the Group's expectations, which could have a material adverse impact on the Group's results of operations, financial condition and prospects.

In the future, the Group may complete acquisitions that result in a significant amount of intangible assets, including goodwill, on its consolidated balance sheet. In this case, apart from goodwill, the Group's intangible assets could consist mainly of intangible customer base assets and technologies, as well as patents and licences. The Group tests goodwill and other intangible assets with an indefinite useful life or which are not yet available for use (such as R&D projects) for impairment at least annually or when there is a clear intermediate indication that an impairment may be required.

Other intangible assets with a determinable useful life are amortised on a straight-line basis over the period of their useful economic life, except where their actual depletion demands a different amortisation pattern. Determination of the expected useful lives of such assets and the amortisation patterns is based on estimates of the period during which they will generate cash flows. An impairment test is performed if there is an indication of possible impairment. As the Group utilises a discounted cash flow methodology to calculate the fair value of its cash-generating units and groups of cash-generating units (i.e., strategic business entities or groups of strategic business entities, as well as certain product families), any prolonged weakness in demand for a specific product line or business could result in an impairment.

Although the Group believes the estimates of the useful lives of certain assets, assumptions concerning the macroeconomic environment and developments in the industries in which it operates, and estimates of the discounted future cash flows, are appropriate, changes in assumptions or circumstances could require changes in the analysis. This could lead to the recognition of additional impairment losses in the future if developments are contrary to expectations, which could have a material adverse impact on the Group's results of operations, financial condition and prospects.

***The Group's financial results may be affected by fluctuations in exchange rates.***

Due to the locations of Group's primary operating premises, the majority of the Group's costs, a significant portion of which relate to personnel expenses, are paid in Canadian Dollars and, going forward, a growing portion may also be paid in Pound Sterling. As a result, its business is exposed to exchange rate fluctuations, in particular with respect to the US Dollar, in which almost all revenue is earned. Exchange rates between the US Dollar and the Canadian Dollar and Pound Sterling have experienced periods of volatility in the past, and they may do so in the future. A significant decline in the value of the US Dollar against the Canadian Dollar or Pound Sterling would have a negative effect on the Group's profitability (in particular in relation to expenses incurred in Canadian Dollars or Pound Sterling) and its reported financial results (when translating Canadian Dollar and Pound Sterling expenses to US Dollars). As a result, the Group's inability to manage its foreign exchange risk could have a material adverse impact on the Group's results of operations, financial condition and prospects.

***The Group's operations rely on complex information technology ("IT") systems and networks, and any disruptions in such systems or networks could negatively impact its operations and reputation.***

The Group relies heavily on distributed and centralised IT systems and networks to support business processes as well as internal and external communications. The consistent, efficient and secure operation of its IT systems, including computer hardware, software and networks, including those of third-party IT providers or business partners engaged by the Group, is critical to the successful performance of its operations and its reputation. Although the vast majority of the Group's design tools, software and other IT system components are off-the-shelf solutions utilised via general commercial licences, it could over the longer-term experience disruptions or be required to undertake significant IT investment if these third-party components were to become unavailable.

Additionally, the Group collects, stores and processes certain data, including proprietary business information, as well as customer and employee data, and may have access to confidential or personal information that is subject to privacy and data security laws, regulations or customer-imposed controls. As a result, the Group's internal IT systems and networks are susceptible to malfunctions and interruptions from a variety of sources, including due to unauthorised access, cyber-attacks, equipment damage, deficient database design, power outages, computer viruses and a range of other hardware, software and network problems, and the Group from time to time experiences intermittent malfunctions and interruptions. In particular, like most internet-connected businesses, the Group experiences attempted security incidents of varying degrees on an ongoing basis, which may involve unauthorised access, misuse or disclosure of intellectual property or confidential or proprietary information regarding the Group's business or its customers or business partners. Because the techniques used to obtain unauthorised access to or sabotage networks and systems change frequently, the Group may be unable to anticipate these techniques or to implement adequate protections. In the past, there have been attempts by third parties to penetrate and/or infect the Group's network and systems with malicious software in an effort to gain access to its network and systems. Several large organisations have been infected by "ransomware," through which an attacker gains access to the organisation's computer files, renders them temporarily inaccessible and threatens to permanently delete them if a cash ransom is not paid by a specified deadline. Third parties may continue to attempt to fraudulently induce employees, users or customers to disclose sensitive information in order to gain access to the Group's network and systems. The Group's IT personnel may not be able to resolve the issues that arise in a timely manner or at all.

Some potential causes that can lead to a malfunction or interruption of the Group's IT systems or networks, or third-party systems, networks and "cloud" servers on which the Group relies, are difficult to detect and may only be detected once the risk has already materialised. The costs to prevent, detect or alleviate cyber or other security problems, bugs, viruses, worms, malicious software programs and security vulnerabilities could be significant, and efforts to address these problems may not be successful. A significant or large-scale malfunction or interruption, whether malicious or otherwise, of one or more of the Group's IT systems or networks could adversely affect its ability to keep its operations running efficiently and affect research and development efforts and customer service, particularly in the country or region in which the malfunction occurs. Moreover, an extended outage at a telecommunications network utilised by the Group's IT systems or networks or a similar event outside its control could lead to an extended unanticipated interruption of its IT systems activities. In the event of a security breach, the Group's business and reputation could be harmed and it could be subject to legal and regulatory claims.

Significant disruptions to the Group's IT systems could lead to product development delays, difficulty communicating with customers or loss of customer or other data, any of which could have a material adverse effect on its business, results of operations, financial position and prospects.

***The Group may depend on sales representatives to generate a significant portion of its new licensing agreements and complete order fulfilment.***

The Group has not significantly relied on channel sales partners (including sales representatives, distributors, and resellers) in the past. However, like other rapidly growing companies in the semiconductor space, the Group may choose to leverage channel sales partners in the future, which could create new risks for its business, including a key channel sales partner materially defaulting on a contract or otherwise failing to perform, or concentrations of credit risk in its trade accounts receivable related to channel sales partner accounts. If the Group's future licensing arrangements rely significantly on channel sales partners, material reduction of effort by a channel sales partner to sell the Group's products or a material change in its relationship with one or more channel sales partners may reduce access to certain end customers and adversely affect the Group's ability to sell its products.

Unpredictable economic conditions may adversely impact the financial health of some of channel sales partners, which could increase the Group's credit risk exposure relating to channel sales partners' solvency, the inability of channel sales partners to obtain credit to finance the purchase of the Group's products, or delayed payment for such purchases. If the Group's future operations rely significantly on channel sales partners, its business could be harmed if the financial health of these channel sales partners impair their performance and the Group is unable to secure alternate channel sales partners.

***The Group's insurance coverage may not be adequate to compensate for any interruptions or loss of business.***

The Group endeavours to ensure that it carries insurance for such risks and in such amounts as management considers reasonably prudent, in light of risks common to the industry and applicable to the Group's operations. These policies include product- and environmental-liability insurance, directors' and officers' liability insurance, property and business interruption insurance, transport and marine cargo insurance, cyber insurance, corporate travel insurance, collective accident insurance and legal protection insurance. However, the Group is subject to the risk that its estimations regarding the levels and types of insurance that it carries are incorrect, or the Group's insurance and its contractual limitations on liability may not adequately protect it against liability for events involving, without limitation, a catastrophic incident, such as an explosion, a fire or flooding, any of which could result in interruption and closure of the particular location impacted, or other environmental liability in excess of insurance cover. The Group may also face risks arising from the cost of insuring its operating activities, in particular, as it targets continued growth in the future. The Group may encounter difficulties renewing insurance policies on the same or similar commercial terms in the future, or in a timely manner, which may lead to gaps in coverage, higher premiums or changes in coverage in the future, in particular if the Group is subject to one or more events for which it seeks coverage for losses in the coming years. Although most of the Group's insurance policies cover against losses resulting from business interruption, there can be no assurance that the Group will be able to recover the full extent of loss following a period of severe or prolonged disruption to the Group's operations.

***Industrial espionage of the Group's internal trade secrets and intellectual property, resulting in disclosure of its trade secrets and intellectual property to competitors or customers, could result in loss of revenue and business.***

The Group increasingly relies upon technology systems and infrastructure, including computer-aided-design (“CAD”) and EDA tools from third-party vendors. The Group's technology systems, infrastructure and CAD tools are potentially vulnerable to data privacy breaches by employees and others. Both permitted and unauthorised access to its systems may pose a risk that sensitive data may be exposed to unauthorised persons or to the public, and render it inaccessible or permanently lost. The increasing use and evolution of technology creates additional opportunities for the unintentional dissemination or intentional destruction of confidential or proprietary information stored in the Group's systems, portable media or storage devices. The Group could also experience a business interruption, information theft or reputational damage from industrial or state-sponsored espionage attacks, malware or other cyber incidents or data breaches, which may compromise its system infrastructure or lead to data breaches, either internally or at the Group's third-party providers or other business partners. Such incidents could compromise the Group's trade secrets or other confidential information and result in such information being disclosed to competitors or customers and becoming less valuable, which could result in loss of revenue and business. Additionally, in response to the COVID-19 pandemic, a majority of the Group's office employees are working remotely, which may increase the risk of cyber incidents or data breaches. Breaches in security, system interruptions and unauthorised disclosure of data, whether perceived or actual, could adversely affect the Group's businesses, assets, revenue and reputation and result in fines, litigation, regulatory proceedings and investigations, increased insurance premiums, remediation efforts, indemnification expenditures, lost revenue and other potential liabilities.

### **Legal, Regulatory and Tax Risks**

***New tariffs and other trade measures could adversely affect the Group's consolidated results of operations, financial position and cash flows.***

General trade tensions between the United States and China have been escalating in recent years, in particular since 2018, and other trade tensions outside of China have also escalated, including in the United Kingdom, Europe and Canada. There remains uncertainty regarding future changes in US trade policy, including imposing new or increased tariffs on certain goods imported into the United States. Since the Group's technology is incorporated in certain products destined for the US market that may be manufactured outside of the United States, such protectionist changes, if adopted, could have a negative impact on the Group's business and make its customers' products more expensive and less competitive in US markets. Furthermore, changes in US trade policy could trigger retaliatory actions by affected countries, which could impose restrictions on the ability of certain of the Group's customers to do business in or with affected countries or prohibit, reduce or discourage purchases of the Group's products by foreign customers. For example, there are risks that the Chinese government may increasingly require the use of local suppliers, compel companies that do business in China to partner with local companies to conduct business and provide incentives to government-backed local customers to buy from local suppliers. Changes in, and responses to, US trade policy could reduce the competitiveness of the Group's customers' products and cause its revenue to drop, which could materially and adversely impact the Group's business and results of operations. The Group cannot predict what actions may ultimately be taken with respect to tariffs or trade relations between the United States and China or other countries, what products may be subject to such actions, or what actions may be taken by the other countries in retaliation. The institution of trade tariffs both globally and between the United States and China, or between the United States, Canada, Europe and the United Kingdom, also specifically carries the risk of negatively impacting China's overall economic condition, which could have negative repercussions for the Group's business.

***Compliance with various environmental, health and safety as well as other applicable regulations in the jurisdictions in which the Group operates may be expensive and its failure to comply may result in adverse publicity, potentially significant monetary damages and fines and suspension of its business operations.***

The Group is subject to numerous regulations in the jurisdictions in which it operates, governing, among other things, occupational health and safety, air and noise emissions, wastewater discharges, the management and disposal of hazardous substances and waste, the investigation and remediation of soil and ground water contamination, as well as product performance standards established by quasi-governmental and industrial standards organisations. For example, in the European Union, the Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of hazardous substances in electrical and electronic equipment (RoHS) and the Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of

Chemicals (REACH) (as it forms part of retained EU law). The requirements imposed by such legal frameworks are complex, change frequently and have tended to become more stringent over time.

The Group has incurred, and will in the future continue to incur, costs to comply with these regulations. Any significant regulatory changes or increased public attention to the impact of operations such as the Group's on the environment may result in more stringent regulations, further increase its compliance costs or require changes in the way it manufactures prototypes and test boards for its products. While the Group cannot currently anticipate the scope and timing of future costs of such compliance with environmental laws and regulatory directives, failure to comply with applicable laws and regulations may result in fines or penalties, liability for personal injury and/or property damage or the suspension of its business operations, any of which could have a material adverse effect on its business, results of operations, financial condition and prospects.

***The Group is subject to certain anti-corruption, anti-money laundering, export control, sanctions, and other trade laws and regulations with respect to its operations and non-compliance with such laws and regulations may subject it to criminal and/or civil liability and harm its business and reputation.***

The Group is subject to certain anti-corruption, anti-money laundering, export control, sanctions, and other trade laws and regulations, including in Canada, the United States, and the United Kingdom and other foreign jurisdictions in which it conducts its operations. Anti-corruption laws are often interpreted broadly and may prohibit companies, their employees, as well as their third-party partners, such as agents, clinical research organisations, legal counsels, accountants, consultants, contractors and other partners, from authorising, promising, offering, providing, soliciting or receiving, directly or indirectly, corrupt or improper payments or anything else of value to or from recipients in the public or private sector. The Group and its third-party partners may have direct and/or indirect interactions with officials and employees of government agencies, universities and other organisations, including in connection with obtaining necessary permits, licences, patent registrations and other regulatory approvals. The Group could, depending on the circumstances, be held liable for the corrupt or other illegal activities of its personnel and third-party partners. Any of the foregoing could not only harm the Group's business, but also its reputation. These risks could be significant if the Group's controls and procedures to monitor exposure and compliance are not successful.

Sanctions and other trade laws and regulations restrict the Group's business dealings with certain sanctioned countries, persons and/or organisations. The Group has implemented compliance procedures to ensure that its operations comply with all applicable sanctions. However, if other persons and entities with whom the Group currently or in the future transacts become subject to sanctions, or the countries in which the Group currently operates become subject to restrictive sanctions in the future, it could result in reputational damage, fines or other censure to the Group, or limit its operations, any of which could have a material adverse effect on its business, results of operations, financial position and prospects.

Although export licences are not currently required for the Group's business, export regulations are open to change in multiple jurisdictions that could affect the Group's ability to ship products to some countries and markets. In the event that the Group becomes subject to these requirements, any failure to obtain export licences for its products, or having one or more of its customers be restricted from receiving exports from the Group, could significantly reduce its ability to enter into new and continue performing under existing licensing arrangements and materially and adversely affect the Group's business, financial condition, results of operations and prospects.

***Applicable labour laws and customs in Europe, the United Kingdom, Canada, the United States and China may prevent the Group from reducing its personnel costs on short notice.***

During the year ended 31 December 2020, the Group had a total headcount of 72 employees, of which approximately 93 per cent. worked at the Group's Canadian headquarters in Toronto, Canada and approximately 7 per cent. at other locations, including the United States. By the end of the year ended 31 December 2021, the Group anticipates that the majority of its employees will work in Canada, while UK operations are expected to grow during the year. The labour laws and customs in the United Kingdom are generally more stringent and employee-friendly than in certain other countries. As a result, in the event that the Group were to face a need to restructure or downsize its operations, it may not be possible for it to quickly implement reductions in its workforce or do so at an acceptable cost, which could have a material adverse effect on its business, results of operations, financial position and prospects.



***The Group may be exposed to changes in tax laws and regulations.***

The Group is subject to income and/or withholding taxes in Canada, the United States, the United Kingdom and the various foreign jurisdictions where it operates and is therefore subject to various tax laws and regulations. Changes in applicable tax laws and regulations or their interpretation in countries in which the Group operates could result in a higher effective tax rate on the Group's earnings, expose the Group to increased tax liabilities or reduce or even eliminate the Group's deferred tax assets (resulting e.g. from its existing tax loss carry forwards). Applicable tax laws include direct and indirect taxes, such as income tax, import and excise duties or value-added tax, and withholding tax. Increases in indirect taxes could affect its products' affordability and may result in falling demand for its products.

Further, the Group may be exposed to certain adverse tax consequences as a result of changes in tax law or applicable double taxation treaties across the jurisdictions in which it operates. For example, interest expenses and royalty payments are currently generally tax deductible. To the extent that such interest expenses and/or royalty payments are no longer accepted as tax-deductible expenses, the Group may be faced with an increase of the current taxable basis or with a reduction of the available tax losses it can carry forward.

The Group may be subject to tax audits by the competent tax authorities in the various jurisdictions where it operates. In the event that the Group anticipates potential tax liabilities arising from future or pending tax audits, the potential risks are accounted for in its financial statements according to applicable laws. Accounting for such tax liabilities and tax risks may prove to be insufficient. In the course of a tax audit, the competent authorities may challenge the positions taken by the Group when filing the tax returns and/or may take views that are different from those reflected in such returns. Similarly, liabilities related to social security contributions and payroll-related taxes may be increased as a result of future audits.

Significant changes in existing tax laws could result in increases to the Group's effective tax rate or its tax liabilities in future periods, or the outcome of tax audits that result in any additional taxable amounts due in respect of past periods, could have a material adverse effect on its business, results of operations, financial position and prospects.

***Current or future legal, administrative and arbitration proceedings or investigations could adversely affect the Group's reputation and harm its business and financial condition.***

The Group may, from time to time, become involved in various actual or threatened legal, administrative and arbitration proceedings and investigations arising out of or in connection with its ordinary course of business (including potential proceedings related to antitrust matters). Regardless of the merits of the claims, and whether the matter or amount subject to the claim is individually material, the cost of pursuing or defending current and future legal, administrative and arbitration proceedings or investigations may be significant, and such matters can be time-consuming and divert management's attention and resources. The results of litigation and other legal proceedings are inherently uncertain, and adverse judgements or settlements in some or all of these legal disputes may result in substantial monetary damages, penalties and fines or injunctive relief against the Group, as well as reputational damage.

While the Group maintains liability insurance for certain legal risks at levels that it believes to be appropriate and consistent with industry practice, the Group may incur losses relating to litigation beyond the scope or limits of such insurance coverage, and its provisions for litigation-related losses may not be sufficient to cover its ultimate loss or expenditure. Any future litigation-related provisions recorded by the Group, in a situation when it believes that a liability is likely to materialise and the associated amount can be reasonably estimated, may also be incorrect or inadequate to cover actual losses.

An unfavourable outcome in any litigation investigation, administrative proceeding, or other material dispute, or reputational damage resulting from a dispute, could materially adversely affect the Group's business, results of operations, financial condition and prospects.

***The Group is subject to governmental regulation and other legal obligations, particularly related to privacy, data protection and information security, and consumer protection laws across different markets where the Group conducts its business. The Group's actual or perceived failure to comply with such obligations could harm its business.***

In the jurisdictions in which the Group operates, it is subject to various consumer protection laws and related regulations. If the Group is found to have breached any consumer protection laws or regulations in any such jurisdiction, it may be subject to enforcement actions that require the Group to change its business practices in a manner which may negatively impact its revenue, as well as expose the Group to litigation, fines, civil and/or

criminal penalties and adverse publicity that could negatively impact the Group's reputation and business in a manner that harms its financial position.

As part of the Group's business, it collects information about individuals, also referred to as personal data, and other potentially sensitive and/or regulated data from its customers. The Group is subject to a number of laws relating to privacy and data protection, including the General Data Protection Regulation (Regulation (EU) 2016/679) (as it forms part of retained EU law and implemented through the Data Protection Act 2018) (the "GDPR"), and the California Consumer Privacy Act as of 1 January 2020 and other applicable data protection and privacy laws across its various markets. These laws and regulations restrict how personal information is collected, processed, stored, used and disclosed, as well as setting standards for its security, implementing notice requirements regarding privacy practices, and providing individuals with certain rights regarding the use, disclosure and sale of their protected personal information. If the Group's privacy or data security measures fail to comply with applicable current or future laws and regulations, it may be subject to litigation, regulatory investigations or enforcement notices requiring the Group to change the way the Group uses personal data or its marketing practices. For example, under the GDPR, the Group may be subject to fines of up to €20 million or up to 4 per cent. of the total worldwide annual group turnover of the preceding financial year (whichever is higher). Restrictions on the collection, use, sharing or disclosure of personal information or additional requirements and liability for security and data integrity could require the Group to modify its solutions and features, possibly in a material manner, which could limit its ability to develop new products and features and could subject the Group to increased compliance obligations and regulatory scrutiny. If the Group is unable to comply, or is alleged to have failed to comply, with these laws and regulations, it may result in negative publicity, increase its operating costs and subject it to claims or other remedies. The Group may also be subject to other liabilities, as well as negative publicity and a potential loss of business.

***Litigation, including securities class action litigation, may impair the Group's reputation and lead it to incur significant costs.***

As the Group continues to grow its operations, it may, from time to time, be party to various lawsuits and claims arising in the normal course of business, which may include lawsuits or claims relating to contracts, third-party services, intellectual property, employment matters, environmental matters or other aspects of the Group's business. In addition, in the past, following periods of volatility in the overall market and the market price of the Company's securities, securities class action litigation has been instituted against companies that experienced such volatility. Litigation, if instituted against the Group, whether or not valid and regardless of outcome, could result in substantial costs, reputational harm and a diversion of the Group's management's attention and resources. In addition, the Group may be required to pay damage awards or settlements or become subject to injunctions or other equitable remedies and, as the outcome of any litigation is difficult to predict, litigation may have a material adverse effect on the Group's business, results of operations, financial condition and prospects.

Although the Group has various insurance policies in place, the potential liabilities associated with litigation matters that could arise in the future, could be excluded from coverage or, if covered, could exceed the coverage provided by such policies. In addition, insurance carriers may seek to rescind or deny coverage with respect to any claim or lawsuit. If the Group does not have sufficient coverage under its policies, or if coverage is denied, it may be required to make material payments to settle litigation or satisfy any judgement. Any of these consequences could have a material adverse effect on the Group's business, results of operations, financial condition and prospects.

***Certain of the Group's historical financial reporting periods are not directly comparable.***

The Group prepares its annual financial statements as at and for the year ended 31 December each year, and it has presented in this document its financial results as at and for the year ended 31 December 2020. Historically, the Group prepared its annual financial statements as at and for the year ended 31 May, and it has presented in this document its financial results as at and for the years ended 31 May 2018 and 2019. As the Group changed its financial year-end to 31 December in 2019, it has accordingly also presented in this document certain financial and operational metrics as at and for the seven months ended 31 December 2019. As a result of this change in the Group's financial reporting year, the Group's historical financial results as at and for the seven months ended 31 December 2019 are not directly comparable to the preceding twelve-month financial year (ended 31 May 2019) or the subsequent twelve-month financial year (ended 31 December 2020).

***The guidance around future performance included in this Registration Document may differ materially from actual developments and readers should not place undue reliance on it.***

The information about the Group's expectations for its future performance in this Registration Document is based upon a number of assumptions and estimates made by management, which are subject to significant business, operational, economic and other risks, many of which are outside of the Group's control. Accordingly, such assumptions may prove to be incorrect. In addition, unanticipated events may adversely affect the actual results that the Group achieves in future periods whether or not its assumptions relating future periods otherwise prove to be correct. As a result, the Group's actual financial performance may vary materially from that suggested by this guidance, and readers should not place undue reliance on such guidance or information around recent developments.

## PART II

### PRESENTATION OF INFORMATION ON THE GROUP

#### General

No representation or warranty, express or implied, is made and no responsibility or liability is accepted by any person other than the Company and its Directors, as to the accuracy, completeness, verification or sufficiency of the information contained herein, and nothing in this Registration Document is, or may be relied upon as a promise or representation in this respect, as to the past or future. No person is or has been authorised to give any information or to make any representation not contained in or not consistent with this Registration Document and, if given or made, such information or representation must not be relied upon as having been authorised by or on behalf of the Company or the Directors. The delivery of this Registration Document shall not, under any circumstances, create any implication that there has been no change in the business or affairs of the Group since the date of this Registration Document or that the information contained herein is correct as at any time subsequent to its date.

This Registration Document has been filed with, and approved by, the FCA (as competent authority under the UK Prospectus Regulation) and has been made available to the public in accordance with the Prospectus Regulation Rules. This Registration Document may be combined with a securities note and summary to form a prospectus in accordance with the Prospectus Regulation Rules. A prospectus is required before an issuer can offer transferable securities to the public or request the admission of transferable securities to trading on a regulated market. However, this Registration Document, where not combined with the securities note and summary to form a prospectus, does not constitute an offer or invitation to sell or issue, or a solicitation of an offer or invitation to purchase or subscribe for, any securities in the Company in any jurisdiction, nor shall this Registration Document alone (or any part of it), or the fact of its distribution, form the basis of, or be relied upon in connection with, or act as any inducement to enter into, any contract or commitment whatsoever with respect to any offer or otherwise.

The contents of this Registration Document are not to be construed as legal, business or tax advice. This Registration Document is not intended to provide the basis of any credit or other evaluation and should not be considered as a recommendation by any of the Company, the Directors, any of the Company's advisers or any of their affiliates or representatives regarding the securities of the Company.

#### Presentation of Financial and Other Information

The Consolidated Historical Financial Information (as defined below) has been prepared in accordance with UK-adopted international accounting standards (“IFRS”). The Consolidated Historical Financial Information is presented in Canadian Dollars, which has been the Group's functional and presentational currency since its founding in 2017. Except as indicated, financial information presented is to the nearest thousand Canadian Dollars. The Consolidated Historical Financial Information is prepared on a going concern basis applying the historical cost convention. Part IX: “*Historical Financial Information*” includes the Consolidated Historical Financial Information, as well as an Accountant's Report thereon prepared by KPMG LLP (“KPMG”). Part IX: “*Historical Financial Information*” is set out in two parts as follows:

- Part A sets out KPMG's Accountant's Report on the Consolidated Historical Financial Information; and
- Part B sets out the Consolidated Historical Financial Information and includes the accounting policies and notes, including the notes to the Consolidated Historical Financial Information.

The Group intends to report its financial results in US Dollars commencing with the reporting period starting 1 January 2021.

#### *Historical financial information*

The historical financial information included in this Registration Document presents the results for the Group as at and for the year ended 31 December 2020, as at and for the seven months ended 31 December 2019, as at and for the year ended 31 May 2019 and as at and for the year ended 31 May 2018 (the “**Consolidated Historical Financial Information**”), in all cases, prepared in accordance with IFRS. The Consolidated Historical Financial Information has been prepared in accordance with the requirements of the Prospectus Regulation Rules. The Consolidated Historical Financial Information was also prepared in accordance with the provisions of the Companies Act 2006 as applicable to companies reporting under IFRS.

The Consolidated Historical Financial Information is covered by the Accountant's Report issued by KPMG, located at 15 Canada Square, London E14 5GL, in accordance with the Standards for Investment Reporting

issued by the Auditing Practices Board in the United Kingdom. KPMG is an independent auditor in accordance with the Institute of Chartered Accountants of England and Wales and the Auditing Practices Board in the United Kingdom.

The financial information included in this Registration Document was not prepared in accordance with generally accepted accounting principles in the United States (“US GAAP”). There could be significant differences between IFRS, as applied by the Group, and US GAAP. The Group neither describes the differences between IFRS and US GAAP nor reconciles its IFRS financial statements to US GAAP. The financial information included in this Registration Document is not intended to comply with the US Securities and Exchange Commission’s reporting requirements. Compliance with such requirements would require the modification, reformulation or exclusion of certain financial measures. In addition, changes would be required in the presentation of certain other information.

*Re-presented historical periods*

The Group prepares its annual financial statements as at and for the year ended 31 December each year, and it has presented in this document its financial results as at and for the year ended 31 December 2020. Historically, the Group prepared its annual financial statements as at and for the year ended 31 May, and it has presented in this document its financial results as at and for the years ended 31 May 2018 and 2019. As the Group changed its financial year-end to 31 December in 2019, it has accordingly also presented in this document its financial results as at and for the seven months ended 31 December 2019. As a result of this change in the Group’s financial reporting year, the Group’s historical financial results as at and for the seven months ended 31 December 2019 are not directly comparable to the preceding twelve-month financial year (ended 31 May 2019) or the subsequent twelve-month financial year (ended 31 December 2020).

In order to better enable readers to compare the Group’s operating and financial performance across these historical periods, the Group also includes in this Registration Document revenue on a re-presented unaudited basis for the twelve-month financial period ended 31 December 2019.

The following table reconciles revenue presented for the period indicated to information extracted from the Group’s Consolidated Historical Financial Information and management accounts. The Reporting Accountant, KPMG, has not audited, reviewed, compiled or performed any procedures with respect to any management accounts information contained herein. Accordingly, KPMG does not express an opinion or any other form of assurance with respect thereto. Financial information for the year ended 31 December 2019 has been calculated by adding revenue for the seven months ended 31 December 2019 and the five months ended 31 May 2019.

Calculation of financial information for the year ended 31 December 2019:

	<u>7 months ended 31 December 2019</u>	<u>5 months ended 31 May 2019<sup>(1)</sup></u>	<u>Year ended 31 December 2019<sup>(2)</sup></u>
		(\$ thousands) (unaudited)	
Revenue . . . . .	9,313	5,350	14,663

Note:

- (1) Derived from Alphawave management accounts.
- (2) Calculated from Alphawave’s applicable results for the seven months ended 31 December 2019, plus its results for the five months ended 31 May 2019.

**Rounding**

Rounding adjustments have been made in calculating some of the financial and operating information included in this Registration Document. As a result, numerical figures shown as total amounts in some tables may not be exact arithmetic aggregations of the figures that make up such total amounts.

**Non-IFRS measures**

This Registration Document contains certain financial measures that are not defined or recognised under IFRS, including EBITDA and EBITDA Margin (the “Non-IFRS measures”). The Directors consider these metrics to be the Non-IFRS measures used by the Group to help evaluate growth trends, establish budgets and assess operational performance and efficiencies in relation to the Group. The Directors believe that the Non-IFRS measures provide an enhanced understanding of the Group’s results and related trends, therefore increasing transparency and clarity in the core results of the business of the Group.

A reconciliation of each of the Non-IFRS measures to the most directly comparable measures calculated and presented in accordance with IFRS and a discussion of their limitations are set out below. The Group does not regard these Non-IFRS measures as a substitute for, or superior to, the equivalent measures calculated and presented in accordance with IFRS or those calculated using financial measures that are calculated in accordance with IFRS. Each Non-IFRS measure has limitations as an analytical tool, and each measure should not be considered in isolation from, or as a substitute for, analysis of the Group's financial condition, cash flows, or results of operations, as reported under IFRS. In addition, the Non-IFRS measures are not standardised terms, hence, a direct comparison between companies using such terms may not be possible.

The Group defines "**EBITDA**" as reported profit before tax, less interest income, plus interest expense and depreciation.

The Group defines "**EBITDA Margin**" as EBITDA, divided by revenue, expressed as a percentage.

The Non-IFRS measures are not measures of financial performance or liquidity under IFRS and should not be considered as an alternative to net profit, operating profit or any other performance measures derived in accordance with IFRS or as alternatives to cash flow from operating activities as a measure of liquidity. The Group believes that the Non-IFRS measures facilitate comparisons of operating performance from period to period and company to company by eliminating potential differences caused by variations in capital structures (affecting interest and finance charges), tax positions (such as the impact on periods or companies of changes in effective tax rates or net operating losses) and the age and booked depreciation on assets. The Non-IFRS measures have been presented because the Group believes that they are frequently used by securities analysts, investors and other interested parties in evaluating similar companies, many of whom present such Non-IFRS measures when reporting their results.

### **Currency Presentation**

The Group prepares its financial statements and the financial information included in this Registration Document in Canadian Dollars. Unless otherwise indicated, the financial information contained in this Registration Document has been expressed in Canadian Dollars.

Unless otherwise indicated, all references in this Registration Document to "Canadian Dollars", "CaD" or "\$" are to the lawful currency of Canada, all references to "Sterling", "Pound Sterling", "GBP", "£" or "pence" are to the lawful currency of the United Kingdom, and all references to "US Dollars", "USD" or "USD \$" are to the lawful currency of the United States.

### **Market, Economic and Industry Data**

Unless the source is otherwise stated, the market, economic and industry data in this Registration Document constitute the Directors' estimates, using underlying data from independent third parties. The Group obtained market data and certain industry forecasts used in this Registration Document from internal surveys, reports and studies, where appropriate, as well as market research, publicly available information and industry publications, including publications and data compiled by third parties (together, the "**Group market analysis**"). Third-party sources regularly reviewed by the Group when evaluating its operating environment include 650 Group, Cisco Systems (including the Cisco Cloud Index and Cisco Annual Internet Report), Gartner, Intel Corp., International Business Strategies (IBS), the International Data Corporation (IDC), IPNest, Open AI, Seagate, Semico and Synopsys.

The Group confirms that all third-party data contained in this Registration Document has been accurately reproduced and, so far as the Group is aware and able to ascertain from information published by that third party, no facts have been omitted that would render the reproduced information inaccurate or misleading. Where third-party information has been used in this Registration Document, the source of such information has been identified. While the Directors believe the third-party information included herein to be reliable, the Group has not independently verified such third-party information.

### **Information Regarding Forward-Looking Statements**

Certain statements included herein may constitute forward-looking statements within the meaning of the securities laws of certain jurisdictions. Certain such forward-looking statements can be identified by the use of forward-looking terminology such as "believes", "expects", "may", "are expected to", "intends", "will", "will continue", "should", "would be", "seeks", "anticipates" or similar expressions or the negative thereof or other variations thereof or comparable terminology. These forward-looking statements include all matters that are not historical facts. They appear in a number of places throughout this Registration Document and include

statements regarding the Group's intentions, beliefs or current expectations concerning, amongst other things, its results in relation to operations, financial condition, prospects, growth, strategies and the industry in which it operates. By their nature, forward-looking statements involve risks and uncertainties because they relate to events and depend on circumstances that may or may not occur in the future.

Prospective investors should be aware that forward-looking statements are not guarantees of future performance and that the Group's actual results of operations, financial condition, and the development of the industry in which it operates, may differ materially from those made in or suggested by the forward-looking statements contained in this Registration Document. In addition, even if the Group's results of operations, financial condition, or the development of the industry in which it operates are consistent with the forward-looking statements contained in this Registration Document, those results or developments may not be indicative of results or developments in subsequent periods. Important factors that could cause those differences include, but are not limited to: demand for the Group's IP solutions, including its innovation and R&D and technology capabilities, target market trends, industry trends, customer activities and end-market trends, market acceptance of Group technologies; increased competition; the impact of the COVID-19 pandemic and macroeconomic conditions; changes in laws, regulations or regulatory policies; currency fluctuations; failure to retain key management; and timing and success of future acquisition opportunities or major investment projects.

Such forward-looking statements contained in this Registration Document speak only as of the date of this Registration Document. The Group, the Directors and the Group's advisers expressly disclaim any obligation or undertaking to update these forward-looking statements contained in the document to reflect any change in their expectations or any change in events, conditions, or circumstances on which such statements are based unless required to do so by applicable law, the Prospectus Regulation Rules, the Disclosure Guidance and Transparency Rules or the Listing Rules.

#### **Definitions**

Certain terms used in this Registration Document, including all capitalised terms and certain technical and other terms, are defined and explained in Part XI: "*Definitions*". Additional industry-related terms and those specific to the Group's operations are defined and explained in Part XII: "*Glossary*".

#### **No Incorporation of Website Information**

Save for the copies of the documents listed in Part X: "*Additional Information—Documents available for inspection*", the contents of the Group's websites, any website mentioned in this Registration Document or any website directly or indirectly linked to these websites have not been verified and do not form part of this Registration Document, and readers should not rely on such information.

**PART III**  
**DIRECTORS, SECRETARY, REGISTERED AND HEAD OFFICE AND ADVISERS**

<b>Directors</b>	John Lofton Holt (Executive Chairman) Tony Pialis (President and Chief Executive Officer) Daniel Aharoni (Chief Financial Officer) Sehat Sutardja (Executive Director) Jan Frykhammar (Senior Independent Non-Executive Director) Michelle Senecal de Fonseca (Independent Non-Executive Director) Paul Boudre (Independent Non-Executive Director) Victoria Hull (Independent Non-Executive Director) Susan Buttsworth (Independent Non-Executive Director) Rosalind Singleton (Independent Non-Executive Director)
<b>Company Secretary</b>	Link Market Services Limited
<b>Registered office of the Company and Global Headquarters</b>	Alphawave IP Group plc 6th Floor 65 Gresham Street London EC2V 7NQ United Kingdom
<b>English and US legal advisers to the Company</b>	Linklaters LLP One Silk Street London EC2Y 8HQ United Kingdom
<b>Auditors and Reporting Accountants</b>	KPMG LLP 15 Canada Square London E14 5GL United Kingdom



## PART IV INDUSTRY OVERVIEW

*The following information relating to the Group's industry has been provided for background purposes only. The information has been extracted from a variety of sources released by public and private organisations. The information has been accurately reproduced and, as far as the Company is aware and is able to ascertain from information published by such sources, no facts have been omitted which would render the reproduced information inaccurate or misleading. This Part IV should be read in conjunction with the more detailed information contained in this Registration Document including Part I: "Risk Factors" and Part VIII: "Operating and Financial Review".*

### Industry Background

The Group addresses the fast-growing wired connectivity IP market, which benefits from secular trends related to rapid and reliable data movement required in data centres, communications infrastructure and increasingly in autonomous vehicles. Over the last decade, the proliferation of new technologies, applications, cloud-based services and internet-connected devices has led to increasing levels of data traffic and congestion, driving the need for greater bandwidth. The global datasphere, or data that is created, captured, copied and consumed, is set to grow from 40 zettabytes in 2019 to 175 zettabytes in 2025, representing a CAGR of 28 per cent.<sup>1</sup> A significant portion of this data has to be transmitted using wired network infrastructure. The following factors drive this rapid creation and consumption of data, including:

- **Proliferation of cloud services and hyperscale data centres.** Enterprises are increasingly adopting cloud services to reduce IT costs and scale computing, networking and storage requirements on-demand. Consumers are increasingly relying on cloud services to satisfy bandwidth-intensive needs such as high definition and 4K on-demand video viewing, audio streaming and photo sharing. The global cloud services market is expected to grow from USD \$552 billion in 2020 to USD \$1 trillion in 2025, representing a CAGR of 14 per cent.<sup>2</sup> The Group expects the infrastructure-as-a-service ("IaaS") portion of this market, which includes services related to cloud-based computing, networking and storage, to grow at a CAGR of 18 per cent. during that period.<sup>2</sup>
- **Development of advanced wireless technologies, such as 5G.** Consumption of data and video-intensive content and applications on mobile devices is driving significant growth in mobile data and video traffic and has led to adoption of advanced wireless communication technologies, such as 5G. By 2023, average mobile speeds of 5G-enabled devices are expected to be 575 megabits per second, or 13 times higher than the average mobile connection today.<sup>3</sup> To support cellular speeds of such magnitude, wired connectivity interfaces must match this performance, particularly as wireless signals aggregate in the access layer before being routed to core wired networks.
- **Proliferation of "Internet of Things" devices.** Significant consumer, enterprise and governmental adoption of internet-connected devices embedded with electronics, software and sensors is anticipated to strain network capacity further and increase demand for bandwidth, while creating significant amounts of data to process. Approximately 29 billion devices and objects are expected to be connected to the internet by 2023, compared to 18 billion in 2018, representing a CAGR of 10 per cent.<sup>3</sup> Specifically, machine-to-machine (M2M) connections are expected to grow from approximately 6 billion in 2018 to 15 billion in 2023, representing a CAGR of 19 per cent. and comprising 50 per cent. of all connections in 2023.<sup>4</sup>
- **Growth of artificial intelligence.** Proliferation of hyperscale data centres, improvements in hardware and semiconductor technology and maturation of software frameworks has fuelled significant growth in artificial intelligence applications. Compute devices such as microprocessors ("CPUs"), graphics processing units ("GPUs"), field programmable gate arrays ("FPGAs") and specialised application-specific integrated circuits ("ASICs") can now be configured to train and apply complex machine learning models and make accurate predictions that were not possible a decade ago. As these models become more multi-layered and complex, they need to be processed on a large number of interconnected computing cores, which puts significant pressure on wired connectivity and interface technologies.

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1 Group market analysis, including data from IDC.

2 Group market analysis, including data from 650 Group.

3 Public Cisco Annual Internet Report (2018—2023) White Paper.

4 Group market analysis, reflecting market trends and industry projections.

## Overview of Wired Connectivity IP

In electronic systems, connectivity functionality is ubiquitous and used wherever a chip needs to be connected to another chip. Connection length can range from distances spanning thousands of miles, which are traditionally addressed by high-speed optical networks, to short chip-to-chip links used to connect chips to each other. As every chip functions internally using electrical signalling, electrical connectivity interface is an essential functional block of semiconductor design. The overall addressable market for semiconductor devices, including CPUs, FPGAs, ASICs and general wired connectivity, is estimated to be USD \$34 billion in 2020.<sup>4</sup> In contrast to wireless interface technologies, such as WiFi, Bluetooth or 5G, which are typically more consumer-facing, applications targeted by the Group's wired connectivity solutions are predominantly related to critical network infrastructure and data processing and require significantly higher data rates, reliability and performance.

Transmission speed performance, power consumption, chip footprint and design flexibility are generally the most important considerations for chipmakers as they select connectivity IP blocks for their designs. These considerations can be managed in different types of connectivity IP blocks, including parallel data interfaces to serial data interfaces. The Group's solutions can use both approaches but, to date, the Group has specialised in high-speed serial data interfaces. The Group has developed a novel serialiser/deserialiser, or SerDes, which is a critical component of serial wired connectivity IP design. A SerDes is used in integrated circuits as an interface to other chips by converting parallel streams of data, which are used within integrated circuits, to serial streams, which are used in longer-distance transmission outside and between chips, and vice versa. In general, serial transmission is more efficient and less complex over longer distances due to timing, synchronisation and footprint advantages, whereas parallel transmission is critical inside chips to achieve throughput and performance. Due to this key difference, every integrated circuit that needs fast and reliable external connectivity requires a SerDes.

## Critical Industry Challenges

Historically, wired connectivity IP has been challenging to design. As every connectivity block requires a complex combination of phase-locked loops ("PLLs"), clock-data recovery ("CDR") circuits, transmission line drivers, and receiver equalisers, alongside with additional proprietary circuitry, designing wired connectivity IP blocks has been the domain of analogue mixed-signal engineers. Traditionally, analogue design can differ drastically from digital techniques and requires specialised know-how. In addition, as wired connectivity transmission speed requirements continue to increase, most recently to a rate of 112 gigabits per second, and as modulation schemes become more complex, traditional analogue approaches to connectivity become more sensitive to process, voltage and temperature variations. Furthermore, analogue circuitry does not directly benefit from scaling to lower geometries, such as 7nm and 5nm, because of limited performance and power benefit and increased potential for signal disruption by noisy digital circuits nearby. Another challenge of traditional analogue connectivity is generally a longer time is required to bring a design to market as each analogue circuit is typically developed to target a unique application, with each development requiring tens of millions of dollars of investment and up to two years of development time to yield a robust, production-worthy design. Due to these fundamental challenges, wired connectivity designs are becoming harder to design and integrate into complex logic-based integrated circuits.

As CPUs, GPUs, FPGAs and application-specific integrated circuits incorporate more transistors and improve clock speed and performance, they increasingly rely on faster wired connectivity interfaces, which can be a critical bottleneck, potentially limiting these devices from reaching their full performance potential. For example, the speeds for Peripheral Component Interconnect Express standard, or PCIe, which is commonly used to connect peripheral devices such as graphics cards, storage devices and ethernet connectivity adapters on computer and server motherboards, have historically doubled every three years, growing to 128 gigabits per second in the new PCIe 5.0 standard that is expected to be widely adopted in coming years. Other connectivity standards, such as Ethernet and Universal Serial Bus, or USB, are expected to continue increasing transmission speed requirements, driving the need for faster, reliable and flexible physical connection technology that can support multiple standards.

## Increasing Semiconductor Design Complexity

To achieve higher performance and functionality for the most demanding applications, such as network switching or artificial intelligence, semiconductor designers are increasingly utilising leading-edge process technologies for products such as CPUs, GPUs, FPGAs and ASICs. The size of the smallest transistor, the basic building block of modern semiconductors, has been reduced to 5nm in 2020 by leading third-party semiconductor manufacturers such as Samsung and TSMC, from 3,000nm in the 1980s, 65nm in 2006, and

28nm in 2011. An integrated circuit made on a 5nm process contains over 150 million transistors per square millimetre. With each transistor size reduction, development costs for designers tend to rise significantly. For example, total chip design costs for a single 5nm integrated circuit are estimated to be as high as USD \$542 million, having risen nearly 20 times from USD \$28 million estimated for a 65nm design.<sup>5</sup> In addition, integrated circuits tend to become significantly more complex from generation to generation as the average number of functional IP blocks per chip has increased from approximately 100 in 2012 to approximately 150 in 2016. This increased semiconductor design cost and complexity encourages many chip designers to utilise third-party providers of various IP blocks, particularly those that perform critical and hard-to-do functionality that needs to be high-performing and reliable, such as interface connectivity.

## **Overview of Semiconductor and Wired Connectivity IP Market**

The semiconductor IP licensing market is a subset of the broader semiconductor device market, making wired connectivity specialists key providers in the semiconductor value chain. Semiconductor IP suppliers provide pre-designed blocks of logic that are integrated into a customer's larger system on a chip, or SOC. The semiconductor IP industry was estimated to be approximately USD \$3.9 billion in 2019, with compute IP and wired connectivity IP accounting for 51 per cent. and 22 per cent. of the total semiconductor market, respectively.<sup>5</sup> Wired connectivity IP is estimated to be the fastest growing segment of the broader semiconductor IP market, and is expected to grow at a CAGR of 14 per cent. from approximately USD \$900 million in 2019 to approximately USD \$1.7 billion in 2024.<sup>5</sup>

Historically, semiconductor device suppliers largely designed their own technologies in-house. Over the past decade, due to increasing complexity, rising development costs, specialist skill sets and faster required time-to-market, many semiconductor design and manufacturing companies have increasingly chosen to license proven intellectual property such as high-speed wired interface connectivity from third-party IP providers including Alphawave. The demands for high-speed wired connectivity IP have become more stringent over the years, and many semiconductor device companies do not have the capability to design connectivity interface blocks internally and choose to focus efforts on the core functionality of their products. It is estimated that approximately 70 per cent. of wired connectivity IP is outsourced to third-party providers,<sup>6</sup> and the Group believes that this reliance will continue to grow as connectivity demands reach higher transmission speeds. In addition, more system-level OEMs and hyperscaler data centre operators are developing their own silicon for greater control of system-level design, competitive differentiation and economies of scale. Many of these companies do not currently have internal wired connectivity IP capability and have to rely on third-party providers.

## **Evolving IP Delivery Model and the Chiplet Market Opportunity**

### ***Complete Product Licensing***

In addition to providing wired connectivity IP as a separate block to be integrated in a larger system-on-a-chip design, customers increasingly demand more complete IP solutions from third-party suppliers, particularly in cases where the wired connectivity IP represents the core function of the chip and therefore the majority of electronic content. For example, for certain retimer products used to boost electrical signals in applications, such as data centre switch backplanes, wired connectivity IP represents the vast majority of content and is the core function of the chip, in certain cases up to 80 per cent. to 90 per cent. of the chip substance. In these cases, customers may rely on wired connectivity IP providers to design the entire chip and will instead focus on manufacturing, marketing and selling the product.

### ***Chiplet Market Opportunity***

The rapidly growing chiplet market will create a significant opportunity for wired connectivity IP providers. As integrated circuits such as CPUs, GPUs, FPGAs and application-specific integrated circuits increase in complexity and size, the manufacturing process becomes economically limited and challenged by the physical limit of single patterning device, or reticle, that is required to imprint electronic circuitry on a silicon wafer. In addition, as size of single transistor geometry continues to decrease in advanced nodes, currently to 5nm and eventually to 3nm and beyond, manufacturing larger chips with higher transistor density becomes less economical due to lower manufacturing yields and the necessity to design every function, including connectivity interface, in the same manufacturing node. The economic slowdown of Moore's Law, the

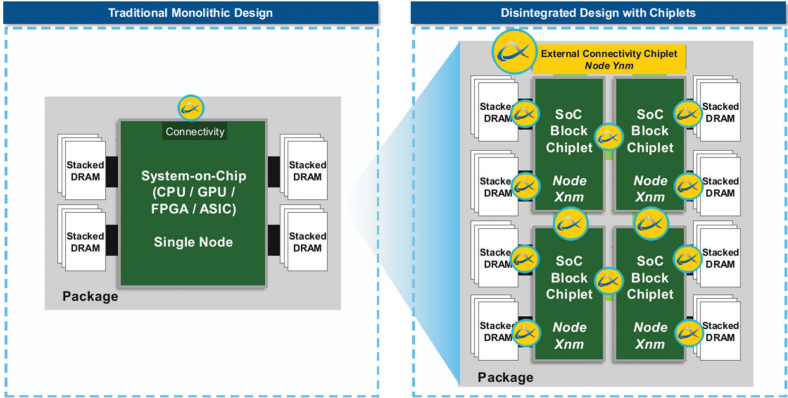
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<sup>5</sup> Group market analysis, reflecting market trends and industry projections.

<sup>6</sup> Group market analysis, reflecting market trends and industry projections.

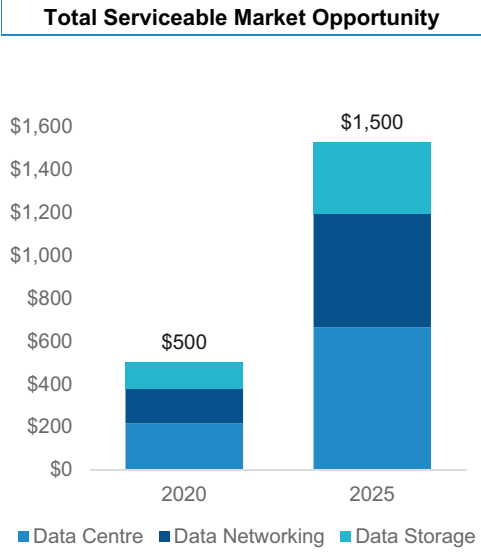
observational principle that speed and performance of processors doubles every two years as transistors reduce in size, has been observed since 2016 when transistor geometries reached 14nm.

One way to address these challenges has been to divide larger integrated circuits into smaller modular pieces of silicon, or chiplets, that can be integrated together using die-to-die interfaces. This disaggregation of silicon presents an opportunity for wired connectivity IP providers to supply wired connectivity IP in chiplet or die form, either in licensing or full-chip format, potentially at more mature process geometries to minimise cost and maximise overall performance. The overall chiplet market for all semiconductors, including processors and connectivity, is expected to grow from approximately USD \$3 billion in 2020 to approximately USD \$50 billion in 2024, representing a CAGR of 98 per cent.<sup>7</sup> Within this market, server-based and other applications that exclude desktop PCs, laptops and smartphones are expected to grow from approximately USD \$1 billion in 2020 to approximately USD \$22 billion in 2024, representing a CAGR of 112 per cent.<sup>8</sup> Connectivity chiplets are expected to represent a portion of this market.



**Market Opportunity for Alphawave**

The Group estimates that the overall wired connectivity IP market represents a USD \$1.0 billion opportunity as of 2020, and it expects this market to grow to \$1.7 billion by 2024.<sup>7</sup> In addition, Alphawave believes there is a substantial market opportunity as the Group maintains and expands its technology leadership. The Group estimates its total addressable market opportunity for its current products to be USD \$500 million in 2020, growing to USD \$1.5 billion in 2025, representing a CAGR of approximately 23 per cent.<sup>7</sup> By 2024, the addressable market for the Group’s future products is forecast to exceed USD \$50 billion. This current and future market includes addressable content in data centre, networking, storage, with additional potential upside from 5G wireless infrastructure, artificial intelligence and autonomous vehicle markets.



<sup>7</sup> Group market analysis, reflecting market trends and industry projections.  
<sup>8</sup> Group market analysis, reflecting market trends and industry projections.

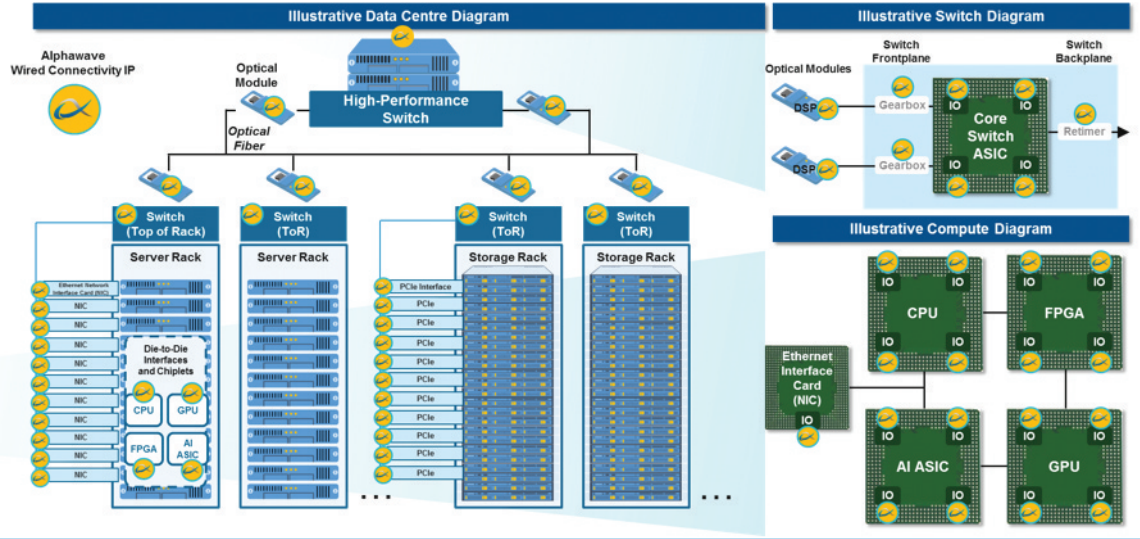
**End-Market Overview**

High-speed connectivity is critical to a wide variety of end-markets that rely on fast, reliable and power-efficient transfer of data. Alphawave’s wired connectivity IP typically addresses infrastructure-oriented end-markets with a strong emphasis on performance as listed below. The Group currently does not address consumer-oriented markets such as mobile devices or personal computers.

**Hyperscale Data Centres**

In recent years, data centre operators have continued to construct data centres around the world to address the growing demand for data and the increased demand for enterprise-grade and consumer cloud services. The total number of large data centres is expected to grow at an overall rate of 17 per cent. from 1,579 in 2020 to 1,849 in 2024.<sup>7</sup> As hyperscale data centres grow in number and size, reliable high-speed wired connectivity becomes critical as a large number of servers, switches and storage devices need to be interconnected in a cost-efficient manner. In addition, in recent years, hyperscale data centre operators have increasingly been designing their own silicon for processing and connectivity functionality to take advantage of economies of scale, attain a greater internal control over technology and increase service differentiation. To ensure their silicon matches or exceeds performance of merchant silicon, they have been relying on third-party silicon IP providers.

Below is an illustrative diagram of a data centre design, with networking, computing and storage components. Wired connectivity IP blocks, including those developed by the Group, can be found in a variety of applications.



While the Group’s IP can be found in compute, switching and storage nodes within a typical data centre, for this segment the Group primarily classifies the revenue to compute customers such as designers of microprocessors (MPUs) and programable logic (FPGAs). The data centre compute market in recent years has been driven by continued performance evolution of processing devices in data centres, as wired connectivity is critical to connect these processors to other chips. In addition, some designers are focusing on building sophisticated heterogeneous SOCs that combine traditional MPUs with programable logic circuitry for more specialised and efficient workload allocation. Many of these designs rely on interconnected chiplets, with connectivity chiplets comprising a critical portion of the design to provide for efficient communication with the outside world.

**Data Networking**

In a typical data centre, data is transmitted between compute and storage devices through switches, routers and interface cards using copper or optical cables. Up to 76 per cent. of all data centre internet traffic traverses internally within data centres due to significant interaction between compute and storage resources, putting significant pressure on networking and interface bandwidth requirements.<sup>9</sup> In data centres, wired connectivity IP can be found in switch front- and backplanes, providing critical high-speed interfaces between switch ASICs and optical devices as optical links are transformed to electrical interfaces, and in high-speed interface cards

<sup>9</sup> Group market analysis, reflecting market trends and industry projections.

that sit in servers, storage devices and other appliances. For example, maximum throughput for a data centre switch in recent years has increased from 12 Terabits per second to 25 Terabits per second, and the speed of an individual data centre port has risen from 100G per second to 400G per second. At such speeds, 112G SerDes-based wired interface is crucial to support such high-speed links for switch ASICs. The number of 400Gbps and 800Gbps data centre switch ports in use is expected to grow from 4.7 million in 2020 to 35 million in 2025, representing a CAGR of 49 per cent.<sup>10</sup> While today virtually all 400Gbps ports are enabled by 50Gbps SerDes links, in the future 100Gbps SerDes connections are expected to grow rapidly. The number of 100Gbps and 200Gbps SerDes embedded in data centre switches are expected to grow from 4.6 million in 2021 to 248 million in 2025, representing a CAGR of 171 per cent.<sup>10</sup>

### ***Artificial Intelligence***

The overall market for silicon containing AI functionality is expected to grow from USD \$12 billion in 2019 to USD \$44 billion in 2024, representing a CAGR of 29 per cent., with the market excluding smartphone, tablet and laptop applications growing at a CAGR of 50 per cent. over that time.<sup>11</sup> As AI models become more complex and multi-layered, they consume an increasing amount of compute, storage and networking resources. The amount of compute used in the largest AI training runs is estimated to have increased 300,000 times from 2012 to 2018, which caused a general increase in AI chip complexity and size.<sup>9</sup> As it becomes less practical and economical to build large monolithic die for AI, due to complexity and yield challenges, many AI suppliers choose to cluster a number of AI chips that have to share common resources such as memories and be able to talk to each other for greater performance. Therefore, interface connectivity can be a key bottleneck for AI chips and may prevent AI systems from reaching their full performance potential.

### ***Storage***

As data processing requirements in data centres continue to grow, so does the proliferation of high-performance storage, particularly solid-state drives that are based on flash memory. Compared to hard-disk drives, flash-based solid-state drives are able to store more data per footprint and are much faster to access. The total flash memory consumption for solid-state drives globally is expected to grow from 159 billion gigabytes in 2019 to 825 billion gigabytes in 2024, representing a CAGR of 39 per cent.<sup>9</sup> As requirements for fast data access and storage continue to grow, solid-state drive manufacturers are increasingly using the NVM Express (“**NVMe**”), interface specification for external connectivity, which uses PCIe as the connectivity standard. Accordingly, the number of PCIe-based solid state drives is expected to grow from 232 million units in 2020 to 396 million units in 2024, representing a CAGR of 14 per cent.<sup>12</sup> Historically, PCIe speeds have doubled every three years and are expected to increase to 128 gigabits per second in the PCIe 5.0 specification. Such interface speeds require high-performing and reliable SerDes IP in order to avoid performance bottlenecks related to external connectivity.

### ***5G Infrastructure***

5G, the fifth generation wireless standard, aims to increase cellular transmission speeds for wireless users up to 10 gigabits per second and expand bandwidth and density to accommodate a wide array of IoT devices. An important part of the evolving wireless infrastructure architecture is the utilisation of shorter frequencies, which necessitates a build-out of a greater number of antenna units interconnected through “front-haul” links with an array of distributed basebands. Because of this architectural separation, a significant strain is put on the wireline network, particularly on the front-haul and mid-haul portion that requires very low-latency reliable connectivity. Connectivity interface has to keep up with evolution of high-performing specialised wireless integrated circuits such as transceiver and baseband units and support a variety of standards, including CPRI, JESD204, Ethernet and PCIe.

### ***Autonomous Vehicles***

Advanced driver assistance systems, in-vehicle infotainment and autonomous driving systems, are driving the need for interconnected cameras, sensors such as LiDARs and RADARs, displays and on-board processors. It is expected that each autonomous car will be able to generate and consume up to 4 terabytes of data per hour of driving. High-speed wired connectivity is key to move this data from sensors to processing nodes and interconnect the automotive components with low latency. Due to stringent safety requirements, automotive connectivity has to be reliable and resilient to noise and interference under harsh environments. In 2020, MIPI,

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<sup>10</sup> Group market analysis, including data from 650 Group.

<sup>11</sup> Group market analysis, reflecting market trends and industry projections.

<sup>12</sup> Group market analysis, including data from IDC.

a mobility-oriented global business alliance, released the first automotive long-reach SerDes interface specification, which calls for data rates as high as 16 gigabits per second with a roadmap to 48 gigabits per second and beyond.

## PART V

### INFORMATION ON THE GROUP

*This Part V: “Information on the Group” should be read in conjunction with the other information contained in this Registration Document including the financial and other information appearing in Part VIII: “Operating and Financial Review”. Where stated, financial information in this Part V has been extracted from Part IX: “Historical Financial Information”.*

#### Overview

Alphawave addresses a critical need in the technology world: the Group builds industry-leading wired connectivity solutions that enable data to travel faster, more reliably, using lower power. Alphawave’s wired connectivity technology is embedded in leading-edge semiconductors built to power global network- and computer-systems that process zettabytes of data. The Group targets Tier-1 customers in data centre, AI, 5G wireless infrastructure, data networking, autonomous vehicles and solid-state storage.

Wherever there is a high-end compute, networking or storage *solution*, Alphawave addresses the high-end connectivity *need*.

Alphawave has a proven track record in licensing semiconductor IP to various of the world’s leading companies, powering high-bandwidth compute, data centre and network infrastructure. As ARM conquered the mobile device market with its processor technology, Alphawave seeks to conquer the global infrastructure markets with its wired connectivity solutions. Management believe that Alphawave is the only non-U.S. company licensing this technology, serving customers globally in North America, China, South Korea, Europe—anywhere high-speed wired connectivity is needed.

The Group focuses on the design and development of digital signal processing (DSP)-based, multi-standard wired connectivity silicon IP solutions. As technological advances in smart-devices and digital integration continue to push the boundaries of connectivity capabilities in everyday products from automobiles to AI-enabled devices, the underlying data networks and data centres that support them require high-performance connectivity. The Group addresses this growing need for advanced and high-speed data transmission at the chip level. Alphawave’s IP solutions support data transmission in semiconductor devices, chips and dies, providing designs for interfaces that utilise advanced data transmission technology to ensure the highest transmission speeds at low power levels. As computer chips continue to decrease in size, recent leading developments include the Group’s introduction of designs for use at 7nm, 6nm and 5nm manufacturing technologies (a nanometre measuring less than the width of a human DNA strand). The Group believes that its technology expertise, strong customer relationships and industry experience support its development of the cutting-edge solutions that enable chip designs powering next-generation technologies. Since its founding, the Group’s solutions have repeatedly established benchmarks in the industry in terms of performance, power consumption, size and flexibility.

Alphawave has established its position as a key provider in the semiconductor value chain through a portfolio of silicon IP solutions that are delivered to customers using a well-understood licensing model. Through this model, the Group’s design and development activities support steps in the production process for semiconductor vendors, OEMs and hyperscaler data centre operators, who utilise the Group’s silicon IP blocks and blocks from other IP providers to create their own semiconductor designs and products. As semiconductor designs become more complex and chip development costs continue to rise, semiconductor suppliers are increasingly licensing critical wired connectivity IP blocks from providers such as Alphawave rather than develop these technologies internally. This allows the Group to focus on advanced design and development activities without the significant capital expenditure (“**capex**”) requirements of a traditional semiconductor company. Alphawave is an approved provider with TSMC and Samsung, the world’s two leading third-party foundries, which represent the majority of third-party manufacturing capability globally at 7nm and beyond. This close relationship with TSMC and Samsung ensures that customers can seamlessly integrate the Group’s IP solutions into their own semiconductor products. Growth in the global semiconductor industry, and in particular within the wired connectivity IP market where Alphawave operates, will continue to be driven by increasing connectivity requirements in end-markets such as data centre, AI, 5G wireless infrastructure, data networking, autonomous vehicles and solid-state storage in the coming years.

Alphawave offers its wired connectivity IP solutions across a variety of formats (or form factors), utilising a configurable “chassis” model to allow customers to choose the specific capabilities required for their semiconductor device designs. As Alphawave grows its IP offering into chiplet design and development, providing customers with a turn-key product licence, it expects continued proliferation of its IP solutions in



customers' semiconductor designs, providing the Group with enhanced revenue and royalty growth and increasing margins over time. In the future, Alphawave may also further diversify and expand its product offering in chiplets to include manufacturing and sale of chiplet silicon devices as part of its strategic growth in the medium to long term.

During the year ended 31 December 2020, the Group generated revenue of \$44.2 million, exhibiting robust growth as compared to \$9.3 million, \$6.9 million and \$3.5 million in the seven months ended 31 December 2019, the year ended 31 May 2019 and the year ended 31 May 2018, respectively. The Group's bookings from contracts entered into during the year ended 31 December 2020 were USD \$75.0 million (USD \$51.9 million excluding estimated royalties), as compared to USD \$27.2 million (USD \$23.4 million excluding estimated royalties) from contracts entered into during the year ended 31 December 2019 and USD \$9.6 million (nil royalties) from contracts entered into during the years ended 31 December 2018 and 2017 (in aggregate). This rapid bookings growth has continued into the current year, and the Group achieved USD \$82.2 million in bookings (USD \$74.3 million excluding estimated royalties) from contracts entered into during the three-month period ended 31 March 2021. The Group's operating profit increased significantly over these years, reaching \$23.9 million in the year ended 31 December 2020, as compared to \$3.3 million, \$0.7 million and \$1.2 million in the seven months ended 31 December 2019, the year ended 31 May 2019 and the year ended 31 May 2018, respectively.

## Industry Overview

### *Industry Background and Challenges*

Wired connectivity performance is a critical limiting factor in high-performance semiconductor applications, such as data centre, AI, 5G wireless infrastructure, data networking, autonomous vehicles and solid-state storage. As integrated circuits such as CPUs, GPUs, PLDs and ASICs increase in complexity and performance with higher space demands, they have to interface with other circuits in a reliable manner at high transmission speeds. Since connectivity functionality is generally more challenging to design at higher transmission speeds, semiconductor designers and manufacturers (and, increasingly, original equipment manufacturers and hyperscaler data centre operators) rely on specialised IP providers such as the Group for their connectivity IP needs.

Designing high-speed wired connectivity has historically been challenging due to the following factors:

- **Critical analogue and digital mixed-signal expertise.** Since connectivity functionality is based on physical transmission of bits, it has traditionally been the domain of analogue mixed-signal engineering. Analogue design differs significantly from purely digital techniques and requires specialised know-how that many integrated circuit designers do not possess at the highest levels of performance. In addition, analogue-only approaches do not scale as well as digital approaches in lower geometries such as 7nm, 5nm and eventually 3nm because of a limited performance and power consumption gain and more susceptibility to noise and disruption. A further challenge with analogue-only approaches is that there is a scarcity of global talent in high-end analogue design, which makes scaling design teams challenging and costly.
- **Sensitivity to outside conditions.** At higher transmission speeds, such as 112 gigabits per second, connectivity designers have to utilise advanced modulation schemes such as PAM-4 to incorporate more bits in a single channel. However, at these performance levels, traditional analogue-only solutions can become highly sensitive to process, voltage and temperature variation.
- **Longer time to market and design cycle.** Traditional analogue connectivity can generally take a longer time to bring to market as each analogue circuit is typically developed to target a unique application, with each development requiring tens of millions of dollars of investment and up to two years of development time to yield a robust, production-worthy design.

Semiconductor designers consider the following factors in their selection of wired connectivity IP blocks for their designs:

- **Performance:** Transmission speed per electrical wire or lane, typically measured in gigabits per second.
- **Power consumption:** The amount of power the wired connectivity IP block consumes, typically measured in milliwatts per unit of performance.
- **Footprint and ability to integrate:** Refers to the size of the circuit, as more efficiently designed wired connectivity IP blocks occupy a smaller area and fit better on customers' system-on-a-chip designs. In

addition, easy integration is key, as availability of designs in 7nm and 5nm technologies can be critical for monolithic integration into customers' circuitry.

- **Flexibility and faster time to market:** Semiconductor designers may require their connectivity interface to support a multitude of connectivity standards, such as Ethernet, PCI-Express (“PCIe”) and many others. In addition, customers may value a faster time-to-market from design stage to delivery and connectivity IP blocks that are flexible and configurable can help to reduce time-to-market for semiconductor designers.

## Strengths

The Directors believe the key strengths of the Company are as follows:

### *Market leadership through differentiated DSP-based architecture addressing diverse industry connectivity needs*

Alphawave believes its high-speed connectivity IP solutions have a significant competitive advantage across its target end-markets. The Group's solutions have repeatedly set benchmarks in the industry in terms of performance, power consumption, footprint and flexibility by utilising DSP techniques and technical innovations to successfully compete with, and win designs against, larger and more established peers. Since its founding in 2017, Alphawave has established a reputation with global foundries and its broad customer base as a connectivity IP leader, in particular through its successful demonstration of high-speed connectivity solutions in the most advanced fabrication technologies ahead of competitors. These advanced fabrication technologies are provided by TSMC and Samsung, who together comprise the majority of global third-party fabrication capability at 7nm and beyond. Management believe that the Group was the first silicon IP vendor in the world to demonstrate functional silicon for its high-speed connectivity solutions at 7nm (2018), 6nm (2019) and 5nm (2020); and the Group is currently working with TSMC and Samsung at 4nm and 3nm. In 2020, the Group was recognised as Open Innovation Platform Partner of the Year for High Speed SerDes by TSMC.

Alphawave has leveraged its cutting-edge technologies in a market with rapidly growing demands for high-speed connectivity solutions. As data transmission speeds continue to increase, with end-market capability requirements growing to 112 gigabits per second and 224 gigabits per second, and as modulation schemes become more complex, system demands create process, voltage and temperature variations that expose shortcomings in traditional analogue connectivity designs. Alphawave's DSP-based approach harnesses the advantage of digital processing to overcome these limitations, utilising adaptive algorithms to predict changes as they occur, in ever-changing environmental conditions, to maintain top performance. This DSP approach utilises differentiated techniques in digital equalisation, forward error correction, sequence detection and other proprietary connectivity innovations, which enable end product solutions that were not previously possible using traditional analogue approaches. This DSP approach significantly benefits customers by providing high-speed connectivity solutions that consume less power, are more flexible and are easier/faster to integrate than solutions built with traditional analogue approaches. In addition, the Group's DSP-based approach is wellsuited for technologies requiring advanced manufacturing processes, particularly those in 7nm and 5nm geometries and beyond, as it is more manufacturable, reliable and scalable than solely analogue-based solutions.

Alphawave's DSP-based approach is also extremely flexible, built on core platform characteristics that can be configured for a wide variety of connectivity standards, data rates, end-markets and applications. Traditionally, industry participants would typically develop each individual connectivity IP solution to target a specific application. Under this approach, each new development could require tens of millions of dollars of investment and significant development time of up to two years to yield a robust, production-worthy design. Having identified this fundamental design limitation, the Group has developed a unified, configurable IP platform that supports multiple use cases depending on the customer's specific technology requirements. Utilising this chassis approach, Alphawave's unified, configurable IP platform supports five product families and nearly 60 connectivity products to address a broad range of customer use cases. Within these product families, Alphawave can rapidly configure its technologies by utilising software algorithms to define the target interface and optimise power and performance to meet specific target product criteria, providing each customer with the optimal solution for its specific needs. This design flexibility allows Alphawave to deliver targeted solutions rapidly, accelerating time-to-market for its customers.

### *Pure focus on high-speed connectivity*

Alphawave's research and development, engineering and marketing activities are focused solely on high-speed connectivity IP solutions. The Directors believe this approach gives the Group an advantage over many of its competitors, such as large engineering software suppliers (for whom connectivity IP generally comprises a

small portion of their overall business), diversified semiconductor and design services providers (who have historically bundled their connectivity IP with their broader services) and competitors that focus on broad IP products outside of connectivity. Alphawave management believes that the Group is currently the only pure high-speed connectivity IP provider focused on transmission speeds of up to 112 gigabits per second and is currently developing 224 gigabits per second solutions.

In addition, Alphawave management believes that the Group's singular focus on connectivity IP gives it a strong advantage over the internal connectivity development teams at large semiconductor and system companies. This focus enables the Group to solve complex high-speed connectivity problems for its customers, supporting continued development of higher value and more innovative end products. As transmission requirements increase and advanced semiconductor manufacturing reaches 7nm and 5nm transistor geometries, Alphawave management believes that high-speed connectivity IP will continue to be cost-ineffective to develop for internal teams at large semiconductor and system companies, further establishing the Group's competitive advantages in the development of advanced wired connectivity IP solutions.

### ***Deep relationships with Tier-1 global technology leaders***

Alphawave has utilised its leading-edge and customer-centric development approach to build close relationships with its customers and foundry partners, such as TSMC and Samsung, allowing it to collaborate at the front-end of customers' design cycles and embed its technologies as part of the development stage of their next-generation products. These close relationships also provide the Group with enhanced visibility into customers' future requirements and foresight into industry trends, which drive its R&D activities and, as a result, its ability to support customers as leaders in their markets.

The Group's customer base includes various leading semiconductor suppliers and OEMs and an increasing number of hyperscale data centre operators who design their own hardware for internal purposes, including top tier global data centre compute, ethernet switching and solid-state drive providers globally as well as emerging leaders in AI, 5G and autonomous vehicle technologies. The Group's customers serve a broad range of diversified end-markets, and its connectivity IP products are incorporated in a variety of device applications in these markets, including switching products, processors, programmable logic products and application-specific integrated circuits. As at 31 December 2020, the Group's top three customers comprised approximately 47 per cent. of its cumulative bookings since its founding in 2017, with an additional 28 per cent. from the next three largest clients, as the Group continues to diversify its customer base.

The Group's strong reputation and established track record across a number of deep customer relationships has supported its ability to attain subsequent design wins with existing customers, often in a different end-market or application. For example, the Group's first deal with Samsung was in 2019 in 7nm and, as of 31 December 2020, the Group has five engagements with Samsung spanning 7nm and 5nm technologies. Another example of this successful strategy is at a major Tier-1 5G Wireless OEM in China. In this case, the Group achieved its first design win in 2020 and quickly followed with multiple additional contracts. These relationships stretch across a global customer base, with customers in North America, South Korea and China. Across its customer base, approximately 50 per cent. of design wins since its founding are from repeat customers.

In addition, Alphawave management believes that the Group's close relationships with leading large outsourced semiconductor foundries, TSMC and Samsung, allow it to reach a large number of end-customers who utilise these suppliers' 7nm and 5nm manufacturing technologies. The Group was recognised as Open Innovation Platform Partner of the Year for High-Speed SerDes by TSMC in 2020, shortly after joining the foundry's IP alliance programme in 2019. This highlights the customer success the Group has experienced with TSMC's 7nm and 5nm processes and establishes a strong platform for the Group's continued work with TSMC and Samsung on 3nm technologies and beyond.

### ***Top industry talent, strong governance, and experienced leadership with extensive track record of execution***

Alphawave's engineering-focused workforce, management team and experienced and diverse board of directors are critical to the Group's success in its marketplace.

The Group is led by a team of seasoned semiconductor and connectivity IP experts. The three co-founders, Tony Pialis, Jonathan Rogers and Raj Mahadevan, and its Executive Chairman, John Lofton Holt, have worked together for nearly 20 years and have an extensive track record of successfully building companies across multiple semiconductor markets. Across the founder and leadership team, this experience includes establishing semiconductor and hardware companies with a particular focus on connectivity IP, as well as public listing experience and a variety of critical senior engineering and operations roles at leading technology companies, including at Intel and Gennum, raising and deploying over USD \$300 million across four semiconductor

companies that have generated nearly USD \$3 billion in aggregate value since 2004. In addition, Alphawave management believes that the Group's diverse and experienced board of directors differentiate it from the competition. Alphawave's Directors have a broad array of experience running multi-billion dollar companies in the networking, semiconductors, telecommunications, computing and software markets and in the aggregate possess over 300 years of executive experience.

Alphawave management believes the engineering and design talent of its employees is critical to the Group's success. The Group's development capabilities include six engineers with PhDs and a number that hold other advanced science or engineering degrees. Alphawave's highly technical and experienced management team has created an engineering-focused culture that has enabled the Group to hire and retain some of the best engineering talent in wired connectivity IP, with research and development comprising over 75 per cent. of Alphawave's workforce, with an average of eight years' experience in the industry. In recognition of the Group's engineering focus and talent base, TSMC, the largest semiconductor manufacturing foundry in the world, recognised Alphawave as Open Innovation Platform Partner of the Year for High-Speed SerDes in 2020, validating the value that the Group brings to customers.

### ***High-growth, high-margin and high-visibility financial profile***

The Group has grown at a rapid pace since its inception and has established a track record of strong profitability and cash flow generation. From the year ended 31 May 2018 to the year ended 31 December 2020, the Group has grown its revenue at a compound annual growth rate ("CAGR") of 161 per cent. from 17 design wins, including 11 during the year ended 31 December 2020. In February 2021, the Group signed a USD \$54 million multi-year subscription agreement with VeriSilicon for the China market. Including through this deal, the business's growth has helped establish the Group's reputation and technology expertise among its existing customer base and supports its market reputation as it targets continued growth by winning new customers.

Alphawave's operating model, which utilises a unified, configurable DSP platform, supports high-margin returns across the business, including EBITDA Margin of 53.9 per cent. during the year ended 31 December 2020, showing growth as compared to 37.6 per cent., 13.6 per cent. and 35.7 per cent. in the seven months ended 31 December 2019, the year ended 31 May 2019 and the year ended 31 May 2018, respectively. This approach utilises the Group's broad technological leadership and efficient cost base across its chassis model, enabling it to embed cutting-edge technologies across a number of solutions and to re-use common architecture for development of additional product families and products. In addition, by tailoring its IP licensing model and focusing primarily on connectivity IP solutions, the Group can focus on advanced design and development activities without the significant capex requirements of a traditional semiconductor company or the sales and marketing expenses associated with larger peers that operate across a higher number of product types. This focused approach allows the Group to invest in its personnel, which comprise its primary expense, and advanced research and development activities at the design stage, without the high overhead levels and other expenses associated with large-scale manufacturing activities incurred by a number of its competitors.

These factors, combined with the Group's limited working capital requirements and high margins, support its high cash conversion profile. There are two major contributing factors to the high EBITDA Margins for the Group. First, the Group is a key enabler of the semiconductor value chain to end-customers, but the Group does not participate in any manufacturing activities. Thus, unlike traditional semiconductor businesses with high-capex requirements, the Group has no manufacturing, fabrication, assembly, packaging or test costs. The Group's primary capex is currently office furniture and IT infrastructure to support design activities. The second reason for the Group's strong EBITDA Margin profile is the historic and continued focus on the highest-end solutions. By focusing on the high-end end-segment of connectivity IP, the Group's wired connectivity IP solutions command a scarcity value premium.

The Group's business model provides a high level of revenue visibility, driven by bookings (being the total value of projected licence fee, NRE, support and maintenance and royalties arising from customer contracts, whether or not yet recognised as revenue) and order backlog (being the expected value of contracted revenue, or bookings, that has yet to be recognised). The Group recorded bookings of USD \$75.0 million (USD \$51.9 million excluding estimated royalties) from contracts entered into during the year ended 31 December 2020 and revenue of USD \$32.8 million (\$44.2 million) for that year, highlighting the significant portion of 2020 bookings still to be recognised as revenue in 2021 and subsequent years. These types of relationships, under which the Group may benefit from a customer's use of Alphawave's connectivity IP over the lifetime of its use in the customer's product, have a number of benefits, including providing visibility on recurring future revenues over a prolonged period and more closely aligning the Group with its customers' needs through their product innovation cycles. Continued use of the Group's wired connectivity IP solutions in networking chips,

which tend to have longer product lifecycles than other more consumer-facing devices, is expected to support revenue visibility and longer-term royalty revenues in the coming years. As at 1 March 2021, the Group's unweighted sales pipeline of discussions with customers (which generally extends out by approximately 18 to 24 months) includes approximately USD \$170 million from cloud compute and data centre customers, USD \$96 million from data networking and optical customers, USD \$31 million from solid-state storage customers, USD \$23 million from 5G wireless customers and USD \$53 million from AI customers. The pipeline is expected to fluctuate from period to period, reflecting ordinary course changes as new potential projects emerge, other potential projects are accelerated, delayed or cancelled and as deals in the pipeline convert to signed contracts. The Group's weighted sales pipeline for the current financial year is USD \$78.7 million (as described in Part VIII: "*Operating and Financial Review—Key Factors Affecting Alphawave's Financial Condition and Results of Operations*"). See Part II: "*Presentation of Information on the Group—Information Regarding Forward-Looking Statements*".

## **Strategy**

The Group intends to build on its strengths to capture a disproportionate share of the large and growing global semiconductor silicon IP sector by pursuing the principal strategies described below:

### ***Continue to enhance key technological expertise and maintain 112G leadership whilst establishing a top position in 224G***

The Group has established itself as a leading supplier of high-speed connectivity IP solutions in a number of markets, with technology advances that place it at the cutting edge of wired connectivity IP solutions. It intends to maintain critical R&D investments in its technological expertise and continue enhancing its DSP-based architecture.

As performance, power consumption and footprint requirements continue to evolve at higher transmission speeds and more advanced manufacturing geometries, the Group's technology strategy targets continued advances in technical capabilities and growth in its product portfolio to maintain its leadership in high-speed connectivity IP. For example, to establish leadership at 224 gigabits per second solutions, the Group intends to invest in supporting more complex modulation schemes such as PAM4, NRZ and other advanced signalling protocols, and expects to further refine its foundational DSP-based and algorithmic approach. In addition, the Group expects to develop high-speed connectivity IP in 4nm and 3nm manufacturing technologies with its leading foundry partners.

### ***Broaden the Group's product portfolio across end-markets and applications***

Using its configurable DSP-based approach, Alphawave will continue tailoring its technology and service offering to the ever-evolving needs of next generation technology end-markets. As the Group continues to work closely with its customers and partners, Alphawave is developing new products servicing their specific evolving connectivity needs by leveraging its flexible technology, ongoing design and development activities and investment in specialist personnel. These targeted advances include increasing the number and type of wired connectivity IP product families and offerings, including both 224G interface IPs, as well as Die-Die interface IPs.

### ***Expand from single IP blocks to complete connectivity solutions and chiplets***

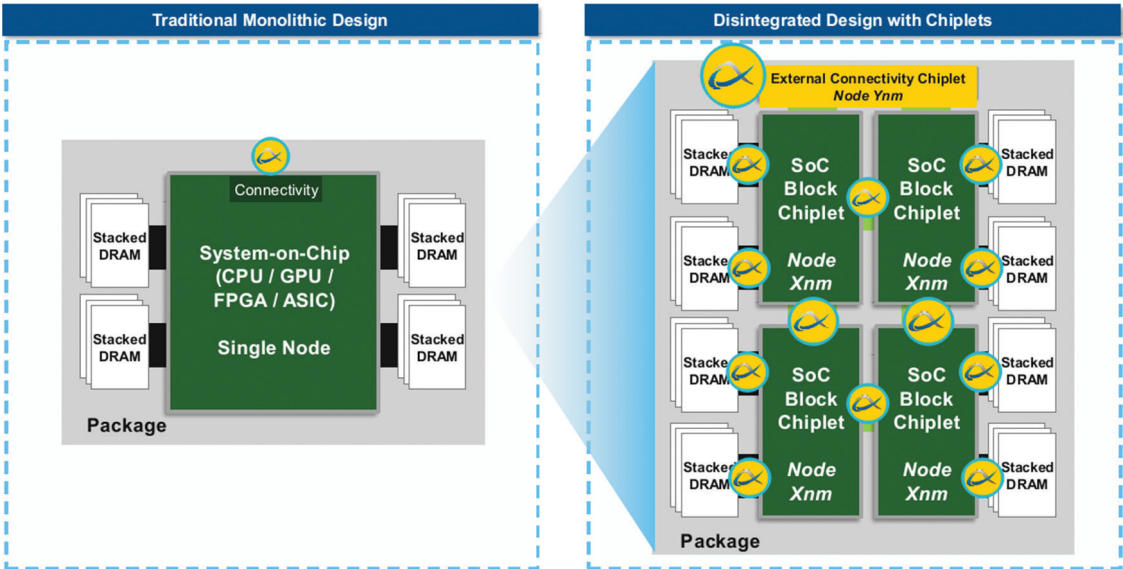
While today the Group provides licensable IP blocks to customers to incorporate into their semiconductor designs, the Group has broadened its solutions to licensing full connectivity IP solutions and will continue to explore the opportunity to expand into full chiplet products. The Group has historically focused its IP design and development activities to core IP solutions, which enable the customer's design process by providing IP blocks to integrate into the customer's end ASIC, SOC and standard product, with expansion into product IP solutions, which provide a richer set of functionality that represents the majority of the customer's complete product that they fabricate, market, brand and sell themselves. While one of the Group's core IP solutions typically comprises approximately 15 per cent. of a total customer solution and would correspond with a standard illustrative deal size exceeding USD \$5 million, a product IP solution will often comprise approximately 70 per cent. of the total customer solution and correspond with a standard illustrative deal size exceeding USD \$15 million.

The Group intends that its future customer solutions will increasingly target chiplet designs and, in the longer term, chiplet silicon devices. In cases where wired connectivity IP design comprises the core functionality of a product, as opposed to being a single block, the Group may design the entire chip and license to a

semiconductor customer who will then focus on marketing, manufacturing and selling the product to its customers. An example of such a product could be the Ethernet switchboard retimer, which maintains integrity of an electrical signal from the switch ASIC to the optical port.

In addition, the rise of the chiplet market is expected to create an opportunity for the Group to market and deliver full chiplet products whose core functionality is to act as a wired connectivity interface for SOCs to the outside world. As integrated circuits such as CPUs, GPUs, FPGAs and ASICs increase in complexity and size, the manufacturing process becomes economically limited and challenged by the physical limit of a single patterning device, or reticle, that helps imprint electronic circuitry on a silicon wafer. In addition, as the size of single transistor geometry continues to decrease in advanced nodes, currently to 5nm and eventually to 3nm and beyond, manufacturing larger chips that pack more transistors becomes less economical due to lower manufacturing yields and the necessity to design every function, including wired connectivity interface, in the same manufacturing node.

One of the techniques to address these challenges has been to break the larger integrated circuits into smaller modular pieces of silicon, or chiplets, that can be integrated together using die-to-die interfaces. This disaggregation of silicon presents an opportunity for the Group to provide its wired connectivity IP in chiplet form, either through licensing as silicon IP or potentially delivering the full unpackaged chiplet to the customer. This strategy enables customers to utilise chiplets in more mature geometries to minimise development costs, while maximising overall performance and focusing on their core competency. The below example shows an illustrative diagram of disaggregated chiplet design:



Alphawave estimates that the overall chiplet market for all semiconductors, including processors and connectivity, is set to grow from approximately USD \$3 billion in 2020 to USD \$50 billion in 2024, representing a CAGR of 98 per cent. Within this market, server-based and other applications that exclude desktop PCs, lap-tops and smartphones, are expected to grow from approximately USD \$1 billion in 2020 to USD \$22 billion in 2024, representing a CAGR of 112 per cent. Wired connectivity chiplets are expected to represent a portion of this market.

***Continue to execute multi-dimensional land-and-expand strategy with existing customers***

Growing with existing customers is fundamental to Alphawave’s current and future success. In addition to first-generation design wins with premier Tier-1 customers, the Group believes it is well placed to expand its footprint within its current customer base by winning new designs, penetrating other departments and adding more sockets and applications. In many cases, this is through close collaboration with customers to ensure the Group is providing demand-driven and leading-edge technological solutions. This repeat business is a cornerstone of the Group’s growth strategy. Furthermore, following its established relationships with these initial Tier-1 customers, the Group is transitioning its business model to target an increased share of recurring revenue. This strategy includes the introduction of a subscription model for silicon IP. Rather than purchasing multiple, pay-as-you-go licences in a single year, the Group can offer unlimited access to all, or a subset, of its silicon IP portfolio, for a flat annual “subscription” fee, similar to the unlimited use model ARM introduced for its architectural licences. The subscription model offers value to customers by ensuring a known, predictable

research and development expense for semiconductor OEMs that has multiple tape-outs within a single year. It also creates increased cost pressure on large semiconductor OEMs that have traditionally developed their silicon IPs in-house, due to the significant cost outlay for competitors that fully develop in-house. By starting with a larger, multi-year contracted revenue base, Alphawave management believes the silicon IP subscription model will offer predictable bookings, revenues and royalty streams off which the Group can sustainably grow its business while incentivising longer term commitments and deepening its relationships with customers across a growing range of each customer's products. As a result, the Group is not just innovating wired connectivity IP technology, but also its approach to expanding its technology adoption across the industry.

### ***Diversify the business model***

Under the Group's current model, a deal will typically provide NRE revenue, licensing revenue, support and maintenance revenue and royalty revenue. As part of its growth strategy and supported by its development and scaling success to date, the Group aims to continue growing the role that royalties play in its customer contracts. The Group typically structures these royalty arrangements on a bespoke basis to meet the customer's own planning, product-mix, budgetary and other considerations. These royalty arrangements build upon the conventional subscription revenue model to provide the Group with significant financial up-side as its technologies become increasingly embedded in products produced by a number of leading global technology companies. The Group's ability to continue offering increasingly complex and innovative wired connectivity solutions, in particular as it targets growth in its chiplet offering, is expected to enable it to increase the royalty component of future licensing arrangements.

### ***Continue to attract and acquire new customers***

The Group aims to continue adding new Tier-1 customers by leveraging its differentiated DSP platform to meet their needs for increasingly advanced connectivity IP solutions. The Group is focused on developing a strong sales pipeline with large, global customers at the leading edge of modern technology, including network equipment OEMs, compute solution providers and hyperscalers. Alphawave management believes that the Group has a strong sales team that does not require significant incremental headcount in order to achieve the Group's targeted growth objectives. The configurability of the Group's wired connectivity IP solutions can be utilised for a wide variety of applications, which management believes can continue to drive strong demand in the marketplace with customers looking to upgrade from traditional analogue or lower power and performance alternatives. The Group intends to continue to collaborate with TSMC and Samsung on 3nm and beyond and leverage these foundry relationships, ensuring that customers can seamlessly utilise Alphawave connectivity IP solutions into their semiconductor designs.

### ***Expand the Group's global operational footprint***

The Group is focused on three operational initiatives to bolster its global product capabilities and customer reach:

- Addressing adjacent IP blocks through the build-out of its UK design team, which will be enabled by its planned R&D headquarters in Cambridge, and the potential acquisition of design teams or key technologies.
- Expanding its reseller agreement and partnership with VeriSilicon to drive further success in China.
- Building on existing China success through its Product Partnership with Wise Road Capital and potential investment in leading-edge semiconductor devices in the Asia-Pacific region.

The Group believes that the United Kingdom offers an attractive location to replicate its successful engineering development model as it targets its next stage of growth across its design and development activities. Within key markets, the United Kingdom boasts world leading silicon IP providers, such as ARM and Imagination, and leading fabless semiconductor device vendors, such as CSR and Dialog, and it allows the Group to continue developing its global offering including serving customers in both the United States and China. The United Kingdom also offers world leading university programmes in electrical and computer engineering. In addition, the United Kingdom has significantly lower levels of competition for graduating engineering talent than Silicon Valley, which results in lower staffing costs, allowing the Group to replicate the personnel model it has utilised in Toronto, Canada since its founding in 2017.

In addition to organic growth, the Group can acquire the additional functionality required for new wired connectivity IPs through inorganic sub-licensing, partnerships or merger and acquisition activity. Alphawave management has commenced steps to identify design teams in Canada and the United Kingdom with

complementary capabilities, and the ability to supplement the Group's existing design activities, to support acceleration of the Group's product development plans in the future.

The Group's engineering development model utilises experienced designers in the field and complements them with newly graduated university students, who are trained in the Group's design approaches. Toronto, Canada has delivered a thriving ecosystem of seasoned industry experts, coupled with a robust pipeline of university graduates. The Toronto technology talent pool was ranked fourth in North America by CBRE 2020 Scoring Tech Talent report. In the same report, it also noted that average tech talent salaries are approximately 40 per cent. lower in Toronto than in the California Bay Area.

A key component of the Group's strategy is to further build its global technology offering, including through continued focus on deploying its presence in China and the broader Asia-Pacific region. This multi-step strategy includes (i) growing technology awareness, (ii) building on established channel partnerships and (iii) establishing onshore capabilities to better support Chinese and Asia-Pacific region customers. Since its foundation, the Group has aimed to build a global customer base, including through direct and indirect sales and marketing activities in China to raise awareness about the Group's technologies and capabilities. Following early and sustained success in establishing its reputation and creating significant interest from channel partners, the Group has established a close relationship with VeriSilicon, the largest ASIC company in China, as the exclusive reseller for Alphawave's IP solutions in China. The Group and VeriSilicon signed an initial reseller agreement in 2020, which it expanded to include a minimum subscription licence commitment from VeriSilicon as part of a renewal in early 2021. The Group is accelerating its China penetration strategy by establishing a product partnership with Wise Road Capital, under which Wise Road Capital will have a subscription agreement to license certain Alphawave's IP solutions, with an option to increase the scope to include advanced Alphawave IP technologies, and royalty fee arrangements on all shipped products incorporating Alphawave IP. The Group will aim to grow this partnership in the future through further investment alongside Wise Road Capital in onshore capabilities, including the development or acquisition of production capacity to build communications semiconductor products with Alphawave IP, as described in "*—Business Model—Product Partnership*" below. This partnership strategy supports the Group's aim to establish a trusted, leading onshore Chinese digital communications semiconductor supplier that can leverage the Group's leading turnkey IP technologies and its continued advances in wired connectivity IP design and development to manufacture standalone semiconductors for various applications, driving high-volume, high-margin growth and significantly expanding royalty streams.

## History

The founders of the Group have worked together for nearly 20 years across numerous global wired connectivity IP and semiconductor OEMs, including Intel and Gennum, in the United States and Canada. After the Group was founded in 2017, Alphawave brought together the management team and scaled quickly while securing lead customers for the Group's first 112G silicon IP in TSMC 7nm, leading to profitability in 2018 off the back of two design wins utilising this technology. The licensing contracts with these early customers, combined with paid in capital by the founders, funded the Company to profitability without seeking any other external capital sources.

Between 2017 and 2019, Alphawave expanded and diversified its customer base while driving key partnerships with TSMC and achieving its first design win with Samsung in early 2019. Alphawave continued to target growth in its customer base, new customers globally and across a number of end-markets. As of 31 March 2021, the Company has 14 customers, including multiple design wins with a number of key customers, and achieved USD \$75.0 million of bookings from contracts entered into during the year ended 31 December 2020 (USD \$51.9 million excluding estimated royalties), and bookings of USD \$82.2 million (USD \$74.3 million excluding estimated royalties) from contracts entered into during the three months ended 31 March 2021.

Today, Alphawave has established its position as a key provider in the semiconductor value chain. Any customer building a custom semiconductor device needs four fundamental elements: silicon IP blocks, design tools, an outsourced foundry and a packaging/test supply chain. Alphawave provides silicon IP blocks focused on connectivity. Once Alphawave provides these blocks, customers then use design tools from companies like Cadence and Synopsys to build and stitch their chip together with blocks from other IP providers. The customer then sends their design to a foundry, like Samsung or TSMC, to fabricate the chips. Then, the chip is tested and packaged by back-end supply chain partners.



## Products and Solutions

The Group’s industry-leading, unified DSP-based platform enables it to provide customers with proven solutions to the world’s most complex connectivity problems. This platform currently supports five product families, which comprise a total of nearly 60 products, allowing the Group to tailor wired connectivity solutions that can be optimised for each customer’s specific market, in order to meet its precise design needs.

The Group delivers its technology through three distinct delivery models. These delivery models are additive and evolutionary, providing customers with three distinct ways to integrate the Group’s technology.

1. **Connectivity IPs**, which are individual silicon IP building blocks that customers license and integrate into the design of their chip;
2. **Integrated Product IPs**, which are complete designs for products that can be licensed by customers and either customised further or manufactured as-is; and
3. **Chiplet IPs**, which are small form factor IPs that are licensed to customers to fabricate and integrate with other chiplets in a system-in-package.

As described in “*Strategy — Expand from single IP blocks to complete connectivity solutions and chiplets*”, the rise of the chiplet market is expected to create an opportunity for the Group to market and deliver full chiplet products in the coming years.

The following graphic shows the form factor utilised for each of these delivery models, which provide customers with successfully higher levels of integration to match their design needs. In all three models, the Group utilises a licensing-based business model today, to preserve its low capex financial model and maintain high gross margins and EBITDA Margins.



All product form factors leverage Alphawave’s connectivity IP technologies, but permit customers to select the specific integration level required. This flexible approach allows the Group to leverage its cutting-edge technologies across multiple formats to meet different levels of customer needs, expanding its addressable markets and ultimately increasing the value delivered to customers.

IP Type	IP Description	Nodes Supported	Total Number of Configuration Options
ZeusCORE100 – MLSE	– XLR – FFE/DFE/MLSE	TSMC 7nm	3
ZeusCORE100 – MLSE	– XLR – FFE/DFE/MLSE	TSMC 5nm SMS 5nm	6
AlphaCORE100 – FFE/DFE	– Built for high lane count integration	TSMC 7nm	3
AlphaCORE100 – FFE/DFE	– Built for high lane count integration	TSMC 5nm SMS 5nm	6
AlphaCORE64 – FFE/DFE	– Optimised for rates 64Gbps and below	TSMC 7nm	3
AlphaCORE64 – FFE/DFE	– Optimised for rates 64Gbps and below	TSMC 5nm SMS 5nm	6
– Add on PCIe to AlphaCore 100 (PCS)	– Soft PCS layer add-on to ZeusCORE or AlphaCORE	TSMC 7nm	3
PipeCORE – PCIe5 PHY	– PCI-Express Gen5 PHY	TSMC 7nm	2
PipeCORE – PCIe5 PHY	– PCI-Express Gen5 PHY	TSMC 5nm SMS 5nm	4

IP Type	IP Description	Nodes Supported	Total Number of Configuration Options
ApolloCORE – Medium Reach / Optical	– Medium reach PHY optimised for Medium Reach and optical applications	TSMC 7nm	2
ApolloCORE – Medium Reach / Optical	– Medium reach PHY optimised for Medium Reach and optical applications	TSMC 5nm SMS 5nm	4
DieCORE – XSR PHY	– XSR PHY optimised for D2D interfaces	TSMC 7nm	6
DieCORE – XSR PHY	– XSR PHY optimised for D2D interfaces	TSMC 5nm SMS 5nm	4
HexaCORE 1600 Retimer Core	– Retimer IP Subsystem	TSMC 7nm	2
HexaCORE 1600 Retimer Core	– Retimer IP Subsystem	TSMC 5nm SMS 5nm	4

### *The Group's DSP Family of Connectivity IP Cores*

The Group offers an industry-leading portfolio of multi-standard, connectivity IP. The Group's wired connectivity IP supports the widest range of data rates from 1Gbps to 112Gbps and soon up to 224Gbps. Multiple signalling schemes are supported, such as pulse amplitude modulations (PAM2 (aka NRZ), PAM4, PAM6 and PAM8), which are used in over 30 different industry protocols/standards.

Each of the wired connectivity IPs in our portfolio share the same foundational features:

- **High speed A/D and analogue front-end:** high speed A/D architecture that has configurability for both the A/D sampling rate, as well as the A/D resolution.
- **Sub-sampling clock multiplier:** DSP-based, wide tuning, sub-sampling clock multiplier that can track over 5000ppm of error for both scrambled and 8B/10B encoded data.
- **DSP Equalisation:** Designed for the most challenging systems, the DSP-based receiver equalisation can recover corrupted data.
- **Master controller:** Combination of firmware training with hardware accelerators to provide full flexibility with minimum power state transition times. It also includes significant testability, such as non-destructive, in service link monitoring.

**ZeusCORE100:** ZeusCORE100 is the Group's extra-long reach (XLR) connectivity IP. This is the highest performance DSP engine the Group offers today. The key differentiating feature of the ZeusCORE100 is the addition of a most-likely sequence detector (MLSD). The MLSD significantly extends the channel reach performance. This extends the system solution space for customers with the most challenging channels. The ZeusCORE100 is targeted to data networking applications.

**AlphaCORE100:** The AlphaCORE100 Long-Reach (LR) IP is a high-performance, low-power, DSP-based silicon IP interface or Physical Interface (PHY). The unique differentiator of the AlphaCORE100 LR PHY is in its register configurable DSP architecture. The AlphaCORE100 master controller uses complex signal processing techniques to recover the signal, while optimising both power and latency. The AlphaCORE100 is targeted to AI and 5G base station applications.

**ApolloCORE100:** The ApolloCORE100 Medium-Reach (MR) IP is optimised for optical communications and shorter electrical channels. Management believes the ApolloCORE100 is the world's lowest power DSP based PHY. This makes it extremely attractive for optical communications within data centres.

**PipeCORE64:** The Group's PipeCORE64 PHY IP is a high-performance, low-power, PCIe Gen1 (2.5Gbps)—Gen6 (64Gbps) and Compute Express Link ("CXL") PHY used for processor interfaces. The PipeCORE64 is power and performance optimised for the challenges of PCIe and is targeted to deliver very high bandwidth for the next generation of computing and storage interfaces.

**AthenaCORE200:** The Group’s next generation of connectivity IP will support up to 224Gbps data rates. The AthenaCORE200 leverages the foundational building blocks of the DSP architecture to double the data rate by employing enhanced modulation schemes to double connectivity bandwidths in data centres, without increasing power consumption.

**DieCORE100:** DieCORE100 is a 112Gbps D2D PHY that employs a low noise, high speed, analogue front end that delivers performance and configurability to support both PAM4 and NRZ signalling. The DieCORE100 operates at sub-mW/Gbps power consumption, while still providing robust equalisation for chiplet interfaces. The DieCORE100 enables low cost packaging on an organic substrate to utilise chiplet technologies.

**AresCORE:** AresCore is a parallel interface operating single ended from 2-16Gbps. Leading in sub mw/Gbps power, area and latency, the AresCORE is ideal for short reach D2D interfaces on SIP where high density packaging is available.

**Turnkey, Integrated Product IP Cores**

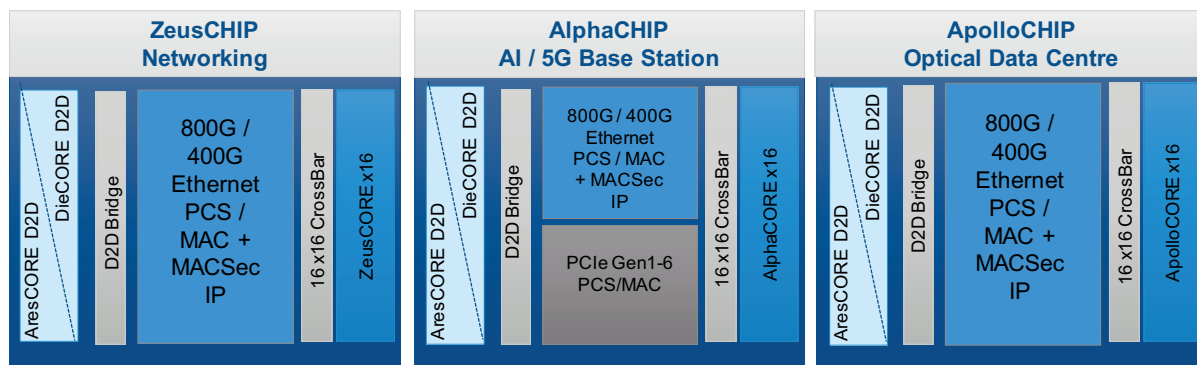
The Group’s integrated product IPs enable customers with semi-customisable full product solutions. The Group delivers product IP solutions for 100G retimer products that act as a “repeater” in a connectivity channel, products transitioning to 100G rates, as well as gearboxes that enable interfaces between old and new infrastructure. Optical retimers enable the interface between optical and electrical infrastructure. Electrical retimers enable customers to meet the challenges of channel losses at higher data rates by providing a bridge between chips that are not physically able to be closer.

**OctalCORE800:** An 8 channel IP with Ethernet PCS and crossbar targeting optical modules. It supports all combinations of 800GE, 400GE, 200GE and 100GE.

**HexaCORE1600:** Contains 16 channels of industry leading 1-112Gbps multi-standard DSP PHY. Supports all combinations of 800GE, 400GE, 200GE, 100GE, including 400GAUI-16.

**Chiplet IP Cores**

The Group’s family of chiplet silicon IP products builds upon its industry leading wired connectivity IP portfolio of technologies and integrates them into a chiplet form factor. The following table sets out the Group’s initial chiplet wired connectivity IP products and component IPs, namely ZeusCHIP, AlphaCHIP and ApolloCORE. These initial chiplet designs are based on customer-driven product IPs that are now being commercialised in a chiplet form factor. The following diagram shows the Group’s chiplet-based IP products:



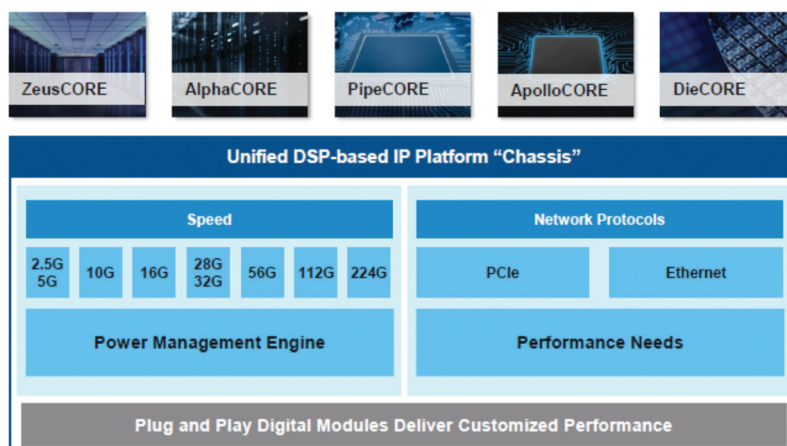
**ZeusCHIP:** Contains the industry leading DieCORE100 or AresCORE D2D interface and can be matched with AthenaCORE200 or ZeusCORE100 to meet the needs of top-of rack networking interconnects.

**AlphaCHIP:** Contains the industry leading DieCORE100 or AresCORE D2D interface and is paired with the AlphaCORE100 or ZeusCORE100 to deliver flexibility for switching, base station or AI applications.

**ApolloCORE:** Contains the industry leading DieCORE100 or AresCORE D2D interface and is paired with the ultra-low power ApolloCORE100 DSP PHY to deliver high performance for optical and medium reach electrical interfaces.

### *DSP-based chassis model*

The Group built its first products in 2017, with the support of lead customers with the need for high-speed connectivity. In architecting these first products, the Group did not just focus on building a single product, but a configurable DSP-based “chassis” from which multiple future products could be quickly developed and deployed. This chassis represents a unified architecture that is the foundation of all of the Group’s products, as shown below.



The Group’s approach utilises a common DSP engine and analogue front-end and product interface to permit configurable options depending on the specific device needs, including speed (2.5Gbps—112Gbps), network protocol (Ethernet, PCIe), number of pins/channels, power consumption, performance/reach, footprint/size and API libraries. As a result, this unified DSP-based chassis solution has enabled the Group to build five distinct product families between 2018 and 2020, representing nearly 60 unique products, from its small but scalable design team. As the Group expands, it will continue to leverage this chassis-based approach to maintain and expand leadership over competitors, who typically focus more on “ground-up” development for most of their products.

### **Business Model**

The Group’s licensing arrangements utilise an established model in IP markets. This approach is similar to the models that have historically been used by silicon IP leaders like ARM, Imagination, Rambus, Cadence, CEVA, Synopsys and many others. The way that the Group leverages this business model is innovative and bespoke, based on product mix, customer needs and the ultimate complexity of the product that is delivered to customers.

### *Technology licensing model*

In all cases, customers pay a licence fee to license products from the Group, whether for a single use, multiple uses or on a subscription basis. A customer’s fee arrangement will typically include the following components:

- **Licensing fee:** subscription licence fees are typically paid by customers that require access to a portfolio of products, or multiple products, on a single manufacturing technology over a longer period of time.
- **Support and maintenance:** in all cases, customers also pay for support and maintenance to ensure that the Group can provide them assistance as they integrate the Group’s products into their end products, and as customers take their products to production.
- **NRE:** in addition to the licensing fee and support and maintenance, many customers pay non-recurring engineering (NRE) fees so the Group can configure its existing products to meet a specific customer need.
- **Royalties:** bespoke arrangements with payment levels typically tied to the customer’s production of its chips incorporating the Group’s wired connectivity IP.

The two basic fee components of this model—licence fees and support/maintenance fees—are common across the Group’s customer arrangements. In addition, NRE charges were common earlier in the lifecycle of the Group’s business and ranged from USD \$250,000 to USD \$5 million per arrangement. As the Group has developed a larger portfolio of products, the number and level of NRE charges has reduced. In 2020, 75 per cent. of contracts were for NRE or had an NRE component, compared with 80 per cent. in 2019.

Royalties do not typically begin until the customer has completed design, manufacturing and testing of its end product and then commenced shipping their product in high volumes. In most cases, this is at least 18 to 24 months from the time of the original design win and entry into a licence agreement.

As a result, the Group's revenue from a particular customer agreement is initially closely linked to the licence fee (typically over four to eight quarters per IFRS) and any NRE revenues, and it is, over the longer term, significantly dependent on the customer's utilisation of the specific IP solution, which influences the royalty revenue over the life of the agreement.

### ***Innovation in royalty arrangements***

As the Group has matured and broadened its customer base, it has built upon the licensing business model in two key ways.

First, starting in 2018, the Group began to charge customers royalties. These royalty structures are diverse and bespoke, depending on the needs of the customer, the product mix, the customer's preferences and the ultimate complexity of the product that is delivered to the customer. For example, some customers prefer paying a simple royalty to the Group on a per-chip-shipped basis, typically as a fixed fee per chip (for example, \$2.00) or on a percentage of average sales price (ASP). Other customers prefer to pay a prepaid royalty, which can either be capped or uncapped. Some customers prefer to pay a larger royalty that is a percentage of total revenue, in return for a lower licensing fee. The Group works closely with customers to understand their business and to structure a royalty model for customers that is a win-win for both companies. As a result, 25 per cent. of the customer contracts that the Group signed in 2020 provided for some kind of royalty, and the Group is targeting that a majority of its customer contracts going forward will contain royalty arrangements.

The second way that the Group has adapted this business model is to change the consideration mix (NRE, licence fee, support and maintenance, royalty) based on the complexity of the product licensed. For instance, for single-core building block licences, the NRE, licence fee, and support and maintenance charges are the most significant components of the customer cost structure. For product IP licences, the NRE and licence fee is lower, but the royalty components are much larger. For chiplet IP licences, the Group anticipates that the business model will further evolve with a higher royalty and also higher NRE and licence fees.

This royalty-focused approach also aligns with the Group's customer base and, in particular, its significant exposure to technology infrastructure providers, such as networking companies, data centre providers and wireless infrastructure providers. These types of customers typically ship products in production for up to a decade, unlike consumer electronics manufacturers, whose products tend to have shorter product lifecycles. Once a customer has embedded one of the Group's IP solutions into a product, these longer-term customer product lifecycles have the potential to drive the Group's royalty revenues over a significant period of time.

### ***Product Partnership***

In 2021, the Group entered into a non-binding term sheet with Wise Road Capital to better enable it to serve existing and targeted customers in the Asia-Pacific region, in particular China, Taiwan and Macau. A definitive agreement associated with this term sheet and the Product Partnership is being negotiated.

As part of this relationship, the Group anticipates licensing specified IP solutions to a subsidiary of Wise Road Capital, on a perpetual basis, for USD \$95 million (paid in instalments through the end of 2025, with an option for Wise Road Capital to increase the licence scope to include advanced Alphawave IP technologies for an additional USD \$105 million over the same period) and a royalty fee on all shipped products incorporating Alphawave IP. The aim of this approach is to leverage the depth of its existing experience and relationships in the Asia-Pacific region while creating an onshore platform alongside Wise Road Capital to reach customers in China through a similar licensing model as used with customers globally.

In addition, the Group aims to grow this partnership in the future to further establish its technology offering in the Asia-Pacific region alongside Wise Road Capital. A definitive agreement in relation to the Product Partnership is expected to set out a non-binding framework for future investment in the development or acquisition of IP development and customer licensing and sales capabilities. Under this approach, the Group anticipates that future investment would aim to leverage the Group's IP solutions while establishing onshore production capabilities and undertaking R&D activity, including by building on the Group's existing IP solutions and future design capabilities, to broaden the Group's product portfolio, grow its chiplet offering, diversify its business model and expand its global operating footprint.

See Part I "*Risk Factors—The Group is subject to risks associated with the Product Partnership*".

## Product Development Methodology

The Group has developed a flexible product development methodology that enables it to adjust to future market trends, as well as quickly deliver high-value customisation to existing customer needs. The unified DSP-based chassis is the foundation of this model, by requiring slight customisations to deliver fully optimised, derivative solutions. At the centre of the development methodology, is the Group's high-end research and development team, managed by Jonathan Rogers. Within the research and development organisation, cross-functional teams are assembled to execute three different programme types:

- **Research and Development:** Development efforts (that last approximately eight quarters in duration) that involve developing new architectures to solve novel interface challenges (e.g. 200G development is a research and development programme). These programmes are cost-intensive but fuel the Group's future earnings when licensed across a broad range of customers. The costs are typically completely offset by customer NRE payments.
- **Migration Developments:** Moderate size engineering efforts (that last approximately six quarters in duration) that focus on moving existing silicon IPs to the next silicon process node (e.g. migrating the AlphaCORE100 to TSMC 3nm). These programmes maintain the Group's technology leadership, by ensuring its silicon IP portfolio is available in leading edge technologies. These developments are also typically funded by customer NRE payments.
- **Derivative Developments:** Minor engineering efforts (that last approximately two quarters in duration), that implement configuration customisations on existing silicon IPs (e.g. changing the orientation or channel count of an IP). These programmes are highly profitable due to nearly 100 per cent. IP reuse. As a result, customers rarely pay NRE charges for these developments but the licence fees they pay are very high margin.

Separately, the Group's technical marketing organisation works closely with customers, industry standards bodies and market research to determine where to invest the efforts of its cross-functional engineering teams. Due to decades of institutional knowledge in this space and through close collaboration with its Tier-1 customer base, the Group believes that it has been successful in forecasting market trends. The Group's marketing organisation is also actively participating in driving the next generation of interface standards for both IEEE and PCIe.

## Sales, Marketing and Customer Support

The Group's sales capabilities provide worldwide coverage by utilising direct customer sales and independent sales representatives, including offices in the United Kingdom, Canada and the United States and representatives in Asia, Europe and Israel. The direct sales team reports into senior management, working closely alongside development activities to provide tailored support to customer needs.

During the presales phase, the Group's engineers work with customers to establish the Group's technology leadership via performance, power and area efficiency metrics. The Group's application engineers also support and demonstrate hardware prototypes with customers, so they can benchmark the Group's technology. The typical sales cycles require two to three quarters to complete technical diligence and commercial negotiations with a new customer prior to entry into a new agreement. However, for repeat business with an existing customer, this process typically requires less than one quarter.

The Group's technical marketing organisation is responsible for driving next generation products, supporting technical sales and growing brand awareness. Public relations activities include creating technology awareness and understanding online through the Group's website, videos and trade shows in partnership with external public relations agencies. Also, the Group actively participates in industry standard bodies such as IEEE 802.3, OIF, and PCIe SIG to promote adoption of the Group's technology for future industry standards.

The Group provides customers with a comprehensive support model during both the design and manufacturing phases of their product's life cycles. Each customer has a dedicated programme lead contact at the Company that guides the virtual joint team throughout all phases of product development. A sophisticated issue tracking and ticketing system is used by the Group in conjunction with weekly team synchronisation meetings. In addition, the Group provides customers with test software to enable their platforms with the solutions that reduce time-to-market for their end products.

## Customers

The Group currently targets IP products directly to major semiconductor OEMs and ASIC providers in the United States, China, Europe and South Korea. It spans the key end-markets of data centres, AI, 5G wireless infrastructure, data networking, autonomous vehicles and solid-state storage. The Group has 14 customers globally, and measured as at 31 December 2020 no single end customer exceeded 20 per cent. of the Group's cumulative bookings.

## Research and Development

The Group is a technology company and believes that its future success depends on its ability to rapidly develop and introduce differentiated new products. As a result, the Group is committed to investing into its product development capabilities. The Group focuses its engineering efforts on designing and introducing new technology platforms and application specific derivative IPs based on its DSP IP technology. The Group has also developed deep design expertise in building high speed analogue circuitry in cutting-edge semiconductor process technologies. The Group has developed proprietary innovations and intellectual property that has enabled its technology lead in the market.

The Group believes it anticipated the technology inflection point enabling inter-chip communications systems to efficiently move to DSP-based equalisation to meet the challenges of the 112Gbs+ rates. The Group uses this DSP-based approach to provide products to market that exceed prior generation analogue offerings' performance while continuing to improve on their power and area efficiency. The Group has developed a highly differentiated clocking capability that allows it to address a continuous range of data rates from 1-112Gbs, including the very different requirements of PCIe and Ethernet standards. The Group has developed a DSP technology platform to allow for rapid customisation to meet varying application and customer practice requirements. Customisations include a DSP based transceiver with configurable power/area vs. reach and front-end customisations allowing trade-off between performance and power.

The Group has differentiating expertise in all sub-fields required to create market leading DSP transceiver designs. Many of these disciplines are very different from what is required to build traditional analogue transceivers resulting in a significant barrier to entry for legacy competitors. These include:

- The circuit design of high-performance time-interleaved analogue to digital converters.
- Detailed system modelling of mixed signal DSP transceivers including silicon correlation.
- Design of wide-band highly linear, low noise analogue front ends.
- Clocking and advanced highly digital synthesiser architecture.
- Design of power efficient block DSP for wireline applications.
- Design and architecture of DSP based clock recovery loops.
- Analogue layout optimisation for performance and reliability at very high data rates.
- Design of power efficient highly linear transmit drivers.
- Design of blindly adaptive wireline receivers.

Due to the need for device interoperability, the connectivity IP space is largely driven by standards development. The research and development team is strongly focused on engaging early in the standards process to develop prototypes that are aligned with standard development. This strategy allows the Group to have early demonstration vehicles in place to demonstrate technology value. The Group believes its platform flexibility allows it to efficiently incorporate updates ahead of standards ratification, to provide compliant solutions for customers' products.

The Group's team of highly skilled engineers has extensive semiconductor design experience, including expertise in systems architecture, analogue design, custom analogue layout, digital design, digital verification, digital backend, design automation, firmware and lab validation. As of 31 December 2020, the Group had 56 employees dedicated to research and development, primarily in the Greater Toronto Area ("GTA") in Canada. It has drawn experienced employees from the considerable analogue/mixed-signal talent pool in the GTA, which is largely composed of companies that were previously started by the Group's founding management team. Toronto was ranked fourth in North America by the CBRE 2020 Scoring Tech Talent report for technology companies. In the same report, it noted that average tech talent salaries are approximately 40 per cent. lower in Toronto than in the California Bay Area. Additionally, from 2015 to 2019, the Toronto area added more than 66,000 technology jobs, including a net "Brain Gain" of more than 42,000. This is second

only to the California Bay Area in North America. The talent pool is further underpinned by the proximity of world-class electrical and computer engineering undergraduate and graduate programmes at the University of Toronto and the University of Waterloo. As the Group continues to scale, it intends to replicate this success in team building in the United Kingdom. For less differentiated development activities, the Group aims to supplement its capacity by leveraging service providers in a variety of low-cost geographies.

The Group has also made significant investments in its core engineering capabilities, including improvements in tools and flows to support greater engineering efficiency, full system modelling, electro-magnetic modelling, detailed analogue/digital verification and automated lab testing. The Group believes that these improved tools enable it to predict the performance of its designs more accurately, resulting in improved time-to-market for its products.

The Group's focus on exceeding stringent connectivity performance and reliability requirements is fundamental to the research and development process. The Group aims to continue making research and development investments, in order to enhance its technical leadership position via innovative, high-quality products and services.

### **Material Operating Locations**

The Group does not manufacture and only licenses intellectual property. As such, the Group only leases commercial office spaces for its employees and contractors. As of 31 December 2020, the company had the following material operating locations:

- 70 University Avenue, Suite 1000, Toronto, Ontario, Canada
- 170 University Avenue, Suite 1001, Toronto, Ontario, Canada

### **Employees**

As of 31 December 2020, the Group employed 72 full-time employees, including 56 in research and development, 3 in sales and marketing and 13 in operations (31 December 2019: 43, 35, 2 and 6, respectively; 31 December 2018: 28, 24, nil and 4, respectively). As at 31 December 2020, the Group's employees were primarily located at its premises in Toronto, in addition to 4 located in the United States. The Group has never experienced a labour-related work stoppage. None of the Group's employees are either represented by a labour union or subject to a collective bargaining agreement.

### **Insurance**

The Group has secured insurance policies it considers appropriate for the industry, such as, but not limited to, commercial property and general liability insurance, professional liability insurance, directors and officer's liability insurance, and errors and omissions liability insurance.

### **Legal Proceedings and Investigations**

There are no current, nor have there been, any governmental, legal or arbitration proceedings (including any such proceedings which are pending or threatened or of which the Group is aware) during the 12 months preceding the date of this Registration Document which may have, or have had in the recent past, a significant effect on the Company's or the Group's financial position or profitability.

### **Regulatory Overview**

The Group's operations subject it to a variety of general regulatory requirements and specific requirements related to the industries in which it operates. The Group monitors its obligations with these requirements centrally with the support of external counsel where appropriate. There are currently no material breaches of applicable regulations.

#### ***General regulatory requirements***

The Group is subject to the laws and regulations of the jurisdictions in which it operates covering a variety of areas affecting health and safety, environmental, competition, data protection and privacy, export and import controls, anti-corruption legislation, trade sanctions and labour laws. As the Group does not undertake manufacturing activities, it is not subject to the material risks associated with manufacturing such as release, storage, use, discharge, handling, generation, transportation, disposal, and labelling of, and human exposure to,



hazardous and toxic materials, product composition and the investigation and clean-up of contaminated sites, including sites we currently or formerly owned or operated, due to the release of hazardous materials.

***Export control regulations***

Since its founding in 2017, the Group has undertaken its technology design and development activities in Canada, and will in the future undertake significant design and development activities in the United Kingdom, and exported its technology to customers in a number of jurisdictions globally. As a result, it is required to evaluate whether its operating and licensing activities subject the Group to export licensing requirements in the countries where it operates. The Group closely monitors these requirements with the support of specialist counsel where appropriate.

The Group's activities are not subject to US Export Administration Regulations, the so-called Foreign-Produced Direct Product Rule or other aspects of US export control regulation, as its products are developed outside the United States, are not the direct products of US-origin software and equipment, and are not otherwise directly subject to US national security controls.

**PART VI**  
**DIRECTORS, SENIOR MANAGEMENT AND CORPORATE GOVERNANCE**

**1 Directors and Senior Management**

***Directors***

The following table lists the names, ages and positions of the directors of the Company:

<u>Name</u>	<u>Age</u>	<u>Position</u>
John Lofton Holt	45	Executive Chairman
Tony Pialis	44	President and Chief Executive Officer
Daniel Aharoni	47	Chief Financial Officer
Sehat Sutardja	59	Executive Director
Jan Frykhammar	56	Senior Independent Non-Executive Director
Michelle Senecal de Fonseca	60	Independent Non-Executive Director
Paul Boudre	62	Independent Non-Executive Director
Victoria Hull	59	Independent Non-Executive Director
Susan Buttsworth	62	Independent Non-Executive Director
Rosalind Singleton	49	Independent Non-Executive Director

The business address of each of the Directors is Alphawave IP Group plc, 6<sup>th</sup> Floor, 65 Gresham Street, London EC2V 7NQ.

***Senior Management***

The following table lists the names, ages and positions of the Group's current Senior Management, in addition to the Directors listed above:

<u>Name</u>	<u>Age</u>	<u>Position</u>
Jonathan Rogers	45	Senior Vice President, Engineering
Rajeevan Mahadevan	46	Senior Vice President, Operations

Mr. Rogers and Mr. Mahadevan also serve as Board Observers.

***Biographies***

The management experience and expertise of each of the Directors and Senior Management are set out below.

***Directors***

**John Lofton Holt (Executive Chairman)**

John Lofton Holt has served as strategic adviser to management since 2019 and was appointed as the Company's Executive Chairman in 2021.

John has been a semiconductor executive since the late 1990s and has founded, funded, scaled and led multiple semiconductor businesses, driving billions of dollars in value for shareholders. He has more than 24 years of experience as an investor and senior executive, including considerable experience in chairing boards. He previously served as Founder, Chairman and Chief Executive Officer of Achronix Semiconductor Corporation and was also a Founder and Managing Partner of Holt Brothers Capital LLC where he managed a portfolio of investments in semiconductors, hardware, robotics, renewables and real estate. John started his career in the late 1980s at NASA Goddard Space Flight Center, where he worked as a design engineer focusing on optics and electronics for remote sensing and LIDAR applications.

John holds a BSE in Electrical Engineering from Princeton University and an MSE in Electrical Engineering from Johns Hopkins University.

**Tony Pialis (President and Chief Executive Officer)**

Tony Pialis co-founded Alphawave IP Inc. in 2017 and has since served as its President and Chief Executive Officer. Tony has extensive experience as an entrepreneur in the semiconductor industry, having co-founded three semiconductor IP companies, including Snowbush Microelectronics Inc, which was sold in 2007 to

Gennum/Semtech and is currently part of Rambus. He also founded V Semiconductor Inc. where he served as President and CEO, and which was acquired by Intel Corporation in 2012. Tony served as Vice President of Analog and Mixed-Signal IP at Intel Corporation between 2012 and 2017. During his tenure at Intel, Tony and his team won the prestigious Intel Achievement Award for successfully delivering next generation Ethernet and PCIe SerDes solutions on Intel's 22nm and 14nm process technologies.

Tony holds a Bachelor of Science and Master of Engineering in Electrical Engineering from the University of Toronto.

#### **Daniel Aharoni (Chief Financial Officer)**

Daniel Aharoni was appointed to the Board as Chief Financial Officer in January 2021. Daniel has extensive experience in the banking and finance industry, with many years' experience in a senior executive role and has worked with companies such as ARM, Imagination and CSR. He served as the Co-Head of Technology Investment Banking, EME at Barclays Bank PLC, with overall responsibility for the technology sector investment banking coverage across Europe and the Middle East. Daniel has also held roles at Jefferies, UBS, Dresdner Kleinwort and Rothschild.

Daniel holds a Bachelor of Arts with honours in Jurisprudence from Oxford University and a Diploma in Legal Practice from the Oxford Institute of Legal Practice. Daniel qualified as a solicitor in 2000.

#### **Sehat Sutardja (Executive Director)**

Sehat Sutardja was appointed to the Board in April 2021. Sehat has extensive experience in the semiconductor industry, having co-founded Marvell Technology Group with his wife, Weili Dai, and having served as its Chief Executive Officer. Today, Sehat is the Chief Executive Officer at FLC Technology Group.

In 2006, Sehat was named Inventor of the Year by the Silicon Valley Intellectual Property Law Association, and in 2010, he received the Distinguished Alumni Award from the Iowa State University Alumni Association, and in 2013, he received the Dr. Morris Chang Exemplary Leadership Award.

Sehat holds a PhD in Electronic Engineering and Computer Science from the University of California, Berkeley. He is also an IEEE Fellow of the Institute of Electrical and Electronics Engineers.

#### **Jan Frykhammar (Senior Independent Non-Executive Director)**

Jan Frykhammar was appointed to the Board in April 2021 as its Senior Independent Non-Executive Director. Jan is an experienced executive within the telecom industry, with many years of experience as senior executive and as an adviser to listed and non-listed companies. Jan was the Group Executive Vice President and Chief Financial Officer at Ericsson Group, and served as interim Chief Executive Officer until 2017.

Jan is currently the Non-Executive Chairman of the board at Aspia AB. He also serves as a Non-Executive Director on the boards of, amongst others, ITAB Shop Concept AB, Nordic Semiconductor ASA, Clavister Holding AB and Roima Intelligence OY. Jan also previously served as a Non-Executive Director on the boards of Kvdcar AB, Openet Telecom Ltd and the Swedish International Chamber of Commerce.

Jan holds a Bachelor of Science in Business Administration and Economics from the University of Uppsala.

#### **Michelle Senecal de Fonseca (Independent Non-Executive Director)**

Michelle Senecal de Fonseca was appointed to the Board in April 2021. Michelle has more than 26 years of experience in the international telecommunications and technology sectors. She is currently an area Vice President for Citrix Systems after having served as the Global Director of Cloud and Hosting Services at Vodafone. Prior to Vodafone, Michelle worked at the European Bank for Reconstruction and Development where she managed the Telecom, Media and Technology banking team. Michelle joined the Board of the FDM Group (a FTSE 250 company) in January 2016 and is the co-founder and board member of Women in Telecoms and Technology, a UK not-for-profit organisation, as well as a global council member at Thunderbird School of Global Management in Phoenix, Arizona.

Michelle holds a Bachelor of Science in Business and a Bachelor of Science in Political Science from the University of Kansas. Michelle also holds a Master of Business Administration from the Thunderbird School of Global Management.

### **Victoria Hull (Independent Non-Executive Director)**

Victoria Hull was appointed to the Board in April 2021. Victoria has over two decades of senior management experience including roles as Executive Director and General Counsel of Invensys plc, which she joined in 2001, and Telewest Communications plc, which she joined in 1995. Prior to Telewest, she was a solicitor in the corporate finance department of Clifford Chance.

Victoria has a strong legal and corporate governance background and has operated at an Executive Committee or Board level throughout her career. She joined the Board of Ultra Electronics plc (a FTSE 250 company) as Senior Independent Director in April 2017 and is a member of the Audit, Remuneration and Nomination Committees. Victoria was also appointed to the board of Network International PLC (a FTSE 250 company) in April 2019 where she chairs the Remuneration Committee and is a member of the Nomination Committee. She has recently joined the professional services company RBG Holdings plc as a Non-Executive Director.

Victoria holds a Bachelor of Laws from the University of Southampton and qualified as a solicitor in 1987.

### **Susan Buttsworth (Independent Non-Executive Director)**

Susan Buttsworth was appointed to the Board in April 2021. She is Three UK's Chief Operating Officer and responsible for driving Three UK's overall network and IT transformation. Susan has worked for the CK Hutchison Group since 1996 and has delivered large scale network and IT deployments across its group.

In addition to her role at Three, Susan also leads CKH Innovations Opportunities & Development (CKHIOD), a telecom unit of CK Hutchison Holdings. CKHIOD is comprised of cross-border wholesale and enterprise opportunities, data monetisation and digital consumer products and services.

Susan holds a bachelor's degree in Commerce from the University of New South Wales, a Master's degree in Commerce from Macquarie University and is a Certified Practising Accountant in Australia.

### **Rosalind Singleton (Independent Non-Executive Director)**

Rosalind Singleton was appointed to the Board in April 2021. She is a telecoms executive with over 25 years of experience in the sector.

Rosalind is the CEO of Spring Fibre and previously was Managing Director of UK Broadband from 2017 to 2019. She has previously held senior roles at BT Openreach, Cable and Wireless, Vodafone, various VNOs, and other international operators from start-ups to incumbents.

She is also Chair of the UK5G Advisory Board which advises Government on developing the 5G ecosystem and a member of Ofcom's Spectrum Advisory Board.

For the last five years Rosalind has been an active angel investor with a primary focus on technology businesses with a female founder and is a member of the Angel Academe Advisory Board.

### **Paul Boudre (Independent Non-Executive Director)**

Paul Boudre was appointed to the Board in April 2021. Paul is the Chief Executive Officer of Soitec, a France-based international industrial company specialised in generating and manufacturing high performance semiconductor materials, having been appointed to the role in January 2015. A semiconductor-industry veteran of more than 30 years, Paul gained extensive international experience through his previous positions, managing industrial operations for IBM Semiconductor, STMicroelectronics, Motorola Semiconductor and Atmel. From 1997 to 2006, he managed European operations for KLA-Tencor, a leading semiconductor equipment manufacturer, and he was subsequently appointed Vice President for both the US and Europe.

Paul holds a graduate degree in chemistry from France's Ecole Nationale Supérieure de Chimie de Toulouse.

### *Senior Management*

### **Rajeevan Mahadevan (Senior Vice President, Operations)**

Raj Mahadevan co-founded Alphawave IP Inc. in 2017 and has since served as its Senior Vice President of Operations and Chief Operating Officer. Raj has more than two decades of engineering executive experience in the semiconductor IP industry, including leading roles in design, architecture, operations, and design methodology development. Prior to Alphawave, he co-founded V Semiconductor Inc. where he was a Director and also Snowbush Microelectronics Inc.

Raj holds a Bachelor of Applied Science in Engineering Science and a Master of Applied Science in Engineering from the University of Toronto.

### **Jonathan Rogers (Senior Vice President, Engineering)**

Jonathan Rogers co-founded Alphawave IP Inc. in 2017 and has since served as its Senior Vice President of Engineering, leading the Group's research and development function. He has over 13 years' experience as an engineering executive, including as Director of Engineering and Senior Principal Engineer at Intel Corporation between 2012 and 2017, and Director of Design Engineering at V Semiconductor and Gennum. He was also the Director of IP Development and IC Designer at Snowbush Microelectronics Inc.

Jonathan holds a B.A Sc in Engineering Science and an M.A Sc in Engineering from the University of Toronto.

## **2 Corporate Governance**

### **2.1 UK Corporate Governance Code**

As an unlisted company, the Company is not subject to the UK Corporate Governance Code. The Board is, however, firmly committed to the highest standards of corporate governance and, save as set out below, intends to voluntarily comply with the requirements of the UK Corporate Governance Code.

The UK Corporate Governance Code recommends that at least half the board of directors of a UK premium listed company, excluding the chair, should comprise non-executive directors determined by the Board to be independent in character and judgement and free from relationships or circumstances which may affect, or could appear to affect, the director's judgement. The Company regards all of the non-executive directors listed in paragraph 1 of Part VI: "*Directors, Senior Management and Corporate Governance*" above as "Independent Non-Executive Directors" within the meaning of the UK Corporate Governance Code and as free from any business or other relationship that could materially interfere with the exercise of their independent judgement.

The UK Corporate Governance Code recommends that, on appointment, the chair of a UK premium listed company should meet the independence criteria set out in the UK Corporate Governance Code. However, the Company chair will not be independent in the event of any potential Admission. Its chair will be John Lofton Holt, who, together with the other founders, has guided the Group's growth through its early stages and his continued leadership will ensure that the Group is best placed to continue its current growth trajectory. With a majority of independent directors on the Board, John's executive role is not expected to compromise the Board's overall independence and its firm commitment to the highest standards of corporate governance, as noted above.

The Board further believes that the current Directors bring to the Company a desirable range of skills and experience in light of its challenges and opportunities following any potential Admission, while at the same time ensuring that no individual (or small group of individuals) can dominate the Board's decision making.

In compliance with the UK Corporate Governance Code, the Board will also establish three committees: an Audit Committee, a Nomination Committee and a Remuneration Committee. If the need should arise, the Board may set up additional committees as appropriate.

### **2.2 Audit Committee**

The Audit Committee will assist the Board in discharging its responsibilities with regard to financial reporting, external and internal audits and controls, including reviewing and monitoring the integrity of the Group's annual and interim financial statements, reviewing and monitoring the extent of the non-audit work undertaken by external auditors, advising on the appointment of external auditors, overseeing the Group's relationship with its external auditors, reviewing the effectiveness of the external audit process and reviewing the effectiveness of the Group's risk management and internal control review function. The ultimate responsibility for reviewing and approving the annual report and accounts and half-yearly reports will remain with the Board. The Audit Committee will give due consideration to all applicable laws and regulations, including (if and when relevant) the provisions of the UK Corporate Governance Code and the requirements of the Listing Rules.

The Audit Committee will be chaired by Jan Frykhammar and its other members will be Victoria Hull and Michelle Senecal de Fonseca. The Disclosure Guidance and Transparency Rules require that a majority of members of the audit committee be independent and that at least one member has competence in accounting and/or auditing. In addition, the UK Governance Code recommends that the audit committee

should comprise at least three Independent Non-Executive Directors and that at least one member has recent and relevant financial experience. The Board considers that the Group complies with the requirements of the UK Corporate Governance Code in these respects. The Audit Committee will meet at least three times a year.

### **2.3 Nomination Committee**

The Nomination Committee will assist the Board in discharging its responsibilities relating to the composition and make-up of the Board and any committees of the Board. It will also be responsible for periodically reviewing the Board's structure and identifying potential candidates to be appointed as Directors or committee members as the need may arise. The Nomination Committee will be responsible for evaluating the balance of skills, knowledge and experience and the size, structure and composition of the Board and committees of the Board, retirements and appointments of additional and replacement directors and committee members and will make appropriate recommendations to the Board on such matters.

The Nomination Committee will be chaired by John Lofton Holt, and its other members will be Jan Frykhammar and Susan Buttsworth. The UK Corporate Governance Code recommends that a majority of the members of a nomination committee should be independent non-executive directors. The Board considers that the Group complies with the requirements of the UK Corporate Governance Code in this respect. The Nomination Committee will meet at least once a year.

### **2.4 Remuneration Committee**

The Remuneration Committee will assist the Board in determining its responsibilities in relation to remuneration, including making recommendations to the Company and the Board on the Company's policy on executive remuneration, including setting the overarching principles, parameters and governance framework of each of the Company's Executive Directors and certain senior executives. The Remuneration Committee will also ensure compliance with the UK Corporate Governance Code in relation to remuneration.

The Remuneration Committee will be chaired by Victoria Hull and its other members will be Jan Frykhammar and Paul Boudre. The UK Corporate Governance Code recommends that a remuneration committee should comprise at least three members who are independent Non-Executive Directors and that its chair should be an independent non-executive director with at least 12 months' experience on a remuneration committee. The Board considers that the Group complies with the requirements of the UK Corporate Governance Code in this respect.

## **3 Conflicts of Interest**

**3.1** Save as set out below and for their capacities as persons legally and/or beneficially interested in Ordinary Shares as set out in paragraph 8 of Part X: "*Additional Information — Interests of the Directors and Senior Management*", there are:

**3.1.1** no potential conflicts of interest between any duties to the Company of the Directors and members of Senior Management and their private interests and/or other duties; and

**3.1.2** no arrangements or understandings with any other major Shareholders, customers, suppliers or others pursuant to which any Director or member of Senior Management was selected.

**3.2** Mr Holt holds a limited number of restricted stock units in and serves as director of Achronix Semiconductor Corporation, and Mr Sutardja is a shareholder and serves as a director of DreamBig Semiconductor Inc. and FLC Technology Group, Inc., each of which is a customer of Alphawave.

**3.3** Each of the Directors has a statutory duty under the Companies Act to avoid conflicts of interest with the Company and to disclose the nature and extent of any such interest to the Board. Under the Articles, and as permitted by the Companies Act, the Board may authorise any matter which would otherwise involve a Director breaching this duty to avoid conflicts of interest and may attach to any such authorisation such conditions and/or restrictions as the Board deems appropriate (including in respect of the receipt of information or restrictions on participation at certain Board meetings), in accordance with the Articles, as set out in paragraph 5 of Part X: "*Additional Information*".

**PART VII**  
**SELECTED FINANCIAL AND OPERATING INFORMATION**

*The selected financial information relating to the Group set out below has been extracted, without material adjustment, from Part B of Part IX: “Historical Financial Information”. The selected Non-IFRS measures and operating information relating to the Group set out below has been calculated on the basis set out in Part II: “Presentation of Information on the Group”. The selected financial and operating information presented below should be read in conjunction with Part VIII: “Operating and Financial Review”.*

**Consolidated Statement of Income and Comprehensive Income**

	Year ended 31 May 2018	Year ended 31 May 2019	7 months ended 31 December 2019	Year ended 31 December 2020
	(\$ thousands)			
Revenue				
Product and maintenance . . . . .	3,449	6,872	9,313	44,197
Consulting . . . . .	39	40	—	—
<b>Revenue</b> . . . . .	<b>3,488</b>	<b>6,912</b>	<b>9,313</b>	<b>44,197</b>
Expenses				
Salaries . . . . .	(528)	(2,127)	(2,040)	(7,345)
Subscriptions . . . . .	(419)	(1,336)	(1,786)	(4,916)
Subcontracting . . . . .	(824)	(567)	(673)	(2,613)
Professional fees . . . . .	(241)	(426)	(397)	(1,500)
Prototype . . . . .	—	(626)	(106)	(1,130)
Depreciation of right-of-use asset . . . . .	—	—	(401)	(991)
Stock-based payment . . . . .	(6)	(45)	(79)	(758)
Office . . . . .	(117)	(258)	(372)	(627)
Depreciation of property and equipment . . . . .	(21)	(56)	(66)	(229)
Advertising and promotion . . . . .	(14)	(102)	(116)	(137)
Insurance . . . . .	(13)	(32)	(22)	(40)
Equipment rentals . . . . .	—	(371)	—	—
Rental . . . . .	(72)	(288)	—	—
<b>Expenses</b> . . . . .	<b>(2,255)</b>	<b>(6,234)</b>	<b>(6,058)</b>	<b>(20,286)</b>
<b>Operating Profit</b> . . . . .	<b>1,233</b>	<b>678</b>	<b>3,255</b>	<b>23,911</b>
Other Income (Loss)				
Interest income . . . . .	—	9	5	266
Interest expense . . . . .	—	—	(72)	(262)
Foreign currency translation gain (loss) . . . . .	(8)	205	(221)	(1,317)
<b>Profit Before Tax</b> . . . . .	<b>1,225</b>	<b>892</b>	<b>2,967</b>	<b>22,598</b>
Recovery of (provision for) income taxes				
Current . . . . .	(71)	(276)	(868)	(5,875)
Deferred . . . . .	(210)	(104)	37	(350)
Provision for (Recovery of) Income Taxes . . . . .	(281)	(380)	(831)	(6,225)
<b>Total Profit and Comprehensive Income</b> . . . . .	<b>944</b>	<b>512</b>	<b>2,136</b>	<b>16,373</b>

## Consolidated Statement of Financial Position

	As at 31 May 2018	As at 31 May 2019	As at 31 December 2019	As at 31 December 2020
	(\$ thousands)			
<i>Assets</i>				
<i>Non-current Assets</i>				
Property and equipment . . . . .	96	196	260	525
Intangible asset . . . . .	—	—	—	178
Right-of-use asset . . . . .	—	—	1,149	8,804
<b>Total Non-current Assets</b> . . . . .	<b>96</b>	<b>196</b>	<b>1,409</b>	<b>9,507</b>
<i>Current Assets</i>				
Cash and cash equivalents . . . . .	5,242	5,014	7,307	17,875
Accounts receivable . . . . .	—	1,488	2,273	6,628
Government remittances receivable . . . . .	142	204	258	833
Investment tax credit receivable . . . . .	948	1,437	1,533	2,418
Work-in-process . . . . .	—	—	1,006	13,148
Notes receivable . . . . .	—	—	270	545
Prepaid expenses . . . . .	113	132	178	444
Capitalised contract costs . . . . .	—	—	—	308
<b>Total Current Assets</b> . . . . .	<b>6,445</b>	<b>8,275</b>	<b>12,825</b>	<b>42,199</b>
<b>Total Assets</b> . . . . .	<b>6,541</b>	<b>8,471</b>	<b>14,234</b>	<b>51,706</b>
<i>Liabilities</i>				
<i>Current Liabilities</i>				
Bank indebtedness . . . . .	—	—	2,909	—
Accounts payable and accrued liabilities . . . . .	338	529	340	2,810
Income taxes payable . . . . .	71	51	680	4,520
Current portion of long-term debt . . . . .	—	—	—	35
Deferred revenue . . . . .	4,971	6,037	4,786	12,371
Current portion of lease liabilities . . . . .	—	—	586	2,128
<b>Total Current Liabilities</b> . . . . .	<b>5,380</b>	<b>6,617</b>	<b>9,301</b>	<b>21,864</b>
<i>Non-current Liabilities</i>				
Long-term debt . . . . .	—	—	—	35
Deferred income taxes . . . . .	210	314	277	627
Lease liabilities . . . . .	—	—	657	6,529
<b>Total Non-current Liabilities</b> . . . . .	<b>210</b>	<b>314</b>	<b>934</b>	<b>7,191</b>
<b>Total Liabilities</b> . . . . .	<b>5,590</b>	<b>6,931</b>	<b>10,235</b>	<b>29,055</b>
<i>Shareholders' Equity</i>				
Share capital . . . . .	1	36	491	2,395
Share-based payment reserve . . . . .	6	48	46	421
Retained earnings . . . . .	944	1,456	3,462	19,835
<b>Total Shareholders' Equity</b> . . . . .	<b>951</b>	<b>1,540</b>	<b>3,999</b>	<b>22,651</b>
	<b>6,541</b>	<b>8,471</b>	<b>14,234</b>	<b>51,706</b>



## Consolidated Statement of Cash Flows

	Year ended 31 May 2018	Year ended 31 May 2019	7 months ended 31 December 2019	Year ended 31 December 2020
	(\$ thousands)			
<b>Cash Flows from Operating Activities</b>				
Net income	944	512	2,136	16,373
Items not affecting cash:				
Depreciation of property and equipment	21	56	66	229
Depreciation of right-of-use asset	—	—	401	991
Share-based payment	6	45	80	758
Subcontracting expense obtained for common shares	—	18	23	40
Deferred income taxes	210	104	(37)	350
Lease interests	—	—	48	111
Unrealised foreign exchange gain on cash	(50)	(265)	(43)	302
	<b>1,131</b>	<b>470</b>	<b>2,674</b>	<b>19,154</b>
Changes in working capital	4,178	(821)	(2,798)	(4,636)
<b>Net Cash Generated from/(Used in) Operating activities</b>	<b>5,309</b>	<b>(351)</b>	<b>(124)</b>	<b>14,518</b>
<b>Cash Flows from Investing Activities</b>				
Purchase of property and equipment	(118)	(155)	(130)	(494)
Collection of notes receivable	—	—	42	48
Purchase of intangible asset	—	—	—	(178)
<b>Net Cash Used in Investing Activities</b>	<b>(118)</b>	<b>(155)</b>	<b>(88)</b>	<b>(624)</b>
<b>Cash Flows from Financing Activities</b>				
Issuance of common shares	1	13	38	1,159
Increase (decrease) in bank indebtedness	—	—	2,910	(2,910)
Increase in long-term debt	—	—	—	70
Payment of lease liabilities	—	—	(486)	(1,343)
<b>Net Cash Generated from / (Used in) Financing Activities</b>	<b>1</b>	<b>13</b>	<b>2,462</b>	<b>(3,024)</b>
<b>Net Increase / (Decrease) in Cash for the Period</b>	<b>5,192</b>	<b>(493)</b>	<b>2,250</b>	<b>10,870</b>
<b>Cash, Beginning of Period</b>	<b>—</b>	<b>5,242</b>	<b>5,014</b>	<b>7,307</b>
Foreign exchange (loss)/gain on cash held in foreign currency	50	265	43	(302)
<b>Cash, End of Period</b>	<b>5,242</b>	<b>5,014</b>	<b>7,307</b>	<b>17,875</b>

### Certain Non-IFRS Measures

The following table reconciles EBITDA and EBITDA Margin to Profit Before Tax for each of the periods presented:

	Year ended 31 May 2018	Year ended 31 May 2019	7 months ended 31 December 2019	Year ended 31 December 2020
	(\$ thousands, unless otherwise indicated)			
<b>Profit Before Tax</b>	1,225	892	2,967	22,598
Interest income	—	(9)	(5)	(266)
Interest expense	—	—	72	262
Depreciation	21	56	467	1,220
<b>EBITDA</b>	<b>1,246</b>	<b>939</b>	<b>3,501</b>	<b>23,814</b>
Divided by revenue	3,488	6,912	9,313	44,197
<b>EBITDA Margin</b>	<b>35.7%</b>	<b>13.6%</b>	<b>37.6%</b>	<b>53.9%</b>

## PART VIII

### OPERATING AND FINANCIAL REVIEW

*The following discussion and analysis is intended to assist in the understanding and assessment of the trends and significant changes in the Group's results of operations and financial condition. Historical results may not indicate future performance. Some of the information in this section, including information in respect of the Group's plans and strategies for the business and expected sources of financing, contains forward-looking statements that involve risk and uncertainties and is based on assumptions about the Group's future business. Actual results could differ materially from those contained in such forward-looking statements as a result of a variety of factors, including the risks discussed in Part I: "Risk Factors" included elsewhere in this Registration Document. The following discussion should be read in conjunction with the Historical Financial Information, including accompanying notes, included in Part IX: "Historical Financial Information".*

#### **Overview**

Alphawave addresses a critical need in the technology world: the Group builds industry-leading wired connectivity solutions that enable data to travel faster, more reliably, using lower power. Alphawave's wired connectivity technology is embedded in leading-edge semiconductors built to power global network- and computer-systems that process zettabytes of data. The Group targets Tier-1 customers in data centre, AI, 5G wireless infrastructure, data networking, autonomous vehicles and solid-state storage.

Wherever there is a high-end compute, networking or storage *solution*, Alphawave addresses the high-end connectivity *need*.

Alphawave has a proven track record in licensing semiconductor IP to various of the world's leading companies, powering high-bandwidth compute, data centre and network infrastructure. As ARM conquered the mobile device market with its processor technology, Alphawave seeks to conquer the global infrastructure markets with its wired connectivity solutions. Management believe that Alphawave is the only non-U.S. company licensing this technology, serving customers globally in North America, China, South Korea, Europe—anywhere high-speed wired connectivity is needed.

The Group focuses on the design and development of digital signal processing (DSP)-based, multi-standard wired connectivity silicon IP solutions. As technological advances in smart-devices and digital integration continue to push the boundaries of connectivity capabilities in everyday products from automobiles to AI-enabled devices, the underlying data networks and data centres that support them require high-performance connectivity. The Group addresses this growing need for advanced and high-speed data transmission at the chip level. Alphawave's IP solutions support data transmission in semiconductor devices, chips and dies, providing designs for interfaces that utilise advanced data transmission technology to ensure the highest transmission speeds at low power levels. As computer chips continue to decrease in size, recent leading developments include the Group's introduction of designs for use at 7nm, 6nm and 5nm manufacturing technologies (a nanometre measuring less than the width of a human DNA strand). The Group believes that its technology expertise, strong customer relationships and industry experience support its development of the cutting-edge solutions that enable chip designs powering next-generation technologies. Since its founding, the Group's solutions have repeatedly established benchmarks in the industry in terms of performance, power consumption, size and flexibility.

Alphawave has established its position as a key provider in the semiconductor value chain through a portfolio of silicon IP solutions that are delivered to customers using a well-understood licensing model. Through this model, the Group's design and development activities support steps in the production process for semiconductor vendors, OEMs and hyperscaler data centre operators, who utilise the Group's silicon IP blocks and blocks from other IP providers to create their own semiconductor designs and products. As semiconductor designs become more complex and chip development costs continue to rise, semiconductor suppliers are increasingly license critical wired connectivity IP blocks from providers such as Alphawave rather than develop these technologies internally. This allows the Group to focus on advanced design and development activities without the significant capex requirements of a traditional semiconductor company. Alphawave is an approved provider with TSMC and Samsung, the world's two leading third-party foundries, which represent the majority of third-party manufacturing capability globally at 7nm and beyond. This close relationship with TSMC and Samsung ensures that customers can seamlessly integrate the Group's IP solutions into their own semiconductor products. Growth in the global semiconductor industry, and in particular within the wired connectivity IP market where Alphawave operates, will continue to be driven by increasing connectivity requirements in end-markets such as data centre, AI, 5G wireless infrastructure, data networking, autonomous vehicles and solid-state storage in the coming years.

Alphawave offers its wired connectivity IP solutions across a variety of formats (or form factors), utilising a configurable “chassis” model to allow customers to choose the specific capabilities required for their semiconductor device designs. As Alphawave grows its IP offering into chiplet design and development, providing customers with a turn-key product licence, it expects continued proliferation of its IP solutions in customers’ semiconductor designs, providing the Group with enhanced revenue and royalty growth and increasing margins over time. In the future, Alphawave may also further diversify and expand its product offering in chiplets to include manufacturing and sale of these chiplets, though this is not currently a near term strategy.

During the year ended 31 December 2020, the Group generated revenue of \$44.2 million, exhibiting robust growth as compared to \$9.3 million, \$6.9 million and \$3.5 million in the seven months ended 31 December 2019, the year ended 31 May 2019 and the year ended 31 May 2018, respectively. The Group’s operating profit increased significantly over these years, reaching \$23.9 million in the year ended 31 December 2020, as compared to \$3.3 million, \$0.7 million and \$1.2 million in the seven months ended 31 December 2019, the year ended 31 May 2019 and the year ended 31 May 2018, respectively.

The Group’s bookings from contracts entered into during the year ended 31 December 2020 were USD \$75.0 million (USD \$51.9 million excluding estimated royalties), as compared to USD \$27.2 million (USD \$23.4 million excluding estimated royalties) from contracts entered into during the year ended 31 December 2019 and USD \$9.6 million (nil royalties) from contracts entered into during the years ended 31 December 2018 and 2017 (in aggregate). This rapid bookings growth has continued into the current year, and the Group achieved USD \$82.2 million in bookings (USD \$74.3 million excluding estimated royalties) from contracts entered into during the three-month period ended 31 March 2021.

### **Key Factors Affecting Alphawave’s Financial Condition and Results of Operations**

The Group has grown at a rapid pace since its inception and established a track record of strong profitability and cash flow generation. From the year ended 31 May 2018 to the year ended 31 December 2020, the Group has grown its revenue at a CAGR of 161 per cent., from \$3.4 million in the year ended 31 May 2018 to \$44.2 million in the year ended 31 December 2020, from 17 design wins, including 11 during the year ended 31 December 2020. In addition, in February 2021, the Group signed a USD \$54 million multi-year subscription agreement with VeriSilicon for the China market. Including through this deal, the business’s growth has helped establish the Group’s reputation and technology expertise among its existing customer base and support its market reputation as it targets continued growth by winning new customers.

The results of Alphawave’s operations have been, and will continue to be, affected by many factors, some of which are beyond the Group’s control. These include structural industry and end-market data usage trends, which have resulted from the proliferation of internet-connected devices and cloud services and led to rising demand for advanced wired connectivity IP solutions. They also include factors such as the Group’s technology advances and DSP-based platform, which have allowed it to rapidly develop a versatile, cutting-edge IP and product offering, and its deep customer relationships and licensing model, which have supported and are expected to continue to drive revenue growth through the next stages in the Group’s development.

This section sets out certain key factors the Directors believe have affected the Group’s results of operations in the period under review and could affect its results of operations in the future.

### **Structural trends**

The Group designs and develops high-performance configurable wired connectivity IP platforms for customers that operate in various markets, and their end-market customers, including data centre, AI, 5G wireless infrastructure, data networking, autonomous vehicles and solid-state storage, and it licenses to a variety of customers in these markets, including large semiconductor suppliers, system-level OEMs and third-party outsourced semiconductor wafer foundries who service their own customers. As a result, Alphawave’s operating and financial performance has been, during the periods under review, and will continue to be highly influenced by broader trends in these industries and the markets in which its customers operate.

Since its founding in 2017, the Group’s operating and financial performance have been supported by an increased industry need for high-performance wired connectivity solutions and greater adoption of a third-party IP model for customers to source these technologies, as described in Part IV: “*Industry Overview*”. These include the growth of cloud services and hyperscale data centres, development in and widespread use of 5G and other wireless technologies, proliferation of IoT devices, and the growth of AI, which are expected to support growth in the Group’s targeted market from USD \$500 million to USD \$1.5 billion between 2020 and 2025.

Although the broader semiconductor market is generally characterised as highly cyclical, including constant and rapid technological change, cyclical product obsolescence, price erosion, evolving standards, short product life cycles and wide fluctuations in product supply and demand, the Group's focus on wired connectivity solutions, specifically the portion of the market for high-capability technologies, has limited its exposure to these trends. The wired connectivity market, particularly for increasingly complex technologies, is expected to continue to be supported by secular trends related to high-speed and reliable data movement in data centres, communications infrastructure and increasingly in autonomous vehicles, less risk of the commoditisation, cyclical price erosion and capacity pressures that have negatively characterised the broader semiconductor industry.

### **Technology development**

The Group's revenue growth during the periods under review has been driven by its technology advances in wired connectivity IP, as the Group's solutions have repeatedly set benchmarks in the industry in terms of performance, power consumption, footprint and flexibility. In particular, since its founding 2017, the Group's operating and financial performance have been driven by its rapid customer growth resulting from its successful demonstration of high-speed connectivity solutions in the most advanced fabrication technologies ahead of competitors. Management believe that the Group was the first silicon IP vendor in the world to demonstrate functional silicon for its high-speed connectivity solutions at 7nm in 2018, 6nm in 2019 and 5nm in 2020. The Group's ongoing working at 4nm and 3nm are expected to continue driving further design wins in the coming years.

### **Product adoption and flexible design architecture**

Alphawave's design activities and product offerings utilise a unified, common architecture across its configurable DSP platform that can be re-used in different applications and it currently offers nearly 60 connectivity products, across five product families, for a variety of customer uses. This approach has enabled it to tailor its technology and service offering to the ever-evolving needs of multiple next generation technology end-markets, and has allowed the Group to rapidly increase the scope of its product offering to grow its revenue and bookings during the periods under review. In the coming years, design developments in additional product families and products from this configurable DSP platform are expected to support continued growth in customer numbers, design wins, revenue and bookings.

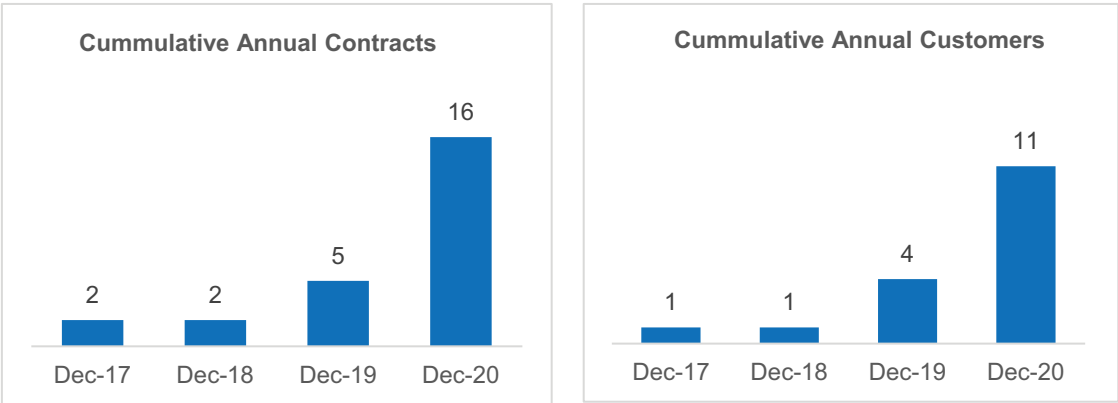
As the Group evaluates new market opportunities and brings new products to market, it pays particular attention to forecasts by industry analysts and the adoption curve of technology. The Group also analyses in detail potential competing forces that could hinder such adoption. If the Group fails to anticipate or respond to technological shifts or market demands, or to timely develop new or enhanced products or technologies in response to the same, it could result in decreased revenue and the loss of design wins to competitors.

In the coming years, Alphawave expects to broaden its technology proposition across the DSP-platform into chiplet offerings. As part of a broader industry transition toward chiplet use, the Group aims to simplify highly complex design and validation processes for customers by integrating its wired connectivity solutions into chiplet form factors. By developing customisable, connectivity chiplet IPs, the Group plans to deliver a low cost, fast time-to-market connectivity solution for silicon IP products.

### **Customer relationships**

Alphawave works closely with its customers to understand their product roadmaps and strategies, and the Group's advanced IP solutions enable its customers to differentiate their product offerings and position themselves to gain market share, which has supported the Group's revenue and booking growth during the periods under review. Since its founding in 2017, Alphawave has grown its customer base to include several leading semiconductor suppliers and OEMs and an increasing number of hyperscale data centre operators who design their own hardware for internal purposes, including top tier global data centre compute, ethernet switching and solid-state drive providers globally as well as emerging leaders in AI, 5G and autonomous vehicle technologies. In aggregate, as at 31 December 2020, the Group had derived 21 per cent. of cumulative bookings from data centre customers, 56 per cent. from data networking and optical customers, 6 per cent. from solid-state storage customers, 11 per cent. from 5G wireless customers and 6 per cent. from AI customers. This versatile approach and the Group's ability to win new customers and grow its relationships with existing customers in quickly growing markets has contributed to its revenue and bookings growth during the periods under review.

The following tables set out the Group’s cumulative annual contracts and customers for the periods indicated:



Alphawave is an approved provider with TSMC and Samsung, the world’s two leading third-party foundries, which represent the majority of third-party manufacturing capability globally at 7nm and beyond. This close integration with TSMC and Samsung ensures that customers can seamlessly integrate the Group’s IP solutions into their own semiconductor products. As a result, the Group’s financial performance is influenced by its design wins and its relationships with customers over the lifetime of their product development and sales cycles.

***Design wins with new and existing customers***

End-customers in the markets where the Group operates, including current and targeted customers, continuously develop new products in existing and new application areas, and as a result, design wins are critical to the Group’s success. The Group has achieved 20 design wins since its foundation in 2017, and it anticipates being increasingly dependent on revenue and bookings from new design wins in the future both from its existing customer base and as it aims to further grow its customer base.

The selection process to achieve a design win is typically lengthy and may require the Group to incur significant design and sales expenditures with no assurance that its solutions will be selected. Failure to achieve design wins, and in particular the loss of any key design win or any significant delay in the ramp of volume production of the customer’s products into which Alphawave’s product is designed, could lead to lower revenue levels than expected and a decline in bookings in future periods.

Design wins and increased usage of the Group’s technologies in new customer developments are expected to support its financial performance. Alphawave has an established track record of growing its customer relationships, with approximately 50 per cent. of design wins since its founding coming from existing customers, which has contributed to its revenue and booking growth during the periods under review. The land-and-expand approach to customer relationships remains a strategic priority for the Group.

***Customer forecasts, development cycles and product life cycles***

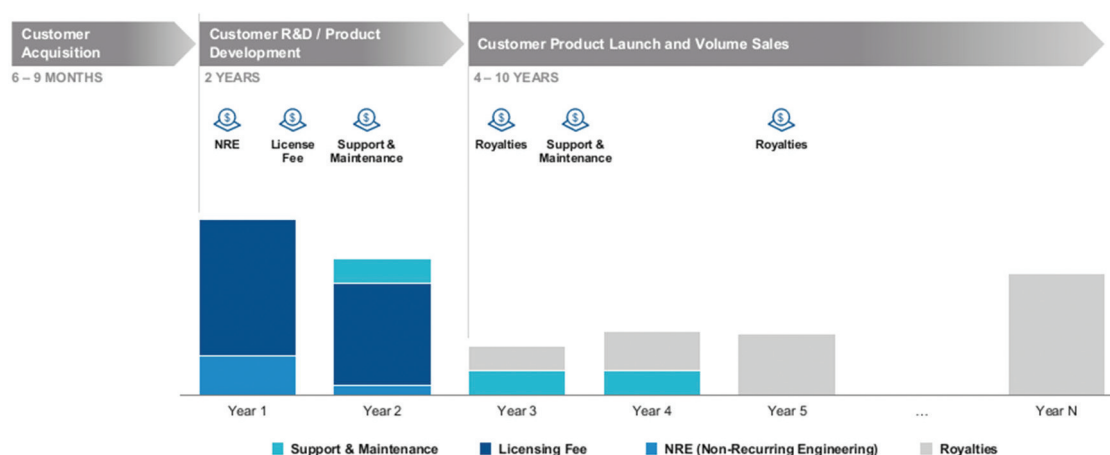
Alphawave engages with customers early on in their product development cycles, as the Group’s wired connectivity IP products are a critical decision and design factor in the architecture of a customer’s final product. This approach allows the Group to embed its technologies at the heart of customer designs, which can support the overall performance of the end product and better enable Alphawave to continue the relationship through subsequent customer designs and new products.

Once a customer designs a product incorporating one of Alphawave’s wired connectivity solutions, the Group closely monitors all aspects of their demand cycle, including the initial design phase, prototype production, volume production and inventories, as well as end-market demand, including seasonality, cyclical and the competitive landscape. As the Group anticipates its financial and operating results will, over the long term, become increasingly driven by royalty revenues, which are generally based on the customer’s sales levels for the product incorporating the Group’s technology (see “— *Licensing model and pricing*”), its ability to project these design, development and end product life cycles will play an increasingly central role in its development activities and performance. Similarly, under these arrangements, changes in customer forecasts, development cycles, product specifications or the timing of development expose the Group to timing and project cancellation risks.

## Licensing model and pricing

Alphawave utilises an industry proven licensing model to provide customers with access to the Group’s advanced wired connectivity solutions. Through this model, the Group’s design and development activities support subsequent steps in the production process for semiconductor vendors, OEMs and hyperscalers, who utilise the Group’s silicon IP blocks and blocks from other IP providers to create their own semiconductor designs and products. These customer arrangements typically comprise a licensing fee, support and maintenance payments, NRE fee and royalties, as described in Part V: “*Information on the Group — Business Model — Technology licensing model*”. This allows the Group to focus on advanced design and development activities without the significant capex requirements of a traditional semiconductor company. This approach supports high-margin returns across the business, including EBITDA Margin of 53.9 per cent. in the year ended 31 December 2020.

Since its foundation in 2017, licensing and NRE fees have comprised the significant majority of the Group’s revenues. Following entry into a licensing agreement, which can typically take from six to nine months, customers will undertake product development activities, which can take up to one to two years, before product launch and ramp to volume production and sales. Under royalty fee arrangements, the Group’s revenue will generally be based on end product sales, as shown in the following illustrative chart:



As an increasing number of customer products utilising the Group’s wired connectivity solutions come to market and volume production increases, the Group expects to earn higher royalty revenues.

### Fee and pricing arrangements

Within this licensing model, the structure and pricing of the Group’s contracts for customers vary significantly, depending on the needs of the customer, the product mix that the customer desires and the ultimate complexity of the product that is delivered to the customer. Royalty arrangements can be structured as a fixed-fee per-chip basis, percentage of ASP, or capped or uncapped prepaid royalties, or as a larger percentage of sales in return for a lower licensing fee.

While the margin realised on any individual contract in earlier technologies may generally decrease over time, the Group’s average economics have generally increased as it continues to introduce new higher-end products with improved economics in terms of licence fee, NRE and royalty. The Group’s pricing and margins depend somewhat on the volumes and the features of the solutions it provides to its customers. The Group continually monitors and works to reduce the cost of its products and improve the potential value its solutions provide to customers as it targets new design win opportunities and manages the product life cycles of existing customer designs.

### Bookings

By the nature of this licensing model, a material portion of the revenue that the Group expects to receive from a customer agreement (primarily from royalty fees and from support and maintenance) may arise in the years following entry into the contract. To reflect these anticipated future revenues, the Group calculates bookings as part of its ordinary course evaluation of its operating and financial performance.

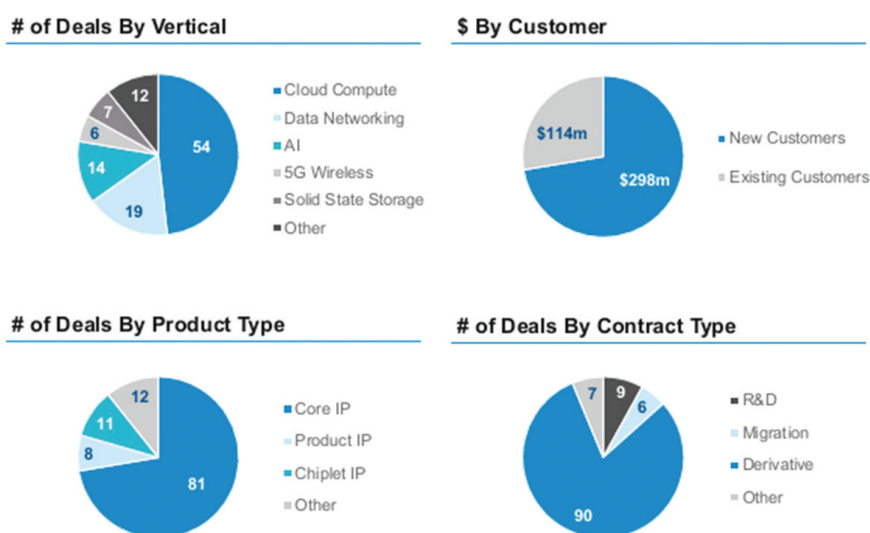
The Group calculates bookings as the total value of licence fee, NRE, support and maintenance and some royalties that are expected by the Group based on the customer contracts it has entered into. This may or may

not include customer volume-based royalties, prepaid royalties, “bullet” royalties, or other royalty arrangements and, as a result, bookings amounts reflect management estimates and assumptions, including significant judgements about the timing and amount of future revenue levels under these contracts based on experience in the sector and projected market and demand trends. The Group’s bookings from contracts entered into during the year ended 31 December 2020 were USD \$75.0 million (comprising USD \$51.7 million from licence and related fees, USD \$23.1 million from royalties and USD \$0.2 million from other fees), as compared to USD \$27.2 million from contracts entered into during the year ended 31 December 2019 (comprising USD \$23.1 million from licence and related fees, USD \$3.8 million from royalties and USD \$0.4 million from other amounts) and USD \$9.6 million from contracts entered into during the years ended 31 December 2018 and 2017 (in aggregate, solely related to licence and related fees). The Group’s rapid bookings growth has continued in the current financial year, and it achieved USD \$82.2 million in bookings (USD \$74.3 million excluding estimated royalties) from contracts entered into during the three-month period ended 31 March 2021, including from the multi-year subscription agreement with VeriSilicon agreed in February 2021 and five additional new customer agreements (including amendments of existing customer contracts), with three new customer wins.

The Group’s bookings profile is supported by its existing backlog (being the expected value of contracted revenue, or bookings, that has yet to be recognised) of USD \$115 million (including estimated royalties, and the impact of the VeriSilicon agreement) as at 1 January 2021, with an anticipated maturity profile of approximately one-third during 2021 and two-thirds in the longer term. The Group’s backlog is balanced toward subscription revenue (USD \$54 million) and licence and related revenue (USD \$34 million), with royalties comprising the remaining portion (USD \$27 million), reflecting its continued shift toward royalty fee arrangements.

### Uncontracted pipeline

The Group’s pipeline is estimated based on customer negotiations and projected future revenue from targeted and ongoing work. The Group presents pipeline on a weighted basis, reflecting the status of each underlying relationship and contract, including weights of 0-10 per cent. for arrangements at the NDA-stage, 10-50 per cent. for the design and evaluation stage, and 50-80 per cent. for the contract negotiation or master agreement stage. As at 1 March 2021, the Group’s unweighted sales pipeline was USD \$412 million (which generally extends out by approximately 18 to 24 months). The pipeline is expected to fluctuate from period to period, reflecting ordinary course changes as new potential projects emerge, other potential projects are accelerated, delayed or cancelled and as deals in the pipeline convert to signed contracts. There is no guarantee that any potential transaction in the pipeline will result in a signed customer contract. Key pipeline characteristics are set out below:



See Part II: “Presentation of Information on the Group — Information Regarding Forward-Looking Statements”.

### ***Margin impact***

The Group's EBITDA Margin has been, and will continue to be, significantly affected by sales commissions, but is also affected by a variety of factors, including revenue over the life of the contract, product mix in a given period and the structure of customer contracts between licence fee, NRE, support and maintenance, and royalty. Alphawave believes the primary driver of gross margin in the short term is the licence fee, NRE and support and maintenance negotiated between the Group and its customers.

In the longer term, the Group expects its EBITDA Margins to be driven more by the royalties paid by customers as they are successful in the market. As the Group transitions from a majority licence fee-dominated model to a model that contains more royalty, it expects its gross margin to stay high but its EBITDA Margins to fluctuate on a quarterly basis as a result of changes in contract economics due to new product introductions, customer product transitions into high-volume manufacturing and additional R&D costs for future products. In the year ended 31 December 2020, the Group's gross margin was 97 per cent. (reflecting cost of goods sold of \$1.5 million) and EBITDA Margin was 53.9 per cent.

### **R&D model and cost considerations**

Given Alphawave's IP licensing model, the Group focuses on advanced design and development activities, rather than high-capex and investment manufacturing models employed by traditional semiconductor companies. This approach supports high margin returns, while enabling the Group to operate from a relatively limited cost base.

As a result, the Group's largest expenses arise from its R&D activities – namely its design and development personnel and third-party subcontractors, as well as technology subscriptions and expenses incurred for the use of equipment utilised in R&D. The significant growth experienced across the Group's technology IP, product offerings and operations since 2017 has driven increases in these expenses during the periods under review. These costs are expensed as they are incurred, with identifiable project-related development expenses for specific customer projects recognised as intangible assets based on specific criteria (as described under "*Critical Accounting Policies — Research and Development*" below).

### ***Salaries***

During the periods under review, Alphawave's most significant expenses have been in relation to employee salary levels, which increased from \$528 thousand in the year ended 31 May 2018 to \$7.3 million in the year ended 31 December 2020, reflecting the rapid growth across the Group's operations, in particular its engineering and design capabilities. As at 31 December 2020, the Group had 72 employees, of which 56 were in research and development roles, as compared to 43 employees, with 35 in research and development roles, and 27 employees, with 23 in research and development roles, as at 31 December 2019 and 31 December 2018. The Group's approach has, to date, shown the ability to scale the business across its historical growth, resulting in improvements in bookings per employee to reach USD \$0.7 million in 2019 and USD \$1.3 million in 2020. In the coming years, Alphawave anticipates targeted increases in its headcount to support continued growth, including by expanding its product portfolio and technology offerings, with additional hires in both the United Kingdom and Canada.

### ***Subscriptions***

The Group's focus on design and development activities requires it to obtain subscriptions to computer-aided-design (CAD) and electronic design automation (EDA) tools from third-party providers, including Synopsys, Ansys and several other companies. Subscription fees for the use of these tools are generally based on multi-year subscription licences with a pre-agreed quarterly payment schedule. As a result, the Group's annual subscription fees have increased from \$419 thousand in the year ended 31 May 2018 to \$4.9 million in the year ended 31 December 2020. As Alphawave continues to grow its design capabilities in the coming years, it expects these costs to increase further.

### ***Foreign exchange***

Although the vast majority of the Group's customer contracts are denominated in US Dollars, its primary operating locations are in Canada and the United Kingdom and, as a result, a significant portion of its costs (in particular those arising from personnel expenses) are paid in Canadian Dollars and UK Pound Sterling. In addition, during the periods under review, the Group recognised foreign currency translation losses of \$1,317 thousand in the year ended 31 December 2020, \$221 thousand in the seven months ended 31 December 2019 arising from translation of US Dollar cash and account payable balances into Canadian Dollars for year-end



reporting purposes. The Group intends to report its financial results in US Dollars commencing with the reporting period starting 1 January 2021, and as a result it may face translation risks arising from non-US Dollar balances, as well as deterioration of US Dollar revenues against expenses incurred in relation to operating activities in Canada and the United Kingdom.

### Capex

Although Alphawave anticipates these and other operating costs to increase in the coming years as part of its growth strategy, it aims to continue operating a low-capex model, primarily in relation to computer and office equipment utilised by employees. The Group's capital expenditure amounted to \$672 thousand in the 12 months ended 31 December 2020, \$130 thousand in the seven months ended 31 December 2019, \$155 thousand in the year ended 31 May 2019 and \$118 thousand in the year ended 31 May 2018.

### Recent Developments and Guidance

The Group continued to demonstrate strong progress in the three months ended 31 March 2021 as shown by the signing of six agreements, including the multi-year subscription agreement with VeriSilicon, three new customer additions and a term sheet signed for the Product Partnership with Wise Road Capital. As a result, total bookings for the three months ended 31 March 2021 were USD \$82.2 million, including the Group's estimate of future royalties (USD \$74.3 million excluding estimated royalties). The Group's backlog of approximately USD \$132 million as at 31 March 2021 reflected this strong performance, with an estimated maturity profile of approximately 40 per cent. in the current year (including first quarter revenue) and further upside potential in relation to entry into the Product Partnership and additional wins from the existing sales pipeline.

The Group aims to continue its growth trajectory in the coming years, with a target to achieve 100 per cent. year-on-year revenue growth in the medium term to reach USD \$210 to USD \$240 million based on its existing operational scope. This is expected to support an EBITDA Margin of approximately 50 per cent. from revenues not related to the Group's Product Partnership or revenues from its VeriSilicon agreement, which are both expected to deliver an EBITDA margin of over 90 per cent. The Group expects to continue operating at net working capital levels under 10 per cent. of sales, with minimal capital expenditure required to support its growth targets and depreciation and amortisation remaining under 5 per cent. of revenue in the medium term.

See Part II: "*Presentation of Information on the Group — Information Regarding Forward-Looking Statements*" and Part I: "*Risk Factors — The Group's revenue and operating results are difficult to predict accurately and may fluctuate significantly from period to period, including for a number of reasons beyond its control*" and "*Risk Factors — The guidance around future performance included in this Registration Document may differ materially from actual developments and readers should not place undue reliance on it*".

### Key Operating and Financial Measures

Alphawave monitors a number of key operational and financial measures as indicators of its operating performance. As some of these measures are not determined in accordance with generally accepted accounting principles, including IFRS, and are susceptible to varying calculations, they may not be comparable with other similarly titled measures of performance of other companies. For more information on the definition and calculation of these non-IFRS measures, see Part VII: "*Selected Financial and Operating Information — Certain Non-IFRS Measures*".

The following table shows selected line items of the Group's consolidated income statement and other important data from the periods stated:

	As at and for the 12 months ended 31 December			
	2017	2018	2019	2020
			<i>(unaudited)</i>	
Bookings <sup>(1)</sup> (USD millions) . . . . .	8.6	1.0	27.2	75.0
Excluding estimated royalties (USD millions) . . . . .	8.6	1.0	23.4	51.9
Customers <sup>(2)</sup> . . . . .	1	1	4	11

Notes:

- (1) The Group defines bookings as the total value of projected licence fee, NRE, support and maintenance and royalties arising from customer contracts entered into during the period then ended.
- (2) As at the relevant date.

## **Basis of Presentation and Comparability of Financial Results**

The Consolidated Historical Financial Information presents the financial track record of the Group as at and for the year ended 31 December 2020, as at and for the seven months ended 31 December 2019, as at and for the year ended 31 May 2019 and as at and for the year ended 31 May 2018, and has been prepared in accordance with UK-adopted international accounting standards.

The Group prepares its annual financial statements as at and for the year ended 31 December each year, and it has presented in this document its financial results as at and for the year ended 31 December 2020. Historically, the Group prepared its annual financial statements as at and for the year ended 31 May, and it has presented in this document its financial results as at and for the years ended 31 May 2018 and 2019. As the Group changed its financial year-end to 31 December in 2019, it has, accordingly, also presented in this document its financial results as at and for the seven months ended 31 December 2019. As a result of this change in the Group's financial reporting year, the Group's historical financial results as at and for the seven months ended 31 December 2019 are not directly comparable to the preceding twelve-month financial year (ended 31 May 2019) or the subsequent twelve-month financial year (ended 31 December 2020). See Part II: "*Presentation of Information on the Group*".

The Consolidated Historical Financial Information is prepared on the going concern basis and under the historical cost convention, as modified for the revaluation of certain financial instruments. The Group's reporting currency for the periods under review is Canadian Dollars and the consolidated financial information is presented in thousands of Canadian Dollars unless otherwise indicated.

## **Description of Key Line Items**

### ***Revenue***

Revenue is recognised upon transfer of control of promised products or services to customers in an amount that reflects the consideration the Group expects to be entitled in exchange for promised goods or services. The cumulative effects of revisions to contract revenues and estimated completion costs are recorded in the accounting period in which the amounts become evident and can be reasonably estimated. These revisions can include such items as the effects of change orders.

The Group enters into contracts that can include various combinations of products (i.e. custom IP licences) and maintenance, some of which are distinct and are accounted for as separate performance obligations. For contracts with multiple performance obligations, the Group allocates the transaction price of the contract to each performance obligation, generally on a relative basis using its best estimate of the stand-alone selling price to each distinct good or service in the contract.

### ***Products and maintenance***

Revenue from products and maintenance includes the Group's products and the related maintenance on these products. The products are delivered as contracted projects with contract terms of less than one year to more than three years. The customer controls all of the work-in-process as product is developed and integrated. On partially completed contracts, the Group recognises revenue based on stage of completion of the project, which is estimated by comparing the number of hours actually spent on the project with the total number of hours expected to complete the project (i.e. an input-based method). This is considered a fair basis of the transfer of services as the contract pricing is typically based on the anticipated hours to complete the projects. The maintenance on the product is recognised over the term of the contract as control is transferred to the customer. Payment terms are based on completion of milestones throughout the project life for fixed price contracts and annually for maintenance on the anniversary of the contract effective date. Payment is generally due within 30 days of the invoice date.

### ***Consulting***

Revenue from consulting services comprises one performance obligation (i.e. completion of underlying transaction) and is recognised when control of the goods and services has been transferred, the Group's performance obligations to the customers have been satisfied and related costs are measured reliably. Payment is generally either due immediately or within 30 days.

The timing of delivering the services to the customer may differ from the timing of the customer's payment. Revenue amounts received for which the services are not yet delivered, and recognition conditions do not meet as at the reporting date, are recorded as deferred revenue. Revenue amounts for which the services are

delivered, and recognition conditions are met, however no amounts have been billed and collected, are recorded as work-in-process.

### ***Salaries***

Salaries include all expenses directly incurred in connection with permanent employees and personnel, as well as health benefits, retirement contributions, payroll taxes and withholding tax.

### ***Subscriptions***

Subscription expenses primarily comprise CAD and EDA subscription licences from Synopsys, Ansys, and several other companies. Subscriptions for enterprise productivity tools from Microsoft are also included as the company leverages Microsoft enterprise-wide.

### ***Subcontracting***

Subcontracting expenses include two categories of subcontractor – near-full-time subcontractors that augment the labour force and tactical specialised contractors that work on highly-specialised items for a short duration of time. The mix of these subcontractors is highly variable and depends on number of customer engagements, number of test chips being fabricated/tested and overall engineering demand above the employee capabilities in the Group.

### ***Professional fees***

Professional fees include legal, accounting and other fees required to operate the business and remain in compliance with tax filings and other regulatory requirements. The Group does not have an in-house company counsel so all Group counsel related items are outsourced.

### ***Depreciation of right-of-use asset***

Depreciation of right-of-use asset includes depreciation of lab equipment, computers, and office furniture.

### ***Office***

Office expenses include rental costs for existing office premises, as well as utilities and related operating costs arising from use of these facilities.

### ***Advertising and promotion***

Advertising and promotion expenses include costs incurred to third parties in relation to advertising and promoting the Alphawave brand, products and services.

### ***Prototype***

Prototype expenses include design, manufacturing and test costs associated with semiconductor prototypes or “test chips” that are used to demonstrate the performance of the Group’s IP products in a real-world Silicon environment. Major areas of expenses are test chip manufacturing by TSMC/Samsung, test board fabrication and testing expendables/consumables.

### ***Stock-based payment***

Stock-based payment expenses include stock-based compensation charges required under US GAAP/IFRS and includes the issuance of stock options and restricted stock units to employees and directors.

## Results of Operations

The following table sets out certain income statement data for the periods indicated.

	Year ended 31 May 2018	Year ended 31 May 2019	7 months ended 31 December 2019	Year ended 31 December 2020
	(\$ thousands)			
Revenue				
Product and maintenance	3,449	6,872	9,313	44,197
Consulting	39	40	—	—
<b>Revenue</b>	<b>3,488</b>	<b>6,912</b>	<b>9,313</b>	<b>44,197</b>
Expenses				
Salaries	(528)	(2,127)	(2,040)	(7,345)
Subscriptions	(419)	(1,336)	(1,786)	(4,916)
Subcontracting	(824)	(567)	(673)	(2,613)
Professional fees	(241)	(426)	(397)	(1,500)
Prototype	—	(626)	(106)	(1,130)
Depreciation of right-of-use asset	—	—	(401)	(991)
Stock-based payment	(6)	(45)	(79)	(758)
Office	(117)	(258)	(372)	(627)
Depreciation of property and equipment	(21)	(56)	(66)	(229)
Advertising and promotion	(14)	(102)	(116)	(137)
Insurance	(13)	(32)	(22)	(40)
Equipment rentals	—	(371)	—	—
Rental	(72)	(288)	—	—
<b>Expenses</b>	<b>(2,255)</b>	<b>(6,234)</b>	<b>(6,058)</b>	<b>(20,286)</b>
<b>Operating Profit</b>	<b>1,233</b>	<b>678</b>	<b>3,255</b>	<b>23,911</b>
Other Income (Loss)				
Interest income	—	9	5	266
Interest expense	—	—	(72)	(262)
Foreign currency translation gain (loss)	(8)	205	(221)	(1,317)
<b>Profit Before Tax</b>	<b>1,225</b>	<b>892</b>	<b>2,967</b>	<b>22,598</b>
Recovery of (provision for) income taxes				
Current	(71)	(276)	(868)	(5,875)
Deferred	(210)	(104)	37	(350)
Provision for (Recovery of) Income Taxes	(281)	(380)	(831)	(6,225)
<b>Total Profit and Comprehensive Income</b>	<b>944</b>	<b>512</b>	<b>2,136</b>	<b>16,373</b>

### Results of operations for the year ended 31 December 2020 compared to the seven months ended 31 December 2019

#### Revenue

Revenue increased by \$34,884 thousand from \$9,313 thousand for the seven months ended 31 December 2019 to \$44,197 thousand for the year ended 31 December 2020. The increase in revenue was driven primarily by closing of additional contracts that involved licence fees, NRE charges, and support and maintenance fees, in addition to the longer financial period in 2020.

#### Expenses

##### Salaries

Salaries increased by \$5,305 thousand from \$2,040 thousand for the seven months ended 31 December 2019 to \$7,345 thousand for the year ended 31 December 2020. The increase was driven primarily by a significant increase in headcount, in addition to the longer financial period in 2020.

### *Subscriptions*

Subscription expenses increased by \$3,130 thousand or 175 per cent. from \$1,786 thousand for the seven months ended 31 December 2019 to \$4,916 thousand for the year ended 31 December 2020. The increase was driven primarily by increased demand for CAD and EDA tools to meet the demand of the engineering organisation to meet customer contract milestones, in addition to the longer financial period in 2020.

### *Subcontracting*

Subcontracting expenses increased by \$1,940 thousand from \$673 thousand for the seven months ended 31 December 2019 to \$2,613 thousand for the year ended 31 December 2020. The increase was driven primarily by the need for additional resources to augment the workforce, plus some specialised skill sets required for test chip testing, in addition to the longer financial period in 2020.

### *Professional fees*

Professional fee expenses increased by \$1,103 thousand from \$397 thousand for the seven months ended 31 December 2019 to \$1,500 thousand for the year ended 31 December 2020. The increase was driven primarily by additional need for legal work for secondary stock offerings and preparation for any potential Admission, in addition to the longer financial period in 2020.

### *Prototype*

Prototype expenses increased by \$1,024 thousand from \$106 thousand for the seven months ended 31 December 2019 to \$1,130 thousand for the year ended 31 December 2020. The increase was driven primarily by a dramatic increase in the number of products being offered by the Group, which drove additional test chips being fabricated with TSMC and Samsung, in addition to the longer financial period in 2020.

### *Depreciation of right-of-use asset*

Depreciation of right-of-use asset increased by \$590 thousand or 147 per cent. from \$401 thousand for the seven months ended 31 December 2019 to \$991 thousand for the year ended 31 December 2020. The increase was driven primarily by additional equipment, computers and furniture that was purchased in alignment with the headcount growth, in addition to the longer financial year in 2020.

### *Stock-based payment*

Stock-based payment expenses increased by \$679 thousand from \$79 thousand for the seven months ended 31 December 2019 to \$758 thousand for the year ended 31 December 2020. The increase was driven primarily by a large increase in the valuation of the Group and the issuance of additional options in alignment with the headcount growth, in addition to the longer financial period in 2020.

### *Office*

Office expenses increased by \$255 thousand or 69 per cent. from \$372 thousand for the seven months ended 31 December 2019 to \$627 thousand for the year ended 31 December 2020. The increase was driven primarily by expansion of the Group's offices in Toronto in alignment with the headcount growth, in addition to the longer financial period in 2020.

### *Advertising and promotion*

Advertising and promotion expenses increased by \$21 thousand or 18 per cent. from \$116 thousand for the seven months ended 31 December 2019 to \$137 thousand for the year ended 31 December 2020. The increase was driven primarily by additional products that were built by the Group that required additional promotion, in addition to the longer financial period in 2020.

### ***Operating Profit***

Operating profit increased by \$20,656 thousand from \$3,255 thousand for the seven months ended 31 December 2019 to \$23,911 thousand for the year ended 31 December 2020, driven by the factors set forth above, in addition to the longer financial period in 2020.

### ***Other Income (Loss) – Foreign Currency Translation Gain (Loss)***

Loss from foreign currency translation increased by \$1,096 thousand from \$221 thousand for the seven months ended 31 December 2019 to \$1,317 thousand for the year ended 31 December 2020. The increase was driven primarily by volatility in the USD-CaD pairing and significantly higher USD revenues, in addition to the longer financial period in 2020.

### ***Provision for (Recovery of) Income Taxes***

Provision for (recovery of) income taxes increased by \$5,394 thousand from \$831 thousand for the seven months ended 31 December 2019 to \$6,225 thousand for the year ended 31 December 2020. The increase was driven primarily by the profitability of the Group resulting in lower ability to take advantage of tax credits, in addition to the longer financial period in 2020.

### ***Total Profit and Comprehensive Income***

Total profit and comprehensive income increased by \$14,237 thousand from \$2,136 thousand for the seven months ended 31 December 2019 to \$16,373 thousand for the year ended 31 December 2020, driven by the factors set forth above.

## **Results of operations for the year ended 31 May 2019 compared to the year ended 31 May 2018**

### ***Revenue***

Revenue increased by \$3,424 thousand or 98 per cent. from \$3,488 thousand for the year ended 31 May 2018 to \$6,912 thousand for the year ended 31 May 2019. The increase in revenue was driven primarily by increased numbers of design wins with new customers.

### ***Expenses***

#### ***Salaries***

Salaries increased by \$1,599 thousand from \$528 thousand for the year ended 31 May 2018 to \$2,127 thousand for the year ended 31 May 2019. The increase was driven primarily by significant growth in headcount.

#### ***Subscriptions***

Subscription expenses increased by \$917 thousand or 219 per cent. from \$419 thousand for the year ended 31 May 2018 to \$1,336 thousand for the year ended 31 May 2019. The increase was driven primarily by increased demand for CAD and EDA tools to meet the demand of the engineering organisation to meet customer contract milestones

#### ***Subcontracting***

Subcontracting expenses decreased by \$257 thousand or 31 per cent. from \$824 thousand for the year ended 31 May 2018 to \$567 thousand for the year ended 31 May 2019. The decrease was driven primarily by fewer test chips being built over the time period.

#### ***Professional fees***

Professional fee expenses increased by \$185 thousand or 77 per cent. from \$241 thousand for the year ended 31 May 2018 to \$426 thousand for the year ended 31 May 2019. The increase was driven primarily by accounting and legal expenses associated with the growth and expansion of the Group.

#### ***Prototype***

Prototype expenses increased from nil for the year ended 31 May 2018 to \$626 thousand in the year ended 31 May 2019. The increase was driven primarily by the requirement to build test chips to prove out the Group's new products in silicon.

#### ***Stock-based payment***

Stock-based payment expenses increased by \$39 thousand from \$6 thousand for the year ended 31 May 2018 to \$45 thousand for the year ended 31 May 2019. The increase was driven primarily by significant growth in headcount.

### *Office*

Office expenses increased by \$141 thousand or 121 per cent. from \$117 thousand for the year ended 31 May 2018 to \$258 thousand for the year ended 31 May 2019. The increase was driven primarily by the need for additional space as a result of the significant growth in headcount.

### *Advertising and promotion*

Advertising and promotion expenses increased by \$88 thousand from \$14 thousand for the year ended 31 May 2018 to \$102 thousand for the year ended 31 May 2019. The increase was driven primarily by the development of a larger number of products over the time period, which increased promotion costs.

### ***Operating Profit***

Operating profit decreased by \$555 thousand or 45 per cent. from \$1,233 thousand for the year ended 31 May 2018 to \$678 thousand for the year ended 31 May 2019. The decrease was driven primarily by reinvestment of income into the business to grow the Group.

### ***Other Income (Loss) – Foreign Currency Translation Gain (Loss)***

Other income from foreign currency translation increased by \$213 thousand from a loss of \$8 thousand for the year ended 31 May 2018 to a gain of \$205 thousand for the year ended 31 May 2019. The increase was driven primarily by volatility in the USD-CaD pairing.

### ***Total Profit and Comprehensive Income***

Total profit and comprehensive income decreased by \$432 thousand or 46 per cent. from \$944 thousand for the year ended 31 May 2018 to \$512 thousand for the year ended 31 May 2019. The decrease was driven primarily by profit being reinvested into the business to grow the business.

### **Liquidity and Capital Resources**

The Group manages its financing structure and cash flow requirements based on the Group's overall strategy and objectives, deploying financial and other resources related to those objectives. The Group manages liquidity risk by maintaining adequate reserves and banking facilities and by continuously monitoring forecasts and actual cash flows. Funding decisions are made based upon a number of internal and external factors, including required amounts and the timing of outflows, the internal and external availability of funds, the costs of financing and other strategic objectives. Since nearly all of the Group's expenses are in Canadian Dollars and nearly all of the Group's revenue is in US Dollars, the USD-CaD pairing is an item that Group financial personnel watches carefully. To date, the Group has not used hedging vehicles to protect against volatility in the USD-CaD pairing.

The Group's primary sources of liquidity have historically been cash received from customers.

The following table sets out certain cash flow information for the periods indicated.

	Year ended 31 May 2018	Year ended 31 May 2019	7 months ended 31 December 2019	Year ended 31 December 2020
			(\$ thousands)	
<b><i>Cash Flows from Operating Activities</i></b>				
Net income . . . . .	944	512	2,136	16,373
Items not affecting cash: . . . . .				
Depreciation of property and equipment . . . . .	21	56	66	229
Depreciation of right-of-use asset . . . . .	—	—	401	991
Share-based payment . . . . .	6	45	80	758
Subcontracting expense obtained for common shares . . . . .	—	18	23	40
Deferred income taxes . . . . .	210	104	(37)	350
Lease interests . . . . .	—	—	48	111
Unrealised foreign exchange gain on cash . . . . .	(50)	(265)	(43)	302
	<b>1,131</b>	<b>470</b>	<b>2,674</b>	<b>19,154</b>
Changes in working capital . . . . .	4,178	(821)	(2,798)	(4,636)
<b>Net Cash Generated from/(Used in) Operating activities . . . . .</b>	<b>5,309</b>	<b>(351)</b>	<b>(124)</b>	<b>14,518</b>
<b><i>Cash Flows from Investing Activities</i></b>				
Purchase of property and equipment . . . . .	(118)	(155)	(130)	(494)
Collection of notes receivable . . . . .	—	—	42	48
Purchase of intangible asset . . . . .	—	—	—	(178)
<b>Net Cash Used in Investing Activities . . . . .</b>	<b>(118)</b>	<b>(155)</b>	<b>(88)</b>	<b>(624)</b>
<b><i>Cash Flows from Financing Activities</i></b>				
Issuance of common shares . . . . .	1	13	38	1,159
Increase (decrease) in bank indebtedness . . . . .	—	—	2,910	(2,910)
Increase in long-term debt . . . . .	—	—	—	70
Payment of lease liabilities . . . . .	—	—	(486)	(1,343)
<b>Net Cash Generated from / (Used in) Financing Activities . . . . .</b>	<b>1</b>	<b>13</b>	<b>2,462</b>	<b>(3,024)</b>
<b>Net Increase / (Decrease) in Cash for Period . . . . .</b>	<b>5,192</b>	<b>(493)</b>	<b>2,250</b>	<b>10,870</b>
<b>Cash, Beginning of Period . . . . .</b>	<b>—</b>	<b>5,242</b>	<b>5,014</b>	<b>7,307</b>
Foreign exchange gain (loss) on cash held in foreign currency . . . . .	50	265	43	(302)
<b>Cash, End of Period . . . . .</b>	<b>5,242</b>	<b>5,014</b>	<b>7,307</b>	<b>17,875</b>

***Net cash generated from / (used in) operating activities***

Net cash used in operating activities consists of cash generated from revenue-related activities less cash paid for salaries and operating activities.

Net cash generated from operating activities increased by \$14,642 thousand, from \$124 thousand cash used in the seven months ended 31 December 2019 to \$14,518 thousand cash generated in the 12 months ended 31 December 2020. This increase was primarily due to the significant increase in revenue driven by an increased number of design wins with new and existing customers, in addition to the longer financial period in 2020.

Net cash generated from operating activities decreased by \$5,660 thousand from \$5,309 thousand in the year ended 31 May 2018 to \$351 thousand net cash used in the year ended 31 May 2019. This decrease was primarily due to a working capital absorption of \$821 thousand in the year to 31 May 2019, compared to a working capital cash inflow of \$4,178 thousand in the year to 31 May 2018. The changes in working capital are driven by the timings of completion of contract milestones and the associated timing of cash receipts.

***Net cash used in investing activities***

Net cash used in investing activities consists primarily of purchases of property and equipment, as partially offset by investment credits recovered.

Net cash used in investing activities increased by \$536 thousand from \$88 thousand in the seven months ended 31 December 2019 to \$624 thousand in the 12 months ended 31 December 2020. This increase was primarily due to increased investment in property and equipment to support the delivery on new design wins, in addition to the longer financial period in 2020.



Net cash used in investing activities increased by \$37 thousand from \$118 thousand in the year ended 31 May 2018 to \$155 thousand in the year ended 31 May 2019. This increase was primarily due to increased investment in property and equipment.

#### ***Net cash generated from / (used in) financing activities***

Net cash from financing activities comprises primarily proceeds from the issuance of common shares and borrowings.

Net cash generated from financing activities decreased by \$5,486 thousand from \$2,462 thousand in the seven months ended 31 December 2019 to an outflow of \$3,024 thousand in the 12 months ended 31 December 2020. This decrease was primarily due to drawdowns from bank facilities of \$2,910 thousand in the seven months ended 31 December 2019 that were subsequently repaid in the 12 months ended 31 December 2020.

Net cash generated from financing activities increased by \$12 thousand from \$1 thousand in the year ended 31 May 2018 to \$13 thousand in the year ended 31 May 2019.

#### **Indebtedness**

The Group has a credit facility with Bank of Montreal, which includes an approved operating line that can be drawn upon to a maximum of \$8,150,000 (the “**BoM Facility**”). This facility comprises:

- a \$1,000,000 operating facility, for general operating requirements;
- a \$7,000,000 asset and capital financing facility, to finance up to 100 per cent. of pre-shipment costs of export sales contracts and/or purchase orders; and
- \$150,000, in aggregate, across corporate credit card and treasury (interest and foreign exchange risk) hedging facilities.

Amounts can be borrowed under the operating and the asset and capital financing facilities in CaD or USD, and they incur interest at the Canadian prime rate or US base rate (as applicable) plus 1.50 per cent. Amounts borrowed under the BoM Facility are guaranteed by Export Development Canada and are repayable upon demand. The Group is subject to financial covenants and periodic reporting requirements pursuant to the terms of the BoM Facility. In connection with entry into the BoM Facility, the Group has granted Bank of Montreal a conventional security interest in assets of the Group.

At 31 December 2020, the Group’s borrowed balance under the BoM Facility was nil.

#### **Off-Balance Sheet Arrangements**

The Group has no off-balance sheet arrangements that have or are reasonably likely to have a current or future material effect on its financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources.

#### **Critical Accounting Policies**

Alphawave’s reported financial condition and results of operations are sensitive to the accounting principles, methods and assumptions that are the basis for its consolidated financial statements. Alphawave’s accounting policies, the judgements that management makes in the creation and application of these policies, and the sensitivities of reported results to changes in accounting policies and assumptions are factors to be considered along with the Consolidated Historical Financial Information. For a detailed discussion of its significant accounting policies and estimates, see Note 4 to the Consolidated Historical Financial Information.

The preparation of the Consolidated Historical Financial Information requires its management to make estimates and assumptions that affect the reported amounts of income, expenses, assets and liabilities, and the disclosure of contingent assets and liabilities at the date of the financial statements. While Alphawave bases these estimates and judgements on historical experience and other factors that are believed to be reasonable under the circumstances and reviews all estimates and judgements continually, many factors may cause actual results to materially differ from these estimates. See Part I: “*Risk Factors*” and Part II: “*Presentation of Information on the Group — Information Regarding Forward-Looking Statements*”.

### ***Revenue Recognition***

Revenue is recognised upon transfer of control of promised products or services to customers in an amount that reflects the consideration the Group expects to be entitled in exchange for promised goods or services. See “*Description of Key Line Items — Revenue*” above.

### **Research and Development**

Research costs are expensed as incurred. Development expenditures on an individual project are recognised as an intangible asset when the Group can demonstrate:

the technical feasibility of completing the intangible asset so that it will be available for use or sale;

- its intention to complete the asset and to use or sell it;
- the ability to use or sell the intangible asset;
- how the asset will generate future economic benefits;
- the availability of resources to complete the asset; and
- the ability to measure reliably the expenditure during development.

As of 31 December 2020, Alphawave has not capitalised any development costs except for lab equipment and computers as mentioned above.

### **Qualitative and Quantitative Disclosures on Market Risk**

Alphawave’s major market risk exposures include credit risk, liquidity risk, currency risk, interest rate risk, and other price risk. For more detail, see Note 29 to the Consolidated Historical Financial Information included in this Registration Document.

**PART IX**  
**HISTORICAL FINANCIAL INFORMATION**

This section of the Registration Document includes consolidated historical financial information for the Group as at and for the year ended 31 December 2020, as at and for the seven months ended 31 December 2019, as at and for the year ended 31 May 2019 and as at and for the year ended 31 May 2018, as well as an Accountant's Report thereon prepared by KPMG. This Part IX: "*Historical Financial Information*" is set out in two parts as follows:

- Part A sets out KPMG's Accountant's Report on the Consolidated Historical Financial Information; and
- Part B sets out the Consolidated Historical Financial Information and includes the accounting policies and notes, including the notes to the Consolidated Historical Financial Information.

## Part A: Accountant's Report on the Consolidated Historical Financial Information



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65 Gresham Street  
London EC2V 7NQ  
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22 April 2021

Ladies and Gentlemen

### **Alphawave IP Group plc**

We report on the financial information set out in Part IX (Historical Financial Information) for Alphawave IP Inc. and its subsidiary undertakings for the twelve month period ended 31 May 2018, the twelve month period ended 31 May 2019, the seven-month period ended 31 December 2019 and the twelve month period ended 31 December 2020. This report is required by Item 18.3.1 of Annex 1 of the UK version of Commission Delegated Regulation (EU) 2019/980 (the “**PR Regulation**”) and is given for the purpose of complying with that item and for no other purpose.

### **Opinion on financial information**

In our opinion, the financial information gives, for the purposes of the registration document dated 22 April 2021, a true and fair view of the state of affairs of Alphawave IP Inc. and its subsidiary undertakings as at 31 May 2018, 31 May 2019, 31 December 2019 and 31 December 2020 and of its profits/losses, cash flows, statement of comprehensive income and changes in equity for the twelve month period ended 31 May 2018, the twelve month period ended 31 May 2019, the seven-month period ended 31 December 2019 and the twelve month period ended 31 December 2020 in accordance with the basis of preparation set out in Part B, Note 2 of Part IX and in accordance with UK-adopted international accounting standards as described Part B, Note 2 of Part IX.

### **Responsibilities**

The Directors of Alphawave IP Group plc are responsible for preparing the financial information on the basis of preparation set out in Part B, Note 2 of Part IX and in accordance with UK-adopted international accounting standards.

It is our responsibility to form an opinion on the financial information and to report our opinion to you.

Save for any responsibility arising under Item 1.2 of Annex 1 to the PR Regulation to any person as and to the extent there provided, to the fullest extent permitted by law we do not assume any responsibility and will not accept any liability to any other person for any loss suffered by any such other person as a result of, arising out of, or in connection with this report or our statement, required by and given solely for the purposes of complying with Item 1.3 of Annex 1 of the PR Regulation, consenting to its inclusion in the registration document.

### **Basis of Preparation**

This financial information has been prepared for inclusion in the registration document dated 22 April 2021 of Alphawave IP Group plc on the basis of the accounting policies set out in Part B, Note 2 of Part IX.

## **Basis of Opinion**

We conducted our work in accordance with Standards for Investment Reporting issued by the Financial Reporting Council in the United Kingdom (the “FRC”). We are independent, and have fulfilled our other ethical responsibilities, in accordance with the relevant ethical requirements of the FRC’s Ethical Standard as applied to Investment Circular Reporting Engagements.

Our work included an assessment of evidence relevant to the amounts and disclosures in the financial information. It also included an assessment of the significant estimates and judgements made by those responsible for the preparation of the financial information and whether the accounting policies are appropriate to the entity’s circumstances, consistently applied and adequately disclosed.

We planned and performed our work so as to obtain all the information and explanations which we considered necessary in order to provide us with sufficient evidence to give reasonable assurance that the financial information is free from material misstatement whether caused by fraud or other irregularity or error.

## **Conclusions Relating to Going Concern**

The Directors of Alphawave IP Group plc have prepared the financial information on the going concern basis as they do not intend to liquidate the entity or to cease its operations, and as they have concluded that the entity’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 its ability to continue as a going concern for at least a year from the date of approval of the financial information (“the going concern period”).

### **Our conclusions:**

- we consider that the Directors’ use of the going concern basis of accounting in the preparation of the entity’s financial information is appropriate; and
- we have not identified, and concur with the Directors’ assessment that there is not, a material uncertainty related to events or conditions that, individually or collectively, may cast significant doubt on the entity’s ability to continue as a going concern for the going concern period.

## **Declaration**

For the purposes of Item 1.2 of Annex 1 to the PR Regulation we are responsible for this report as part of the registration document and declare that, to the best of our knowledge, the information contained in this report is in accordance with the facts and that the report makes no omission likely to affect its import. This declaration is included in the registration document in compliance with Item 1.2 of Annex 1 of the PR Regulation.

Yours faithfully

KPMG LLP

**Part B: Consolidated Historical Financial Information**

**Consolidated Statement of Income and Comprehensive Income**

	Note	Twelve months ended 31 May 2018	Twelve months ended 31 May 2019	Seven months ended 31 December 2019	Twelve months ended 31 December 2020
<i>(\$ thousands)</i>					
<b>Revenue</b>					
Product and maintenance . . . . .	6	3,449	6,872	9,313	44,197
Consulting . . . . .	6	39	40	—	—
		<u>3,488</u>	<u>6,912</u>	<u>9,313</u>	<u>44,197</u>
<b>Expenses</b>					
Salaries . . . . .	7, 10	(528)	(2,127)	(2,040)	((7,345)
Subscriptions . . . . .		(419)	(1,336)	(1,786)	(4,916)
Subcontracting . . . . .		(824)	(567)	(673)	(2,613)
Professional fees . . . . .	9	(241)	(426)	(397)	(1,500)
Prototype . . . . .		—	(626)	(106)	(1,130)
Depreciation of right-of-use asset . . . . .	16	—	—	(401)	(991)
Stock-based payment . . . . .	10, 23	(6)	(45)	(79)	(758)
Office . . . . .		(117)	(258)	(372)	(627)
Depreciation of property and equipment . . . . .	14	(21)	(56)	(66)	(229)
Advertising and promotion . . . . .		(14)	(102)	(116)	(137)
Insurance . . . . .		(13)	(32)	(22)	(40)
Equipment rentals . . . . .		—	(371)	—	—
Rental . . . . .		(72)	(288)	—	—
		<u>(2,255)</u>	<u>(6,234)</u>	<u>(6,058)</u>	<u>(20,286)</u>
<b>Operating Profit</b> . . . . .		<b>1,233</b>	<b>678</b>	<b>3,255</b>	<b>23,911</b>
<b>Other Income (loss)</b>					
Interest income . . . . .		—	9	5	266
Interest expense . . . . .		—	—	(72)	(262)
Foreign currency translation gain (loss) . . . . .		(8)	205	(221)	(1,317)
		<u>—</u>	<u>205</u>	<u>(221)</u>	<u>(1,317)</u>
<b>Profit Before Tax</b> . . . . .		<b>1,225</b>	<b>892</b>	<b>2,967</b>	<b>22,598</b>
<b>Recovery of (provision for) income taxes</b>					
Current . . . . .	11	(71)	(276)	(868)	(5,875)
Deferred . . . . .	11	(210)	(104)	37	(350)
		<u>(281)</u>	<u>(380)</u>	<u>(831)</u>	<u>(6,225)</u>
<b>Total Profit and Comprehensive Income for the Year</b> . . . . .		<b><u>944</u></b>	<b><u>512</u></b>	<b><u>2,136</u></b>	<b><u>16,373</u></b>
Basic income per share . . . . .	12	<u>0.05</u>	<u>0.03</u>	<u>0.13</u>	<u>0.89</u>
Diluted income per share . . . . .	12	<u>0.05</u>	<u>0.02</u>	<u>0.11</u>	<u>0.75</u>

## Consolidated Statement of Financial Position

	Note	As at 31 May		As at 31 December	
		2018	2019	2019	2020
<i>(\$ thousands)</i>					
<b>Assets</b>					
Non-Current					
Property and equipment	14	96	196	260	525
Intangible asset	15	—	—	—	178
Right-of-use asset	16	—	—	1,149	8,804
		<b>96</b>	<b>196</b>	<b>1,409</b>	<b>9,507</b>
Current					
Cash and cash equivalents	13	5,242	5,014	7,307	17,875
Accounts receivable		—	1,488	2,273	6,628
Government remittances recoverable		142	204	258	833
Investment tax credit receivable		948	1,437	1,533	2,418
Work-in-process		—	—	1,006	13,148
Notes receivable	17	—	—	270	545
Prepaid expenses		113	132	178	444
Capitalised contract costs		—	—	—	308
		<b>6,445</b>	<b>8,275</b>	<b>12,825</b>	<b>42,199</b>
<b>Total Assets</b>		<b>6,541</b>	<b>8,471</b>	<b>14,234</b>	<b>51,706</b>
<b>Liabilities</b>					
Current					
Bank indebtedness	18	—	—	2,909	—
Accounts payable and accrued liabilities	19	338	529	340	2,810
Income taxes payable	11	71	51	680	4,520
Current portion of long-term debt	21	—	—	—	35
Deferred revenue	20	4,971	6,037	4,786	12,371
Current portion of lease liabilities	16	—	—	586	2,128
		<b>5,380</b>	<b>6,617</b>	<b>9,301</b>	<b>21,864</b>
Non-Current					
Long-term debt	21	—	—	—	35
Deferred income taxes	11	210	314	277	627
Lease liabilities	16	—	—	657	6,529
		<b>210</b>	<b>314</b>	<b>934</b>	<b>7,191</b>
<b>Total Liabilities</b>		<b>5,590</b>	<b>6,931</b>	<b>10,235</b>	<b>29,055</b>
<b>Shareholders' Equity</b>					
Share capital	22	1	36	491	2,395
Share-based payment reserve		6	48	46	421
Retained earnings		944	1,456	3,462	19,835
<b>Total Shareholders' Equity</b>		<b>951</b>	<b>1,540</b>	<b>3,999</b>	<b>22,651</b>
		<b>6,541</b>	<b>8,471</b>	<b>14,234</b>	<b>51,706</b>

## Consolidated Statement of Changes in Equity

	Number of shares	Share capital	Share-based payment reserve <i>(\$ thousands)</i>	Retained earnings	Total
<b>Balance as at 31 May 2017</b> . . . . .	23,400,000	1	—	—	1
Net income and comprehensive income for the year . . . . .	—	—	—	944	944
Share-based payment expense . . . . .	—	—	6	—	6
<b>Balance as at 31 May 2018</b> . . . . .	<b>23,400,000</b>	<b>1</b>	<b>6</b>	<b>944</b>	<b>951</b>
Net income and comprehensive income for the year . . . . .	—	—	—	512	512
Issuance of shares . . . . .	1,392,083	35	(3)	—	32
Share-based payment expense . . . . .	—	—	45	—	45
<b>Balance as at 31 May 2019</b> . . . . .	<b>24,792,083</b>	<b>36</b>	<b>48</b>	<b>1,456</b>	<b>1,540</b>
Issuance of shares . . . . .	1,024,336	455	(82)	—	373
Net income and comprehensive income for the year . . . . .	—	—	—	2,136	2,136
One-time adjustment to retained earnings upon adoption of IFRS 16 . . . . .	—	—	—	(130)	(130)
Share-based payment expense . . . . .	—	—	80	—	80
<b>Balance as at 31 December 2019</b> . . . . .	<b>25,816,419</b>	<b>491</b>	<b>46</b>	<b>3,462</b>	<b>3,999</b>
Net income and comprehensive income for the year . . . . .	—	—	—	16,373	16,373
Issuance of shares . . . . .	2,110,833	1,904	(383)	—	1,521
Share-based payment expense . . . . .	—	—	758	—	758
<b>Balance as at 31 December 2020</b> . . . . .	<b>27,927,252</b>	<b>2,395</b>	<b>421</b>	<b>19,835</b>	<b>22,651</b>



## Consolidated Statement of Cash Flows

	Note	Twelve months ended 31 May 2018	Twelve months ended 31 May 2019	Seven months ended 31 December 2019	Twelve months ended 31 December 2020
<i>(\$ thousands)</i>					
<b>Cash Flows from Operating Activities</b>					
Net income . . . . .		944	512	2,136	16,373
Items not affecting cash:					
Depreciation of property and equipment . . . . .		21	56	66	229
Depreciation of right-of-use asset . . . . .		—	—	401	991
Share-based payment . . . . .		6	45	80	758
Subcontracting expense obtained for common shares . . . . .	22	—	18	23	40
Deferred income taxes . . . . .	11	210	104	(37)	350
Lease interest . . . . .	16	—	—	48	111
Unrealised foreign exchange gain on cash . . . . .		(50)	(265)	(43)	302
		<u>1,131</u>	<u>470</u>	<u>2,674</u>	<u>19,154</u>
Changes in working capital . . . . .		4,178	(821)	(2,798)	(4,636)
<b>Net Cash Generated from / (Used in)</b>					
<b>Operating Activities . . . . .</b>		<u>5,309</u>	<u>(351)</u>	<u>(124)</u>	<u>14,518</u>
<b>Cash Flows from Investing Activities</b>					
Purchase of property and equipment . . . . .		(118)	(155)	(130)	(494)
Collection of notes receivable . . . . .		—	—	42	48
Purchase of intangible asset . . . . .		—	—	—	(178)
<b>Net Cash Used in Investing Activities . . . . .</b>		<u>(118)</u>	<u>(155)</u>	<u>(88)</u>	<u>(624)</u>
<b>Cash Flows from Financing Activities</b>					
Issuance of common shares . . . . .	22	1	13	38	1,159
Increase (decrease) in bank indebtedness . . . . .	18	—	—	2,910	(2,910)
Increase in long-term debt . . . . .	21	—	—	—	70
Payment of lease liabilities . . . . .	16	—	—	(486)	(1,343)
<b>Net Cash Generated from / (Used in)</b>					
<b>Financing Activities . . . . .</b>		<u>1</u>	<u>13</u>	<u>2,462</u>	<u>(3,024)</u>
<b>Net Increase / (Decrease) in Cash for the Period . . . . .</b>		<u>5,192</u>	<u>(493)</u>	<u>2,250</u>	<u>10,870</u>
<b>Cash—Beginning of Period . . . . .</b>		—	5,242	5,014	7,307
Foreign exchange gain on cash held in foreign currency . . . . .		50	265	43	(302)
<b>Cash—End of Period . . . . .</b>		<u>5,242</u>	<u>5,014</u>	<u>7,307</u>	<u>17,875</u>
<b>Cash Flows Supplementary Information</b>					
Interest received . . . . .		—	9	5	266
Interest paid . . . . .		—	—	—	151
Income taxes paid . . . . .		—	71	66	781

## **1 Description of Operations**

These consolidated financial statements represent the consolidated financial statements of Alphawave IP Inc. and its wholly owned subsidiary Alphawave IP Corp. (together, the “**Group**”).

Alphawave IP Inc. was incorporated on 19 May 2017 under the laws of the Province of Ontario. Alphawave IP Corp. was incorporated on 19 April 2018 under the laws of the State of Delaware. The principal address of the Group is 170 University Avenue, Toronto, ON. The Group’s principal business activity is developing and licensing high performance connectivity intellectual property for the semiconductor industry.

## **2 Basis of Preparation**

### **Statement of compliance**

The consolidated financial statements were prepared for the purposes of the Registration Document in accordance with the requirements of the Listing Rules and in accordance with UK-adopted International Financial Reporting Standards (“**IFRS**”) (see note 4(r) for pending accounting pronouncements).

### **Basis of consolidation**

These consolidated financial statements include the accounts of Alphawave IP Inc. and its wholly owned subsidiary Alphawave IP Corp. All intercompany balances and transactions have been eliminated on consolidation.

### **Basis of organisation**

The Group’s management has performed its evaluation for reporting its reportable segments, if any, and concluded that the Group’s business constitutes only one operating segment as all its products and services are of similar nature and focus on customers from the same industry. Its entire revenues, expenses, assets and liabilities pertain to the one business as a whole. In addition, the Group’s business is located only in one geographic segment i.e. Canada. Therefore, there was no information to be disclosed for operating segments.

### **Functional currency**

These consolidated financial statements are presented in Canadian dollars, which is the Group’s functional currency.

### **Basis of measurement**

These consolidated financial statements are prepared on a historical cost basis, except for certain financial instruments and share-based payment reserves that are measured at fair value.

### **Going concern**

As of 31 December 2020, the Group had cash and cash equivalents of \$17.9 million. Considering the Group’s financial position as of 31 December 2020 and its principal risks and opportunities, a going concern analysis has been prepared for at least the twelve-month period from the date of signing the consolidated financial statements (“the going concern period”) utilising realistic scenarios and applying a severe but plausible downside scenario. Even under the downside scenario, the analysis demonstrates the Group continues to maintain sufficient liquidity headroom and continues to comply with all financial obligations. Therefore, the Directors believe the Group is adequately resourced to continue in operational existence for at least the twelve-month period from the date of signing the consolidated financial statements. Accordingly, the Directors considered it appropriate to adopt the going concern basis of accounting in preparing the consolidated financial statements.

### **Use of estimates and judgement**

The preparation of consolidated financial statements in conformity with IFRS requires management to make estimates and assumptions that affect the reported amount of assets and liabilities, disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the period. Such estimates are periodically reviewed and any adjustments necessary are reported in earnings in the period in which they become known. Actual results could differ from these estimates.

Beginning in March 2020, the Governments of Canada and Ontario, as well as foreign governments, instituted emergency measures as a result of the COVID-19 virus. The Group has continued to operate with limited impact on its financial position and cash flows. Management believes that the Group's accounting estimates are fairly determined, however, the ongoing uncertainty due to the unpredictable nature of COVID-19 may affect some of the significant estimates in the next fiscal year.

The areas which require management to make significant estimates in determining carrying values include, but are not limited to:

**(a) Revenue recognition**

In the determination of allocation of revenues to work-in-process and deferred revenues, management must assess the stage of completion of custom IP license contracts based on hours completed compared to total estimated hours to complete. Such judgements are inherently uncertain due to unforeseen delays in technological research. Changes in these assumptions affect the fair value estimates. See note 6.

The areas which require management to make significant judgements and assumptions in determining carrying values include, but are not limited to:

**(a) Revenue**

Judgements are exercised when determining the correct amount of revenue to be recognised. This includes making certain judgements when determining the appropriate accounting treatment of key customer contract terms in accordance with the applicable accounting standards. In particular, judgement is required to determine the performance obligations in a contract (if promised goods and services are distinct or not) and timing of revenue recognition (on delivery or over a period of time).

**(b) Share-based payments**

Judgement is used in determining the fair value of the share options at the grant date, including determining comparable listed companies against which the future volatility of the share price is compared and expected dividend yield. Such judgements are inherently uncertain and changes in these affect the fair value determination.

**(c) Research and development costs**

Judgement is exercised in determining whether costs incurred should be capitalised in line with IAS 38. The judgement includes whether it is technically feasible to complete the relevant assets on which costs are incurred so that it will be available for use or sale. Refer to note 8.

**3 Changes in Accounting Policies**

**IFRS 9—Financial Instruments**

On 1 June 2018 the Group adopted IFRS 9, Financial Instruments (“**IFRS 9**”) and the related consequential amendments to other IFRS standards that are effective for annual periods beginning on or after 1 January 2018. The transition provisions of IFRS 9 allow an entity to apply the new standard on a prospective basis without any adjustments to comparative figures. Accordingly, the Group has decided not to restate its comparative figures, which are presented under IAS 39, Financial Instruments: recognition and measurement (“**IAS 39**”).

IFRS 9 introduced new requirements for:

- (1) Classification and measurement of financial assets and financial liabilities,
- (2) Impairment of financial assets, and
- (3) General hedge accounting.

The impact of these new requirements on the Group's financial statements are described below.

All recognised financial assets that are within the scope of IFRS 9 are required to be measured subsequently at amortised cost or fair value on the basis of the entity's business model for managing the financial assets and the contractual cash flow characteristics of the financial assets.

The following table summarises the classification of Group’s financial instruments under both standards:

	<u>IAS 39</u>	<u>IFRS 9</u>
Cash and cash equivalents . . . . .	FVTPL	FVTPL
Accounts receivable . . . . .	Loans and receivables	Amortised cost
Accounts payable and accrued liabilities . . . . .	Other financial liabilities	Amortised cost

The above changes in classification of Group’s financial instruments had no impact on the carrying amounts of the financial instruments.

**IFRS 15—Revenue from contracts with customers**

On 1 June 2018, the Group adopted IFRS 15, Revenue from contracts with customers (“**IFRS 15**”). IFRS 15 provides a single, principles-based, five-step model to be applied to all contracts with customers. The five steps in the model are as follows:

- Identify the contract with the customer
- Identify the performance obligations in the contract
- Determine the transaction price
- Allocate the transaction price to the performance obligations in the contract
- Recognise revenue when (or as) the entity satisfies a performance obligation

The Group’s revenue streams include revenue on consulting where the Group has one performance obligation i.e. the completion of the underlying sales transaction.

Revenues from products derives from contracts for which there is typically one performance obligation. However, the performance obligation on annual maintenance contracts is typically satisfied evenly throughout the term of the contract. As such, the Group will continue to recognise products income over the term of the contract as the services are rendered.

Therefore, there was no material impact on timing and amount recognised in revenues as a result of adoption of IFRS 15.

**IFRS 16—Leases**

On 1 June 2019, the Group adopted IFRS 16 Leases (“**IFRS 16**”) to replace IAS 17 Leases (“**IAS 17**”). Classification of leases by the lessor under IFRS 16 continues as either an operating or a finance lease, as was the treatment under IAS 17. The treatment of leases by the lessee requires capitalisation of all leases resulting in accounting treatment similar to finance leases under IAS 17. The Group, as permitted, have applied the modified retrospective approach and is not required to restate comparative information for the year ended 31 May 2019. It remains as previously reported under IAS 17 and related interpretations.

The Group has elected to apply the following practical expedients proposed by the standard:

- Reliance on the previous identification of a lease (as provided by IAS 17) for all contracts that existed on the date of initial application;
- the ROU assets for all leases were recognised at an amount equal to the lease liability plus prepaid lease payments immediately before the date of initial application;
- the application of a single discount rate to a portfolio of leases with reasonably similar characteristics. The key differential considered in determining the discount rate is the length of the lease;
- the use of hindsight when determining the lease term, if the contract contains an option to extend or terminate the lease;
- on initial application, initial direct costs are excluded from the measurement of the ROU asset;
- approach not to recognise right-of-use assets and lease liabilities for short-term leases that have a lease term of 12 months or less and leases of low-value assets. The lease payments associated with these leases is recognised as an expense on a straight-line basis over the lease term.

Operating lease commitments disclosed in the Group’s financial statements for the year ended 31 May 2019 under IAS 17 in the amount of \$1,804,423 were discounted using the Group’s incremental borrowing rate at 1 June 2019. In respect of leases outstanding at prior year-end, total lease liability (and corresponding right-of-

use asset) of \$2,162,657 with accumulated depreciation for \$611,692 was recognised at 1 June 2019 as a result of transition. Adjustment of \$130,125 was recorded in 31 December, 2019 period's opening retained earnings on adoption of IFRS 16.

When the lease liability is remeasured, the amount of the remeasurement is recognised as a corresponding adjustment to the carrying amount of the right-of-use asset, or is recorded in profit or loss if the carrying amount of the right-of-use asset has been reduced to zero.

#### **4 Summary of Significant Accounting Policies**

##### **(a) Cash and cash equivalents**

Cash and cash equivalents include cash and liquid investments with a term to maturity of 90 days or less when acquired.

##### **(b) Revenue recognition**

Revenue is recognised upon transfer of control of promised products or services to customers in an amount that reflects the consideration the Group expects to be entitled to in exchange for promised goods or services. The cumulative effects of revisions to contract revenues and estimated completion costs are recorded in the accounting period in which the amounts become evident and can be reasonably estimated. These revisions can include such items as the effects of change orders.

The Group enters into contracts that can include various combinations of products (i.e. custom IP licenses, products and maintenance, some of which are distinct and are accounted for as separate performance obligations. For contracts with multiple performance obligations, the Group allocates the transaction price of the contract to each performance obligation, generally on a relative basis using its best estimate of the stand-alone selling price to each distinct good or service in the contract.

##### *Products and maintenance*

Revenue from products and maintenance includes the Group's products and the related maintenance on these products. The products are delivered as contracted projects with contract terms of less than one year to more than three years. The customer controls all of the work-in-process as product is developed and integrated. On partially completed contracts, the Group recognises revenue based on stage of completion of the project, which is estimated by comparing the number of hours actually spent on the project with the total number of hours expected to complete the project (i.e. an input-based method). This is considered a fair basis of the transfer of services as the contract pricing is typically based on the anticipated hours to complete the projects. The maintenance on the product is recognised over the term of the contract as control is transferred to the customer and includes software updates that become available during the term. The transaction price includes amounts expected to be received in exchange for the goods or services plus any contract amendments that are expected to be received. Payment terms are based on completion of milestones throughout the project life for fixed price contracts and annually for maintenance on the anniversary of the contract effective date. Payment is generally due within 30 days of the invoice date.

##### *Consulting*

Revenue from consulting services comprises one performance obligation i.e. completion of underlying transaction and is recognised when control of the goods and services has been transferred, the Group's performance obligations to the customers have been satisfied and related costs are measured reliably. Payment is generally either due immediately or within 30 days.

The timing of delivering the services to the customer may differ from the timing of the customer's payment. Revenue amounts received for which the services are not yet delivered, and recognition conditions do not meet as at the reporting date, are recorded as deferred revenue. Revenue amounts for which the services are delivered, and recognition conditions are met, however no amounts have been billed and collected, are recorded as work-in-process.

Interest income is recorded on accrual basis.

##### **(c) Investment tax credits**

Investment tax credits receivable are amounts recoverable from the Canadian federal and provincial government under the SRED incentive programme. The amounts claimed under the programme represent the

amounts submitted by management based on research and development costs paid during the year and included a number of estimates and assumptions made by management in determining the eligible expenditures. ITC's are recorded when there is reasonable assurance that the Group will realise the ITC's and are netted against the related expenditure. Recorded ITC's are subject to review and approval by tax authorities and therefore, amounts eventually received may be different from the amounts recorded.

**(d) Work-in-process**

Work-in-process includes unbilled amounts typically resulting from sales under long-term contracts when the cost-to-cost method of revenue recognition is utilised and revenue recognised exceeds the amount billed to the customer accounted for under IFRS 15. At any given period-end, a large portion of the balance in this account represents the accumulation of labour, materials and other costs that have not been billed due to timing, whereby the accumulation of each month's costs and earnings are administratively billed in subsequent months. Also included in the account are amounts that will become billable according to contract terms, which usually require the consideration of the passage of time, achievement of milestones or completion of the project.

**(e) Share-based payments**

The Group issues share options in accordance with its approved shares-settled 'Equity Incentive Plan'. Share options granted to employees are accounted for under the fair value-based method of accounting using fair value for underlying equity instrument. Fair values are determined in accordance with the Black-Scholes-Merton option-pricing model ("BSM"). Management exercises judgement in determining the underlying share price volatility, expected forfeitures and other parameters of the calculations. Share options granted to service providers are valued using fair value of services obtained, and if that is not determinable, at the fair value of underlying equity instrument as per BSM. Share costs of share-based payments are recognised over the vesting period as an increase to share-based payment expense and share-based payment reserve.

Upon the exercise of the options, consideration received together with the amount previously recognised in share-based payment reserve is recorded as an increase to share capital.

Upon expiry of the options, the value that had been ascribed to the expired options remains in the share-based payment reserve.

When terms of the options are modified at a future date, the fair value of the options must be adjusted for the new terms using the BSM. Any difference in fair value must be adjusted as a change to share-based payment reserve and share-based payment expense.

**(f) Capitalised contract costs**

The Group records an asset for the incremental costs of obtaining a contract with a customer, including direct sales commissions that are earned upon execution of the contract. The cost of direct sales commissions is measured as a percentage of the contract price. The Group recognises the cost to fulfil a contract only when the costs relate directly to a contract or to an anticipated contract that the Group can specifically identify, the cost generate or enhance resources of the Group that will be used in satisfying performance obligations in the future, and the costs are expected to be recovered. The Group recognises the amortisation expense related to these capitalised costs related to initial contracts and such expense is recognised over a period associated with the revenue of the related contract, which is recognised on a stage of completion basis, which is generally one to two years. Capitalised contract costs are tested for impairment on an ongoing basis when events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment is recognised to the extent that the amount of the capitalised contract costs exceeds the remaining expected gross margin (remaining revenue less remaining direct costs) on the goods and services to which the capitalised contract costs relates.

**(g) Foreign currency translation**

Transactions in foreign currencies are translated to functional currency at the foreign exchange rate prevailing at the dates of the transactions. At the end of each reporting period, monetary assets and liabilities denominated in foreign currencies are translated to the functional currency at the foreign exchange rate at the reporting date. Foreign exchange differences arising on translation are recognised in the statement of income and comprehensive income as foreign currency translation gains or losses in the period in which they occur.

**(h) Property and equipment**

Property and equipment are stated at cost less accumulated depreciation and impairment losses, if any. Cost includes initial cost and subsequent expenditures that are directly attributable to the related asset when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. All other repair and maintenance costs are charged to consolidated statement of income and comprehensive income during the year they are incurred. Property and equipment are depreciated over their estimated useful life on a declining balance basis at the following rates:

Computer equipment . . . . .	50%
Furniture and fixtures . . . . .	20%
Leasehold improvements . . . . .	40%

Property and equipment acquired during the year are depreciated from the date the asset is available for use as intended until the date of de-recognition. The residual values and useful lives are reviewed by the management at each financial year-end and adjusted if impact on depreciation is significant. Property and equipment are regularly reviewed to eliminate obsolete items.

An item of property and equipment is de-recognised upon disposal or when no future economic benefits are expected from its use. Any gain or loss arising on de-recognition of the asset is included in consolidated statement of income and comprehensive income in the year the asset is de-recognised.

**(i) Intangible assets**

Intangible assets are purchased IP carried at cost less accumulated amortisation and impairments. The intangible asset will be amortised on a straight line basis over the term of the license which is 5 years from the date of completion.

Intangible assets are not amortised until the date the asset is available for use. An intangible asset that is under development and not yet available for use is tested for impairment annually by comparing its carrying amount with its recoverable amount. The residual values and useful lives are reviewed by management at each reporting date and those estimates are adjusted if required.

**(j) Leases**

At inception of a contract, the Group assesses whether a contract is, or contains, a lease based on whether the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. The Group recognises a ROU asset and a lease liability at the lease commencement date, which is the date the leased asset is available for use. The Group has elected not to separate lease and non-lease components and instead treats them all as lease payments and a single lease component.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the Group’s incremental borrowing rate. The incremental borrowing rate is the rate which the Group would have to pay to borrow the funds necessary to obtain an asset of similar value to the ROU asset in a similar economic environment with similar terms, security and conditions. The lease term includes periods covered by an option to extend if the Group is reasonably certain to exercise that option. The lease liability is measured at amortised cost using the effective interest method. The lease liability is remeasured when there is a change in future lease payments arising from a change in the Group’s estimate of the amount expected to be payable under a residual value guarantee, or if the Group changes its assessment of whether it will exercise a purchase, extension or termination option. When the lease liability is remeasured, a corresponding adjustment is made to the carrying amount of the ROU asset unless it has been reduced to zero. Any further reduction in the lease liability is then recognised in profit or loss.

The ROU asset is initially measured based on the initial lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located, less any lease incentives received. The ROU assets are depreciated over the shorter of the lease term and the useful life of the underlying as-set using the straight-line method as this most closely reflects the expected pattern of the consumption of the future economic benefits. In addition, the ROU asset can be periodically reduced by impairment losses, if any, and adjusted for certain re-measurements of the lease liability.

A lease modification will be accounted for as a separate lease if the modification increases the scope of the lease and if the consideration for the lease increases by an amount commensurate with the stand-alone price for

the increase in scope. For a modification that is not a separate lease or where the increase in consideration is not commensurate, at the effective date of the lease modification, the Group will remeasure the lease liability using the Group's incremental borrowing rate on the date of modification, when the rate implicit to the lease is not readily available, with a corresponding adjustment to the ROU asset.

The lease payments associated with short term and low value leases are recognised as an expense on a straight-line basis over the lease term as the Group has elected the relevant practical expedients. Short term leases are those with a lease term of 12 months or less. Low value asset leases are those leases where the asset being leased when new has a value of less than \$10,000.

#### **(k) Research and development**

Research costs are expensed as incurred. Development expenditures on an individual project are recognised as an intangible asset when the Group can demonstrate:

- the technical feasibility of completing the intangible as-set so that it will be available for use or sale;
- its intention to complete the asset and to use or sell it;
- the ability to use or sell the intangible asset;
- how the asset will generate future economic benefits;
- the availability of resources to complete the asset; and
- the ability to measure reliably the expenditure during development.

As of 31 December 2020, 31 December 2019, 31 May 2019 and 31 May 2018, the Group has not capitalised any development costs as technical feasibility has not been reached.

#### **(l) Income taxes**

Income tax is recognised in profit or loss except to the extent that it relates to items recognised directly in equity or other comprehensive income, in which case it is recognised in equity or other comprehensive income.

Current tax expense is the expected tax payable on the taxable income for the period, using tax rates enacted or substantively enacted at period end, adjusted for changes to tax payable with regards to previous years.

Deferred tax is recorded using the asset and liability method, providing for temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. The amount of deferred tax provided is based on the expected manner of realisation or settlement of the carrying amount of assets and liabilities, using tax rates enacted or substantively enacted at the statements of financial position date.

A deferred tax asset is recognised only to the extent that it is probable that future taxable profits will be available against which the asset can be utilised.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to set off current tax assets against current tax liabilities and when they relate to income taxes levied by the same taxation authority and the Group intends to settle its current tax assets and liabilities on a net basis.

#### **(m) Related party transactions**

Parties are considered to be related if one party has the ability, directly or indirectly, to control the other party or exercise significant influence over the other party in making financial and operating decisions. Parties are also considered to be related if they are subject to common control, related parties may be individuals or corporate entities. A transaction is considered to be a related party transaction when there is a transfer of resources or obligations between related parties.

#### **(n) Impairment**

##### *Non-financial assets*

The carrying amounts of the Group's non-financial assets are reviewed at each reporting date to determine whether there is any indication of impairment. If such indication exists, the recoverable amount of such asset is estimated. An impairment loss is recognised wherever the carrying amount of the asset exceeds its recoverable amount. Impairment losses are recognised in consolidated statement of income and comprehensive income. A previously recognised impairment loss is reversed only if there has been a change in the estimates used to



determine the asset's recoverable amount since the last impairment loss was recognised. If that is the case, the carrying amount of the asset is increased to its recoverable amount. That increased amount cannot exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognised for the asset in prior years. Such reversal is recognised in statement of income and comprehensive income.

**(o) Provisions**

Provisions are recognised when the Group has a legal or constructive obligation as a result of past events and it is probable that an outflow of resources embodying economic benefits will be required to settle the obligations and a reliable estimate of the amount can be made.

**(p) Government assistance**

Government assistance is recognised when eligibility criteria are met and are recognised as an asset and offset against the relevant expenditures. Please also refer to note 4(c) Investment tax credits.

**(q) Financial instruments**

Financial assets and financial liabilities are recognised in the Group's consolidated statement of financial position when the Group becomes a party to the contractual provisions of the instrument.

Financial assets and financial liabilities are initially measured at fair value. Except for financial assets and financial liabilities at FVTPL, transaction costs that are directly attributable to the acquisition or issuance of financial assets and financial liabilities are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, upon initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities at FVTPL are recognised immediately in profit or loss.

*Financial assets:*

All recognised financial assets are measured subsequently in their entirety at either amortised cost or fair value, depending on the classification of the financial assets. The classification and measurement of financial assets after initial recognition at fair value depends on the business model for managing the financial asset and the contractual terms of the cash flows. Financial assets are classified in one of the three categories: (i) amortised cost; (ii) FVTOCI; or (iii) FVTPL.

(i) Amortised cost

Financial assets that are debt instruments and are held within a business model whose objective is to collect the contractual cash flows, and that have contractual cash flows that are solely payments of principal and interest on the principal outstanding, are measured at amortised cost at each subsequent reporting period. The Group classifies accounts receivable and notes receivable as financial assets that are subsequently measured at amortised cost.

(ii) FVTOCI

Financial assets that are debt instruments and are held within a business model whose objective is achieved by both collecting contractual cash flows and selling the financial assets, and that have contractual cash flows that are solely payments of principal and interest ("SPPI") on the principal outstanding, are measured at FVTOCI. Currently, the Group does not have any FVTOCI financial assets. In addition, the Group may, at initial recognition, make an irrevocable election to designate investments in equity instruments as at FVTOCI. Designation at FVTOCI is not permitted if the equity instrument is held for trading.

(iii) FVTPL

Financial assets that do not meet the criteria for being measured at amortised cost or FVTOCI are measured subsequently at FVTPL. Trading financial instruments are mandatorily measured at FVTPL as they are held for trading purposes or are part of a business model with a pattern of short-term profit taking. Non-trading financial assets are also mandatorily measured at FVTPL if their contractual cash flow characteristics do not meet the SPPI test or if they are managed together with other financial instruments on a fair value basis. In addition, the Group may, at initial recognition, make an irrevocable election to designate a financial asset as FVTPL. A financial asset is designated as FVTPL when such classification eliminates or significantly reduces a measurement inconsistency that would otherwise arise from measuring the financial asset on different basis. Gains and losses realised on disposition and unrealised gains and losses from changes in fair value of the financial assets are recognised in the consolidated statement of loss and comprehensive loss. Currently, the Group classifies cash as FVTPL financial assets.

#### *Impairment of financial assets:*

The Group recognises a loss allowance for expected credit losses (“ECL”) on accounts receivables that are measured at amortised cost. The Group applies the simplified approach for accounts receivables and recognises the lifetime ECL for these assets. The ECL on accounts receivables is estimated using a provision matrix based on the Group’s historical credit loss experience, adjusted for factors that are specific to the customers, general economic conditions and an assessment of both the current as well as the forecasted direction of conditions at the reporting date, including time value of money where appropriate.

For all other financial assets measured at amortised cost or FVTOCI, the Group recognises lifetime ECL only when there has been a significant increase in credit risk since initial recognition. If the credit risk on such financial instruments has not increased significantly since initial recognition, the Group measures the loss allowance on those financial instruments at an amount equal to 12-months ECL.

Lifetime ECL represents the ECL that will result from all possible default events over the expected life of a financial asset. In contrast, 12-month ECL represents the portion of lifetime ECL that is expected to result from default events on a financial asset that are possible within 12 months after the reporting date.

In assessing whether the credit risk on a financial asset has increased significantly since initial recognition, the Group compares the risk of default occurring on the financial asset at the reporting date with the risk of default occurring at the initial recognition. The Group considers both quantitative and qualitative factors that are supportable, including historical experience and forward-looking information that is available without undue cost or effort.

Irrespective of the above assessment, the Group presumes that the credit risk on a financial asset has increased significantly since initial recognition when contractual payments are more than 30 days past due, unless the Group has reasonable and supportable information that demonstrates otherwise. Despite the foregoing, the Group presumes that the credit risk on a financial asset has not increased significantly since initial recognition if the financial asset is determined to have low credit risk at the reporting date.

The Group regularly monitors the effectiveness of the criteria used to identify whether there has been a significant increase in credit risk and revises them as appropriate to ensure that the criteria are capable of identifying significant increase in credit risk before the amount becomes past due.

#### *Definition of default:*

For internal credit risk management purposes, the Group considers a financial asset not recoverable if the customer balance owing is 180 days past due and information obtained from the customer and other external factors indicate that the customer is unlikely to pay its creditors in full.

#### *Credit impaired financial assets:*

A financial asset is credit-impaired when one or more events that have a detrimental impact on the estimated future cash flows of that financial asset have occurred. Evidence that a financial asset is credit-impaired include observable data about the following events:

- (a) significant financial difficulty of the issuer or the counter-party;
- (b) a breach of contract, such as a default or past due event;
- (c) the lender(s) of the debtor, for economic or contractual reasons relating to the debtor’s financial difficulty, having granted to the debtor a concession(s) that the lender(s) would not otherwise consider;
- (d) it is becoming probable that the debtor will enter bankruptcy or other financial reorganisation;
- (e) the disappearance of an active market for that financial asset because of financial difficulties.

#### *Write-off policy:*

The Group writes off and derecognises a financial asset when there is information indicating that the debtor is in severe financial difficulty and there is no realistic prospect of recovery.

#### *Derecognition of financial assets:*

The Group derecognises a financial asset only when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another entity. If the Group neither transfers nor retains substantially all the risks and rewards of

ownership and continues to control the transferred asset, the Group recognises its retained interest in the asset and an associated liability for amounts it may have to pay. If the Group retains substantially all the risks and rewards of ownership of a transferred financial asset, the Group continues to recognise the financial asset and also recognises a collateralised borrowing for the proceeds received.

On derecognition of a financial asset measured at amortised cost, the difference between the asset's carrying amount and the sum of the consideration received and receivable is recognised in profit or loss. In addition, on derecognition of an investment in a debt instrument classified as at FVTOCI, the cumulative gain or loss previously accumulated in the investments revaluation reserve is reclassified to profit or loss. In contrast, on derecognition of an investment in equity instrument which the Group has designated on initial recognition to measure at FVTOCI, the cumulative gain or loss previously accumulated in the investments revaluation reserve is not reclassified to profit or loss, but is transferred to retained earnings.

#### *Financial liabilities:*

All financial liabilities are measured subsequently at amortised cost using the effective interest method or at FVTPL. Financial liabilities are classified as at FVTPL when the financial liability is (i) contingent consideration of an acquirer in a business combination, (ii) held for trading or (iii) it is designated as at FVTPL. A financial liability is classified as held for trading if it has been acquired principally for the purpose of repurchasing it in the near term or on initial recognition it is part of a portfolio of identified financial instruments that the Group manages together and has a recent actual pattern of short-term profit-taking, or it is a derivative financial liability.

A financial liability other than a financial liability held for trading or contingent consideration of an acquirer in a business combination may be designated as at FVTPL upon initial recognition if such designation eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise or the financial liability forms part of a group of financial assets or financial liabilities or both, which is managed and its performance is evaluated on a fair value basis, in accordance with the Group's documented risk management or investment strategy, and information about the grouping is provided internally on that basis.

Financial liabilities classified or designated at FVTPL are measured at fair value, with any gains or losses arising on changes in fair value recognised in profit or loss. However, for financial liabilities that are designated as FVTPL, the amount of change in the fair value of the financial liability that is attributable to changes in the credit risk of the issuer is recognised in other comprehensive loss, unless the recognition of the effects of changes in the liability's credit risk in other comprehensive loss would create or enlarge an accounting mismatch in profit or loss. The remaining amount of change in the fair value of liability is recognised in profit or loss. Changes in fair value attributable to a financial liability's credit risk that are recognised in other comprehensive loss are not subsequently reclassified to profit or loss; instead, they are transferred to retained earnings upon derecognition of the financial liability.

The Group classifies bank indebtedness, accounts payable and accrued liabilities, and lease liabilities at amortised cost.

#### *Derecognition of financial liabilities:*

The Group derecognises financial liabilities when, and only when, the Group's obligations are discharged, cancelled or have expired. The difference between the carrying amount of the financial liability derecognised and the consideration paid and payable is recognised in profit or loss.

#### **(r) Recent accounting pronouncements**

At the date of authorisation of these financial statements, the International Accounting Standards Board ("IASB") and IFRS Interpretations Committee have issued the following new and revised Standards and Interpretations which the Group reasonably expects to be applicable at a future date and intends to adopt when they become effective:

##### *Classification of liabilities as current or non-current (amendment to IAS 1)*

In January 2020, the IASB issued amendments to IAS 1, Presentation of Financial Statements to clarify that the classification of liabilities as current or non-current should be based on rights that are in existence at the end of the reporting period and is unaffected by expectations about whether or not an entity will exercise their right to defer settlement of a liability. The amendments further clarify requirements for classifying liabilities an entity will or may settle by issuing its own equity instruments. These amendments are effective for annual reporting

periods beginning on or after 1 January 2023, with earlier application permitted. The adoption of these amendments is not expected to have a significant impact on the consolidated financial statements.

#### *COVID-19 related rent concessions (amendment to IFRS 16)*

IFRS 16 Leases has been revised to incorporate an amendment issued by the IASB in May 2020. The amendment permits lessees not to assess whether particular COVID-19 related rent concessions are lease modifications and, instead, account for those rent concessions as if they were not lease modifications. In addition, the amendment to IFRS 16 provides specific disclosure requirements regarding COVID-19 related rent concessions. The amendment is effective for annual reporting periods beginning on or after 1 June 2020. Earlier application is permitted. The Group does not expect the adoption of these amendments to have any impact on the consolidated financial statements.

#### *Onerous Contracts—Cost of Fulfilling a Contract (Amendments to IAS 37)*

IAS 37 Provisions, Contingent Liabilities and Contingent Assets has been revised to incorporate amendments issued by the IASB in May 2020. The amendments specify which costs an entity includes in determining the costs of fulfilling a contract for the purpose of assessing whether the contract is onerous. The amendments are effective for annual reporting periods beginning on or after 1 January 2022. Earlier application is permitted. The Group is currently assessing the impact of these amendments.

#### **(s) Events after the reporting date**

Events between the reporting date and the date on which the consolidated financial statements are approved, favourable and unfavourable, providing evidence of conditions that existed at the reporting date, adjust the amounts recognised in the consolidated financial statements. Those that indicate conditions arising after the reporting date are disclosed but are not recognised within the consolidated financial statements.

#### **5 Alternative Performance Measures (“APM’s”)**

The Group uses certain financial measures that are not defined or recognised under IFRS. The Directors believe that these non-GAAP measures supplement GAAP measures to help in providing a further understanding of the results of the Group and are used as key performance indicators within the business to aid in evaluating its current business performance. The measures can also aid in comparability with other companies, particularly in the cybersecurity industry, who use similar metrics. However as the measures are not defined by IFRS, other companies may calculate them differently or may use such measures for different purposes to the Group.

#### **Earnings before interest, taxation, depreciation and amortisation “EBITDA**

EBITDA provides a supplemental measure of earnings that facilitates review of operating performance on a period-to-period basis by excluding items that are not indicative of the Group’s underlying operating performance.

EBITDA is a key profit measure used by the Board to assess the underlying financial performance of the Group. EBITDA is stated before the following items for the following reasons:

- Interest is excluded from the calculation of EBITDA because the expense bears no relation to the Group’s underlying operational performance.
- Charges for the depreciation of property and equipment, acquired intangibles and right of use assets are excluded from the calculation of EBITDA. This is because these charges are based on judgements about their value and economic life, are the result of the application of acquisition accounting rather than core operations, and whilst revenue recognised in the income statement does benefit from the underlying assets acquired, the depreciation costs bear no relation to the Group’s underlying ongoing operational performance.

EBITDA is defined as the Group’s Operating Profit adjusted for depreciation and amortisation charges, any gain or loss on the sale of tangible and intangible assets. The Directors consider this metric a useful supplemental measure of earnings that provides visibility on the underlying profitability of the business excluding accounting judgements.

	Twelve months ended 31 May 2018	Twelve months ended 31 May 2019	Seven months ended 31 December 2019	Twelve months ended 31 December 2020
			(\$ thousands)	
<b>Profit before tax</b>	1,225	892	2,967	22,598
Add backs:				
Interest income	—	(9)	(5)	(266)
Interest expense	—	—	72	262
Depreciation	21	56	467	1,220
<b>EBITDA</b>	<b>1,246</b>	<b>939</b>	<b>3,501</b>	<b>23,814</b>

## 6 Revenue

Revenue in the consolidated statement of income and comprehensive income is analysed as follows:

	Twelve months ended 31 May 2018	Twelve months ended 31 May 2019	Seven months ended 31 December 2019	Twelve months ended 31 December 2020
			(\$ thousands)	
<b>Revenue by Type:</b>				
Products	2,631	5,611	8,291	40,459
Maintenance	818	1,261	1,022	3,738
Consulting	39	40	—	—
	<b>3,488</b>	<b>6,912</b>	<b>9,313</b>	<b>44,197</b>

Revenues separated by location is based on the address of the customer's head office to which the sale was made, and the product or service is delivered:

	Twelve months ended 31 May 2018	Twelve months ended 31 May 2019	Seven months ended 31 December 2019	Twelve months ended 31 December 2020
			(\$ thousands)	
<b>Revenue by Location:</b>				
North America	3,488	6,282	7,149	25,998
Asia Pacific	—	630	2,164	18,199
	<b>3,488</b>	<b>6,912</b>	<b>9,313</b>	<b>44,197</b>

### Contractual obligations:

The contractual obligations to be fulfilled by the Group, which at 31 December 2020 amounted to \$42,026,005 are expected to be fully realised as revenue in 2021.

### Sensitivity analysis on revenue recognised:

If the total estimated hours to complete a job had increased/decreased by 5 per cent. with all other variables held constant, revenue for the period would have been lower/higher by approximately \$570,313 and \$630,346, respectively.

Revenues from various customers which comprise greater than 10 per cent. of the Group's total revenues are as follows:

	Twelve months ended 31 May 2018	Twelve months ended 31 May 2019	Seven months ended 31 December 2019	Twelve months ended 31 December 2020
			(\$ thousands)	
<b>Customer Location</b>				
Asia Pacific . . . . .	—	—	—	9,086
Asia Pacific . . . . .	—	—	4,405	6,806
North America . . . . .	—	—	—	5,945
North America . . . . .	3,449	6,243	2,745	4,760
North America . . . . .	—	—	2,163	—

## 7 Employee Costs

	Twelve months ended 31 May 2018	Twelve months ended 31 May 2019	Seven months ended 31 December 2019	Twelve months ended 31 December 2020
			(\$ thousands)	
Wages, salaries and benefits . . . . .	1,259	3,267	3,244	10,675
Defined contribution pension costs . . . . .	48	85	107	178
Social security costs . . . . .	23	47	62	142
Share-based payments . . . . .	6	45	79	758
Investment tax credit . . . . .	(802)	(1,272)	(1,373)	(2,297)
Government grants . . . . .	—	—	—	(1,353)
<b>Total employee costs . . . . .</b>	<b>534</b>	<b>2,172</b>	<b>2,119</b>	<b>8,103</b>

The average number of employees during the period, analysed by category, was as follows:

	Twelve months ended 31 May 2018	Twelve months ended 31 May 2019	Seven months ended 31 December 2019	Twelve months ended 31 December 2020
			(\$ thousands)	
Technical . . . . .	17	23	35	52
Administration . . . . .	3	4	4	12
Sales . . . . .	—	1	2	2
<b>Total average number of employees . . . . .</b>	<b>20</b>	<b>28</b>	<b>41</b>	<b>66</b>

## 8 Research and Development

The Group incurred research and development costs that have been expensed in the statement of income and comprehensive income. The amounts expensed through salaries, subscriptions, subcontracting, depreciation of right-of-use asset, equipment rentals, and prototype which relate to research and development are as follows:

	Twelve months ended 31 May 2018	Twelve months ended 31 May 2019	Seven months ended 31 December 2019	Twelve months ended 31 December 2020
			(\$ thousands)	
Research and development . . . . .	2,060	5,645	5,512	14,540

## 9 Auditor's Remuneration

The Group paid the following amount to its auditor in respect of the audit of the historical financial information and for other non-audit services provided to the Group.

	Twelve months ended 31 May 2018	Twelve months ended 31 May 2019	Seven months ended 31 December 2019	Twelve months ended 31 December 2020
			<i>(\$ thousands)</i>	
Audit of the Financial Statements . . . . .	40	55	55	95
Taxation compliance services . . . . .	5	15	15	10
Other tax advisory services . . . . .	—	—	16	35
Corporate Finance services . . . . .	7	24	13	60
	<u>52</u>	<u>94</u>	<u>99</u>	<u>200</u>

## 10 Directors' Remuneration

	Twelve months ended 31 May 2018	Twelve months ended 31 May 2019	Seven months ended 31 December 2019	Twelve months ended 31 December 2020
			<i>(\$ thousands)</i>	
Directors' emoluments . . . . .	—	149	165	719
Share-based payments . . . . .	—	18	23	40
Pension costs . . . . .	—	4	5	9
<b>Total Directors' remuneration . . . . .</b>	<u>—</u>	<u>167</u>	<u>188</u>	<u>759</u>

A single Director exercised options during the period. Details of Directors' exercise of options are as follows:

	Twelve months ended 31 May 2018	Twelve months ended 31 May 2019	Seven months ended 31 December 2019	Twelve months ended 31 December 2020
			<i>(\$ thousands, except number of options)</i>	
Number of options exercised by Directors . . . . .	—	—	—	1,199
Grants made on exercise of options by Directors . . . . .	—	—	—	7,350

Details of the highest paid Director's remuneration is as follows:

	Twelve months ended 31 May 2018	Twelve months ended 31 May 2019	Seven months ended 31 December 2019	Twelve months ended 31 December 2020
			<i>(\$ thousands)</i>	
Aggregate remuneration . . . . .	—	25	52	200
Pension costs . . . . .	—	—	1	3
Total Directors' remuneration . . . . .	<u>—</u>	<u>25</u>	<u>53</u>	<u>203</u>
Number of options exercised . . . . .	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>

## 11 Taxation

The income tax provision recorded differs from the amount obtained by applying the statutory income tax rate of 26.50 per cent. (December 2019—26.50 per cent., May 2019—26.50 per cent., May 2018—26.50 per cent.) to the income before income taxes for the period and is reconciled as follows:

	Twelve months ended 31 May 2018	Twelve months ended 31 May 2019	Seven months ended 31 December 2019	Twelve months ended 31 December 2020
			<i>(\$ thousands)</i>	
Income before income taxes . . . . .	1,225	892	2,967	22,598
Income tax expense at the combined basic federal and provincial tax rate . . . . .	325	236	787	5,988
Increase (decrease) resulting from:				
Small business deduction . . . . .	(65)	(69)	—	—
Stock based compensation . . . . .	2	12	21	201
Non-deductible expenses . . . . .	5	9	3	4
Share issue costs . . . . .	—	—	—	(4)
Foreign taxes not recovered . . . . .	—	166	—	—
Foreign tax rate differential . . . . .	—	—	—	(7)
Research and development tax credits and incentives . . . . .	14	26	20	43
<b>Effective tax expense . . . . .</b>	<b><u>281</u></b>	<b><u>380</u></b>	<b><u>831</u></b>	<b><u>6,225</u></b>

The deferred taxes reflect the tax effects of temporary differences between the carrying amount of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes.

Significant components of the Group's deferred income tax assets (liabilities) are as follows:

	Twelve months ended 31 May 2018	Twelve months ended 31 May 2019	Seven months ended 31 December 2019	Twelve months ended 31 December 2020
			<i>(\$ thousands)</i>	
Deferred income tax liabilities				
Temporary differences relating to property and equipment . . .	—	(2)	(1)	(22)
Temporary differences relating to lease liabilities . . . . .	—	—	25	(39)
Temporary differences relating to share issue . . . . .	—	—	—	16
Temporary differences relating to investment tax credits . . . .	(210)	(312)	(301)	(582)
	<b><u>(210)</u></b>	<b><u>(314)</u></b>	<b><u>(277)</u></b>	<b><u>(627)</u></b>

## 12 Earnings Per Share

Basic earnings per share is calculated by dividing net income from operations by the weighted average number of common shares outstanding during the year.

Diluted earnings per share is calculated by adjusting the weighted average number of common shares outstanding to assume conversion of all potential dilutive stock options to common shares



	Twelve months ended 31 May 2018	Twelve months ended 31 May 2019	Seven months ended 31 December 2019	Twelve months ended 31 December 2020
	<i>(\$ thousands except shares)</i>			
<b>Numerator:</b>				
Net income from operations	1,233	678	3,255	23,911
<b>Denominator:</b>				
Weighted average number of common shares outstanding for basic EPS	23,400,000	24,182,326	25,171,904	27,013,982
Adjustment for stock options	2,520,833	4,990,012	5,721,382	4,910,601
Weighted average number of common shares outstanding for diluted EPS	25,920,833	29,172,338	30,893,286	31,924,583
Basic income per share	0.05	0.03	0.13	0.89
Diluted income per share	0.05	0.02	0.11	0.75

### 13 Cash and cash equivalents

Cash and cash equivalents in the consolidated statement of cash flows comprises cash at bank.

### 14 Property and Equipment

	Computer equipment	Furniture and fixtures	Leasehold improvements	Total
	<i>(\$ thousands)</i>			
<b>Cost</b>				
Balance at 31 May 2017	—	—	—	—
Additions	64	43	10	117
Balance at 31 May 2018	64	43	10	117
Additions	118	19	19	156
Balance at 31 May 2019	182	62	29	273
Additions	124	6	—	130
Balance at 31 December 2019	306	68	29	403
Additions	342	4	148	494
<b>Balance at 31 December 2020</b>	<b>648</b>	<b>72</b>	<b>177</b>	<b>897</b>
	Computer equipment	Furniture and fixtures	Leasehold improvements	Total
	<i>(\$ thousands)</i>			
<b>Accumulated Depreciation</b>				
Balance at 31 May 2017	—	—	—	—
Charge for the year	16	4	1	21
Balance at 31 May 2018	16	4	1	21
Charge for the year	43	10	3	56
Balance at 31 May 2019	59	14	4	77
Charge for the year	54	6	6	66
Balance at 31 December 2019	113	20	10	143
Charge for the year	182	10	37	229
<b>Balance at 31 December 2020</b>	<b>295</b>	<b>30</b>	<b>47</b>	<b>372</b>

	<u>Computer equipment</u>	<u>Furniture and fixtures</u>	<u>Leasehold improvements</u>	<u>Total</u>
	<i>(\$ thousands)</i>			
<b>Net Book Value</b>				
At 31 May 2018 . . . . .	48	39	9	96
At 31 May 2019 . . . . .	123	48	25	196
At 31 December 2019 . . . . .	193	48	19	260
At 31 December 2020 . . . . .	353	42	130	525

## 15 Intangible Asset

The intangible asset is a license to use IP. The IP is being developed by a 3rd party vendor and amount paid to date represent instalments paid to initiate the development and is carried at cost. No amortisation is recorded as the intangible asset is not yet available for use. The carrying amount is tested for impairment at 31 December 2020 and there are no adjustments to the carrying amount.

## 16 Right-of-use Asset and Lease Liabilities

The Group has leases for corporate offices, production facilities, and certain equipment. These leases have remaining lease terms ranging from 4 months to 8.5 years, some of which include options to extend the leases for up to 10 years or to terminate the lease with notice periods of 90 days to 6 months or at predetermined dates as specified within the lease contract. The Group has classified the assets related to these leases as right-of-use assets and the liabilities associated with the future lease payments under these leases as lease liabilities. The weighted average incremental borrowing rate applied to these lease liabilities at initial recognition during the year was 3.95 per cent. per annum.

The following table provides details of changes in the Group's leased assets:

	<u>Buildings</u>	<u>Equipment</u>	<u>Total</u>
	<i>(\$ thousands)</i>		
<b>Cost</b>			
Balance at 31 May 2018 . . . . .	—	—	—
Balance at 31 May 2019 . . . . .	—	—	—
Balance at 1 June 2019 (adoption) . . . . .	1,310	852	2,162
Balance at 31 December 2019 . . . . .	1,310	852	2,162
Additions . . . . .	6,474	2,172	8,646
Disposals . . . . .	—	(852)	(852)
<b>Balance at 31 December 2020 . . . . .</b>	<b><u>7,784</u></b>	<b><u>2,172</u></b>	<b><u>9,956</u></b>
	<u>Buildings</u>	<u>Equipment</u>	<u>Total</u>
	<i>(\$ thousands)</i>		
<b>Accumulated depreciation</b>			
Balance at 31 May 2018 . . . . .	—	—	—
Balance at 31 May 2019 . . . . .	—	—	—
Balance at 1 June 2019 (adoption) . . . . .	328	284	612
Charge for the year . . . . .	153	248	401
Balance at 31 December 2019 . . . . .	481	532	1,013
Charge for the year . . . . .	432	559	991
Disposals . . . . .	—	(852)	(852)
<b>Balance at 31 December 2020 . . . . .</b>	<b><u>913</u></b>	<b><u>239</u></b>	<b><u>1,152</u></b>
	<u>Buildings</u>	<u>Equipment</u>	<u>Total</u>
	<i>(\$ thousands)</i>		
<b>Carrying amounts</b>			
At 31 May 2018 . . . . .	—	—	—
At 31 May 2019 . . . . .	—	—	—
At 31 December 2019 . . . . .	829	320	1,149
At 31 December 2020 . . . . .	6,871	1,933	8,804

The following table provides details of changes in the Group's lease liabilities:

At 1 June 2019	1,681
Additions	—
Interest	48
Payments	(486)
As at 31 December 2019	1,243
Additions	8,646
Interest	111
Payments	(1,343)
<b>As at 31 December 2020</b>	<b><u>8,657</u></b>

*Lease payments not recognised as a liability:*

The Group continues to pay rents where it continues to occupy properties after the lease has expired. Payments made under such leases are expensed on a straight-line basis. In addition, certain variable lease payments are not permitted to be recognised as lease liabilities and are expensed as incurred.

The use of extension and termination options give the Group added flexibility in the event it has identified more suitable premises in terms of cost and/or location or determined that it is advantageous to remain in a location beyond the original lease term. An option is only exercised when consistent with the Group's strategy and economic benefits of exercising the option exceeds the expected overall cost.

## 17 Notes Receivable

The Group has notes receivables from employees with no stated terms of repayment, due on demand, bearing interest at 1 per cent. per annum. In the event of default the notes are to be enforced under applicable laws. The balance at 31 December 2020 is \$544,607 (31 December 2019—\$269,700, 31 May 2019—\$nil, 31 May 2018—\$nil).

## 18 Bank Indebtedness

The Group has a credit facility with Bank of Montreal, which includes an approved operating line that can be drawn upon to a maximum of \$8,150,000, which bears interest at prime plus 1.50 per cent. and is guaranteed by Export Development Canada. At the consolidated statement of financial position date, the amount owing, which is due on demand, was \$nil (December 2019—\$2,909,312, May 2019—\$nil, May 2018—\$nil).

## 19 Accounts Payable and Accrued Liabilities

	<u>As at 31 May</u>		<u>As at 31 December</u>	
	<u>2018</u>	<u>2019</u>	<u>2019</u>	<u>2020</u>
	<i>(\$ thousands)</i>			
Trade payables	129	273	202	1,389
Accruals	206	159	65	1,246
Other payables	3	97	73	175
	<u>338</u>	<u>529</u>	<u>340</u>	<u>2,810</u>

## 20 Deferred revenue

	<u>As at 31 May</u>		<u>As at 31 December</u>	
	<u>2018</u>	<u>2019</u>	<u>2019</u>	<u>2020</u>
	<i>(\$ thousands)</i>			
Balance at the beginning of the period	—	4,971	6,037	4,786
Billings deferred during the year	7,769	7,919	7,056	36,388
Revenue released to the Consolidated Statement of Income and Comprehensive Income	(2,798)	(6,952)	(9,436)	(30,309)
Adjustments <sup>(a)</sup>	—	99	1,129	1,506
Net deferral	<u>4,971</u>	<u>1,066</u>	<u>(1,251)</u>	<u>7,585</u>
<b>Balance at the end of the period</b>	<b><u>4,971</u></b>	<b><u>6,037</u></b>	<b><u>4,786</u></b>	<b><u>12,371</u></b>

(a) Adjustments reflect a change in measurement of progress of projects and estimated completion costs.

## 21 Long-term debt

	As at 31 May		As at 31 December	
	2018	2019	2019	2020
	(\$ thousands)			
Long-term debt under the Paycheck Protection Program (“PPP”) in the United States of America. The debt bears interest at 1 per cent. per annum and is due 8 April 2022. Combined principal and interest payments commence 8 September 2021	—	—	—	70
Less: current portion	—	—	—	(35)
	<u>—</u>	<u>—</u>	<u>—</u>	<u>35</u>

## 22 Share Capital

	Authorised	Issued and Outstanding			
		As at 31 May		As at 31 December	
		2018	2019	2019	2020
Voting common shares, fully paid, with no par value	Unlimited	23,400,000	24,140,000	24,796,900	26,710,649
Non-voting common shares, fully paid, with no par value	Unlimited	—	652,083	1,019,519	1,216,603

Share capital transactions in the year are summarised as follows:

### Voting common shares

	As at 31 December			
	2019		2020	
	Shares	Amount	Shares	Amount
	(\$ thousands except shares)			
Balance at beginning of the year	24,140,000	19	24,796,900	122
Exercise of share options	—	—	1,199,000	441
Subcontracting expense obtained for common shares (a)	—	23	—	40
Exchange with non-voting common shares (b)	656,900	80	714,749	1,086
<b>Balance at end of the year</b>	<b><u>24,796,900</u></b>	<b><u>122</u></b>	<b><u>26,710,649</u></b>	<b><u>1,689</u></b>

	As at 31 May			
	2018		2019	
	Shares	Amount	Shares	Amount
	(\$ thousands except shares)			
Balance at beginning of the year	23,400,000	1	23,400,000	1
Exercise of share options	—	—	—	—
Subcontracting expense obtained for common shares <sup>(a)</sup>	—	—	740,000	18
Exchange with non-voting common shares <sup>(b)</sup>	—	—	—	—
<b>Balance at end of the year</b>	<b><u>23,400,000</u></b>	<b><u>1</u></b>	<b><u>24,140,000</u></b>	<b><u>19</u></b>

### Non-voting common shares

	As at 31 December			
	2019		2020	
	Shares	Amount	Shares	Amount
	(\$ thousands except shares)			
Balance at beginning of the year	652,083	17	1,019,519	369
Exercise of share options	1,024,336	432	911,833	1,499
Exchange with voting common shares <sup>(b)</sup>	(656,900)	(80)	(714,749)	(1,086)
Share issuance costs	—	—	—	(76)
<b>Balance at end of the year</b>	<b><u>1,019,519</u></b>	<b><u>369</u></b>	<b><u>1,216,603</u></b>	<b><u>706</u></b>

	As at 31 May			
	2018		2019	
	(\$ thousands except shares)			
Balance at beginning of the year	—	—	—	—
Exercise of share options	—	—	652,083	17
<b>Balance at end of the year</b>	<b>—</b>	<b>—</b>	<b>652,083</b>	<b>17</b>

- (a) During the year, the Group recognised subcontracting expense of \$82,110 which was paid in voting common shares in a prior year. The shares were issued at the transaction date with the fair value of those shares being amortised into expenses and share capital over the 5 year term of the advisory agreement.
- (b) During the year, the Board of Directors resolved to exchange 714,749 (December 2019—656,900) non-voting shares with a carrying value of \$1,086,567 (December 2019—\$79,818) with voting common shares.

### 23 Share Options

The Board of Directors of the Group adopted a stock incentive plan (the “Plan”) during the year ended 31 May 2018. The terms of any options granted under the Plan are fixed under individual agreements and may not exceed a term of five years. The exercise price of the options granted under the Plan is set at the last fair value of the Company’s common shares determined by independent valuers before the date of grant.

Each share option converts into one voting or non-voting common share of the Company on exercise. No amounts are paid or payable by the recipient on receipt of the option. The options carry neither rights to dividends nor voting rights. Options may be exercised at any time from the date of vesting to the date of their expiry.

The following tables summarises information about share-based payment reserve:

#### Options on voting common shares:

	Seven months ended 31 December 2019		Twelve months ended 31 December 2020	
	Options	Weighted average exercise price (\$)	Options	Weighted average exercise price (\$)
Outstanding at beginning of period	1,199,000	0.270	1,199,000	0.270
Exercised during the period	—	—	(1,199,000)	0.270
Outstanding at end of period	<u>1,199,000</u>	<u>0.270</u>	<u>—</u>	<u>—</u>

	Twelve months ended 31 May 2018		Twelve months ended 31 May 2019	
	Options	Weighted average exercise price (\$)	Options	Weighted average exercise price (\$)
Outstanding at beginning of period	—	—	—	—
Granted during the period	—	—	1,199,000	0.270
Outstanding at end of period	<u>—</u>	<u>—</u>	<u>1,199,000</u>	<u>0.270</u>

#### Options on non-voting common shares:

	Seven months ended 31 December 2019		Twelve months ended 31 December 2020	
	Options	Weighted average exercise price (\$)	Options	Weighted average exercise price (\$)
Outstanding at beginning of period	4,847,917	0.135	4,078,372	0.353
Exercised during the period	(1,024,336)	0.337	(911,833)	1.363
Expired during the period	—	—	—	—
Forfeited during the period	(105,209)	0.034	(152,084)	2.408
Granted during the period	360,000	3.430	1,543,500	7.397
Outstanding at end of period	<u>4,078,372</u>	<u>0.353</u>	<u>4,557,955</u>	<u>2.514</u>
Exercisable at end of period	<u>1,270,185</u>	<u>0.099</u>	<u>1,603,004</u>	<u>1.456</u>

	Twelve months ended 31 May 2018		Twelve months ended 31 May 2019	
	Options	Weighted average exercise price (\$)	Options	Weighted average exercise price (\$)
Outstanding at beginning of period . . . . .	—	—	3,830,000	0.028
Exercised during the period . . . . .	—	—	(652,083)	0.022
Expired during the period . . . . .	—	—	—	—
Forfeited during the period . . . . .	—	—	—	—
Granted during the period . . . . .	3,830,000	0.028	1,670,000	0.337
Outstanding at end of period . . . . .	3,830,000	0.028	4,847,917	0.135
Exercisable at end of period . . . . .	—	—	836,593	0.033

The following share-based payment arrangements were in existence as at period end:

Exercise Price (\$)	Number outstanding		Weighted average remaining life (years)		Number exercisable	
	Dec 2020	Dec 2019	Dec 2020	Dec 2019	Dec 2020	Dec 2019
0.021	1,217,356	1,440,417	1.64	2.64	598,736	365,026
0.039	1,094,676	1,377,855	2.05	3.05	503,320	473,480
0.116	218,143	467,600	2.61	3.63	81,581	110,569
0.270	253,069	1,492,000	2.97	3.96	62,444	321,110
0.620	276,626	324,500	3.41	4.42	68,235	—
6.400	1,427,585	175,000	4.35	4.85	271,064	—
28.230	70,500	—	4.94	—	17,625	—
<b>Total</b> . . . . .	<b>4,557,955</b>	<b>5,277,372</b>	<b>2.79</b>	<b>3.39</b>	<b>1,603,005</b>	<b>1,270,185</b>

Exercise Price (\$)	Number outstanding		Weighted average remaining life (years)		Number exercisable	
	May 2019	May 2018	May 2019	May 2018	May 2019	May 2018
0.021	1,635,417	2,250,000	3.00	4.00	308,855	—
0.039	1,692,500	1,580,000	3.41	4.40	527,708	—
0.116	530,000	—	4.00	—	—	—
0.270	1,539,000	—	4.10	—	—	—
0.620	650,000	—	4.50	—	—	—
<b>Total</b> . . . . .	<b>6,046,917</b>	<b>3,830,000</b>	<b>3.64</b>	<b>4.17</b>	<b>836,563</b>	<b>—</b>

Twenty five per cent. of options granted vest on the first anniversary date of issuance and the remaining options vest equally over the following 48 months. Options expire within five years of their issue under the terms of agreements.

The following assumptions were used in the BSM to determine the fair value of the share-based compensation expense relating to stock options issued in the period:

	Twelve months ended 31 May 2018	Twelve months ended 31 May 2019	Seven months ended 31 December 2019	Twelve months ended 31 December 2020
			(%)	
Risk-free interest rate . . . . .	1.47	2.05	1.41	0.57
Expected volatility . . . . .	20.18	21.76	23.31	27.16
Expected dividend yield . . . . .	0	0	0	0
Expected life of stock options . . . . .	5 years	5 years	5 years	5 years

The Group has determined the forfeiture rate to be nil and volatility was determined in reference to listed entities similar to the Group.

## 24 Government Assistance

In 2020, the Group received Canadian Emergency Wage Subsidy (“CEWS”) from the Government of Canada totalling \$1,353,430. CEWS was offered to qualifying companies in response to the COVID-19 virus to support wages paid to employees. Government assistance was applied to reduce salaries expensed during the year.

## 25 Related-Party Transactions

Transactions between the Company and its subsidiaries, which are related parties, have been eliminated on consolidation and are not disclosed in this note. Transactions with Directors and key management personnel of the Group are disclosed in note 10.

The Group entered into the following transactions and had the following outstanding balances with related parties who are not consolidated in these financial statements:

	<u>As at 31 May</u>		<u>As at 31 December</u>	
	<u>2018</u>	<u>2019</u>	<u>2019</u>	<u>2020</u>
Transactions				
Revenue from a company on which a director is the chairman of the board . . . . .	—	6,243	2,745	1,867
Revenue from a company on which a director is a board observer . . . . .	—	—	—	4,760
Revenue from a company on which an immediate family member of a director has significant influence . . . . .	—	—	—	2,307
	<u>—</u>	<u>6,243</u>	<u>2,745</u>	<u>8,934</u>
Balances:				
Accounts receivable from a company on which a director is a board observer . . . . .	<u>—</u>	<u>—</u>	<u>—</u>	<u>1,024</u>
Work-in-process for a company on which a director is a board observer . . . . .	<u>—</u>	<u>—</u>	<u>—</u>	<u>600</u>
Work-in-process for a company on which an immediate family member of a director has significant influence . . . . .	<u>—</u>	<u>—</u>	<u>—</u>	<u>504</u>
	<u>—</u>	<u>—</u>	<u>—</u>	<u>1,104</u>
Deferred revenue from a company on which a director is the chairman of the board . . . . .	<u>—</u>	<u>(3,069)</u>	<u>(1,329)</u>	<u>(904)</u>
Deferred revenue from a company on which a director is a board observer . . . . .	<u>—</u>	<u>—</u>	<u>—</u>	<u>(231)</u>
	<u>—</u>	<u>(3,069)</u>	<u>(1,329)</u>	<u>(1,135)</u>

Sales to related parties are made at market prices and in the ordinary course of business. Outstanding balances are unsecured and settlement occurs in cash. Any estimated credit losses on amounts owed by related would not be material and is therefore not disclosed. This assessment is undertaken each financial year through examining the financial position of the related party and the market in which the related party operates.

## 26 Capital Risk Management

The Group's primary objective with respect to its capital management 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 and to have sufficient cash resources to fund the research, development and operations. To secure the additional capital necessary to pursue these plans, if needed, the Group may attempt to raise additional funds through the issuance of equity.

Management reviews its capital management approach on an ongoing basis. There were no changes in the Group's approach to capital management in the year ended 31 December 2020. The Group is not subject to externally imposed capital requirements.

## 27 Changes in Non-Cash Working Capital

	As at 31 May		As at 31 December	
	2018	2019	2019	2020
	<i>(\$ thousands)</i>			
Accounts receivable	—	(1,488)	(785)	(4,355)
Government remittances receivable	(142)	(62)	(54)	(575)
Investment tax credit receivable	(948)	(489)	(96)	(885)
Work-in-process	—	—	(1,006)	(12,142)
Prepaid expenses	(113)	(19)	(46)	(266)
Capitalised contract costs	—	—	—	(308)
Accounts payable and accrued liabilities	339	191	(189)	2,470
Income taxes	71	(20)	629	3,840
Deferred revenue	4,971	1,066	(1,251)	7,585
	<u>4,178</u>	<u>(821)</u>	<u>(2,798)</u>	<u>(4,636)</u>

Reconciliation of movements of liabilities to cash flows arising from financial activities:

	Bank indebtedness	Long-term debt	Lease Liabilities	Total
	<i>(\$ thousands)</i>			
<b>Balance, 1 June 2017</b>	—	—	—	—
<b>Balance, 31 May 2018</b>	—	—	—	—
<b>Balance, 31 May 2019</b>	—	—	—	—
Arising on adoption of IFRS 16	—	—	1,681	1,681
Restated at 1 June 2019	—	—	1,681	1,681
<b>Changes from financing cash flows</b>				
Proceeds from borrowings	2,910	—	—	2,910
Payment of lease liabilities	—	—	(486)	(486)
<b>Total changes from financing cash flows</b>	<b>2,910</b>	<b>—</b>	<b>(486)</b>	<b>2,424</b>
<b>Other changes</b>				
Interest expense	—	—	48	48
<b>Balance, 31 December 2019</b>	<b>2,910</b>	<b>—</b>	<b>1,243</b>	<b>4,153</b>
<b>Changes from financing cash flows</b>				
Proceeds from borrowings	—	70	—	70
Repayment of borrowings	(2,910)	—	—	(2,910)
Payment of lease liabilities	—	—	(1,343)	(1,343)
<b>Total changes from financing cash flows</b>	<b>(2,910)</b>	<b>70</b>	<b>(1,343)</b>	<b>(4,183)</b>
<b>Other changes</b>				
Interest expense	151	—	111	262
Interest paid	(151)	—	—	(151)
New finance lease	—	—	8,646	8,646
<b>Total other changes</b>	<b>—</b>	<b>—</b>	<b>8,757</b>	<b>8,757</b>
<b>Balance, 31 December 2020</b>	<b>—</b>	<b>70</b>	<b>8,657</b>	<b>8,727</b>



## 28 Financial Instruments

The Group held the following financial instruments as at 31 December 2020:

	<u>As at 31 May</u>		<u>As at 31 December</u>	
	<u>2018</u>	<u>2019</u>	<u>2019</u>	<u>2020</u>
	<i>(\$ thousands)</i>			
<b>Financial assets</b>				
FVTPL				
Cash	5,242	5,014	7,307	17,875
Amortised cost				
Accounts receivable		1,488	2,273	6,628
Notes receivable		—	270	545
<b>Financial liabilities</b>				
Bank indebtedness	—	—	2,909	—
Accounts payable and accrued liabilities	338	529	340	2,810
Long-term debt	—	—	—	70
Lease liabilities	—	—	1,243	8,657

Financial instruments recorded at fair value on the financial statements are classified using a fair value hierarchy that reflects the significance of the inputs used in making the measurements. The fair value hierarchy has the following levels:

- Level 1—Unadjusted quoted prices in active markets for identical assets or liabilities. Only cash falls under this level of hierarchy;
- Level 2—Inputs other than quoted prices that are observable for assets and liabilities, either directly or indirectly. The Group has no financial assets or financial liabilities under level 2;
- Level 3—Inputs for assets or liabilities that are not based on observable market data. The Group has no financial assets or financial liabilities under level 3.

The Group recognised interest expense on the following financial liabilities:

	<u>As at 31 May</u>		<u>As at 31 December</u>	
	<u>2018</u>	<u>2019</u>	<u>2019</u>	<u>2020</u>
	<i>(\$ thousands)</i>			
Bank indebtedness	—	—	24	151
Lease liabilities	—	—	48	111
	<u>—</u>	<u>—</u>	<u>72</u>	<u>262</u>

## 29 Financial Instrument Risks

In the normal course of business, the Group is exposed to a variety of financial risks. Significant financial instrument risks that are relevant to the Group and an analysis of how they are managed are presented below.

### Credit risk

The Group is subject to credit risk from its operating activities (primarily for accounts receivable). The Group's experience with such customers has been characterised by prompt payment and no uncollectible accounts. As such the Group has \$nil in allowance for doubtful accounts (December 2019—\$nil, May 2019—\$nil, May 2018—\$nil). As at 31 December 2020 the Group had accounts receivable from one customer that made up 51 per cent. (December 2019—100 per cent., May 2019—97 per cent., May 2018—nil per cent.) of the total balance. None of the amounts outstanding have been challenged by the respective counterparties and the Group continues to conduct business with them on an ongoing basis. Accordingly, management has no reason to believe that these balances are not fully collectible in the future.

Notes receivable are from employees which are still employed by the Group for exercise of stock options. The options that the employees hold are valued higher than the note receivable, and management has no indication that the amount would not be fully collectible in the future.

The Group keeps in view the credit quality of financial institutions where it keeps its funds. Currently, it deals with a bank having Aa2 credit rating by Moody's.

## Liquidity risk

Liquidity risk is the risk that an entity will encounter difficulty in meeting obligations associated with financial liabilities. The Group is exposed to this risk mainly in respect of its accounts payable and accrued liabilities. As at 31 December 2020 the Group had \$4,973,000 of liabilities with a maturity of one year or less (December 2019—\$3,835,000, May 2019—\$529,000, May 2018—\$338,000) and working capital of \$20,335,000 (December 2019—\$3,524,000, May 2019—\$1,658,000, May 2018—\$1,065,000). The Group manages its liquidity risk by reviewing its growth plans on an ongoing basis as well as maintaining excess capacity on its line of credit.

	<u>Maturity within one year</u>	<u>Maturity from one to three years</u>	<u>Maturity from three to five years</u>	<u>Total</u>
	<i>(\$ thousands)</i>			
<b>As at 31 May 2018</b>				
Accounts payable and accrued liabilities . . . . .	338	—	—	338
	<u>338</u>	<u>—</u>	<u>—</u>	<u>338</u>
<b>As at 31 May 2019</b>				
Accounts payable and accrued liabilities . . . . .	529	—	—	529
	<u>529</u>	<u>—</u>	<u>—</u>	<u>529</u>
<b>As at 31 December 2019</b>				
Bank indebtedness . . . . .	2,909	—	—	2,909
Accounts payable and accrued liabilities . . . . .	340	—	—	340
Lease liabilities . . . . .	641	647	59	1,347
	<u>3,890</u>	<u>647</u>	<u>59</u>	<u>4,596</u>
<b>As at 31 December 2020</b>				
Accounts payable and accrued liabilities . . . . .	2,810	—	—	2,810
Long-term debt . . . . .	35	35	—	70
Lease liabilities . . . . .	2,442	4,489	2,662	9,593
	<u>5,287</u>	<u>4,524</u>	<u>2,662</u>	<u>12,473</u>

## Market price risk

Market price risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices whether those changes are caused by factors specific to the individual financial instrument or its issuer, or factors affecting similar financial instruments traded in the market. Market price risks includes:

## Currency risk

Currency risk is the risk to the Group's earnings that arise from fluctuations of foreign exchange rates and the degree of volatility of these rates. The Group is exposed to foreign currency exchange risk on cash, and accounts payable held in U.S. dollars. The Group does not use derivative instruments to reduce its exposure to foreign currency risk. The average and closing U.S. dollars rates for the year are 1.3415 and 1.2732 (December 2019—1.2988 and 1.3224, May 2019—1.3224 and 1.3527, May 2018—1.2718 and 1.2948) respectively. The average and closing GBP rates for the year are 1.7381 and 1.7199 respectively. The following amounts in foreign currencies have been reflected at their equivalent of Canadian dollars in these financial statements.

	<u>As at 31 May</u>		<u>As at 31 December</u>	
	<u>2018</u>	<u>2019</u>	<u>2019</u>	<u>2020</u>
	<i>(denominated in USD)</i>			
Cash . . . . .	3,924	3,433	4,909	13,703
Accounts receivable . . . . .	—	1,103	1,750	5,175
Accounts payable and accrued liabilities . . . . .	99	200	119	1,110
Bank indebtedness . . . . .	—	—	2,240	—
Long-term debt . . . . .	—	—	—	56

	<u>As at 31 May</u>		<u>As at 31 December</u>	
	<u>2018</u>	<u>2019</u>	<u>2019</u>	<u>2020</u>
Accounts payable and accrued liabilities . . . . .	—	—	—	228

(denominated in GBP)

As at 31 December 2020, if the currency had weakened/strengthened by 5 per cent. against the USD and GBP with all other variables held constant, profit for the year would have been approximately \$1,134,000 and \$20,000 higher/lower, respectively, mainly as a result of the foreign exchange gains/losses on translation of foreign exchange financial instruments.

### **Interest rate risk**

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Group is exposed to interest rate risk on its floating rate bank indebtedness. If the interest rates were to fluctuate 5 per cent., there would be no significant impact on the Group's financial statements due to the short-term nature of the debt.

### **Other price risk**

Other price risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices (other than those arising from interest rate risk or currency risk), whether those changes are caused by factors specific to the individual financial instrument or its issuer, or factors affecting all similar financial instruments traded in the market. There are no financial assets subject to market rate price fluctuations. The Group's exposure to other price risk is minimal.

**PART X**  
**ADDITIONAL INFORMATION**

**1 Responsibility**

The Company and the Directors, whose names and principal functions are set out in Part VI: “*Directors, Senior Management and Corporate Governance*”, accept responsibility for the information contained in this Registration Document. To the best of the knowledge of the Company and the Directors, the information contained in this Registration Document is in accordance with the facts and this Registration Document makes no omission likely to affect its import.

**2 Incorporation**

- 2.1 The Company was incorporated and registered in England and Wales on 9 December 2020 as a public company limited by shares under the Companies Act with the name Alphawave Group plc and with the registered number 13073661. The Company was renamed Alphawave IP Group plc on 1 April 2021.
- 2.2 The Company’s registered office and principal place of business is at 6th Floor, 65 Gresham Street, London, EC2V 7NQ, United Kingdom. The Company’s telephone number is +44 (0) 207 717 5877.
- 2.3 The principal laws and legislation under which the Company operates and the Ordinary Shares have been created are the Companies Act and the regulations issued thereunder.
- 2.4 On 1 March 2021, the Company entered into the PLC/Inc Loan Agreement.

**3 Share Capital**

The share capital history of the Company is as follows:

- 3.1 On incorporation, the issued share capital of the Company was £1 consisting of 1 Ordinary Share of nominal value of £1, which was issued to Hackwood Secretaries Limited. On 11 January 2021, the single Ordinary Share was transferred, and 50,000 preference shares of nominal value of £1 (the “**Subscription Preference Shares**”) were issued, to John Lofton Holt.
- 3.2 The Subscription Preference Shares are non-voting, carry no rights to conversion into Ordinary Shares (or any other shares), no rights to dividends and are and will remain unlisted. Each Subscription Preference Share will:
  - 3.2.1 carry a liquidation preference equal to their initial subscription amount; and
  - 3.2.2 be subject to redemption at the option of the Company at any time for an amount equal to their initial subscription amount.
- 3.3 The issued and fully paid share capital of the Company as at the date of publication of this Registration Document is as follows:

<u>Class of shares</u>	<u>Nominal value</u>	<u>Number</u>	<u>Amount</u>
Ordinary Shares . . . . .	£1.00	1	£1
Preference Shares . . . . .	£1.00	50,000	£50,000.00

- 3.4 As at the date of publication of this Registration Document, the Company did not hold any Ordinary Shares in treasury.
- 3.5 The Company has no convertible securities, exchangeable securities or securities with warrants in issue.

**4 Corporate Structure**

The Company was incorporated on 9 December 2020 under the laws of England and Wales. The Company proposes to enter into an agreement with the shareholders of Alphawave IP Inc., pursuant to which it will acquire (directly or indirectly) 100 per cent. of the issued share capital of Alphawave IP Inc.

**5 Memorandum and Articles of Association**

**Articles of Association**

The Articles contain, amongst others, provisions to the following effect. The Company’s objects are not restricted by its Articles. Accordingly, pursuant to section 31 of the Companies Act, the Company’s objects are unrestricted.

## **5.1 Liability of members**

The liability of each member is limited to the amount (if any) for the time being unpaid on the shares held by that member.

## **5.2 Shares**

### **5.2.1 Respective Rights of Different Classes of Shares**

Without prejudice to any rights attached to any existing shares, the Company may issue shares with such rights or restrictions as determined by either the Company by ordinary resolution or, if the Company passes a resolution to so authorise them, the Directors. The Company may also issue shares which are, or are liable to be, redeemed at the option of the Company or the holder and the Directors may determine the terms, conditions and manner of redemption of any such shares.

### **5.2.2 Voting Rights**

At a general meeting, subject to any special rights or restrictions attached to any class of shares:

- (a) on a show of hands, every member present in person and every duly appointed proxy present shall have one vote;
- (b) on a show of hands, a proxy has one vote for and one vote against the resolution, and one vote against the resolution if the proxy has been duly appointed by more than one member entitled to vote on the resolution, and the proxy has been instructed:
  - (I) by one or more of those members to vote for the resolution and by one or more other of those members to vote against it; or
  - (II) by one or more of those members to vote either for or against the resolution and by one or more other of those members to use his discretion as to how to vote; and
- (c) on a poll, every member present in person or by proxy has one vote for every share held by him.

A proxy shall not be entitled to vote on a show of hands or on a poll where the member appointing the proxy would not have been entitled to vote on the resolution had he or she been present in person.

Unless the Directors resolve otherwise, no member shall be entitled to vote either personally or by proxy or to exercise any other right in relation to general meetings if any call or other sum due from him to the Company in respect of that share remains unpaid.

### **5.2.3 Variation of Rights**

- (a) Whenever the share capital of the Company is divided into different classes of shares, the special rights attached to any class may be varied or abrogated either with the written consent of the holders of three-quarters in nominal value of the issued shares of the class (excluding shares held as treasury shares) or with the sanction of a special resolution passed at a separate meeting of the holders of the shares of the class (but not otherwise), and may be so varied or abrogated either while the Company is a going concern or during or in contemplation of a winding-up.
- (b) The special rights attached to any class of shares will not, unless otherwise expressly provided by the terms of issue, be deemed to be varied by (i) the creation or issue of further shares ranking, as regards participation in the profits or assets of the Company, in some or all respects equally with them but in no respect in priority to them, or (ii) the purchase or redemption by the Company of any of its own shares.

### **5.2.4 Transfer of Shares**

- (a) Transfers of shares in certificated form may be effected in writing, and signed by or on behalf of the transferor and, except in the case of fully paid shares, by or on behalf of the transferee. The transferor shall remain the holder of the shares concerned until the name of the transferee is entered in the register of members in respect of those shares. Transfers of uncertificated shares may be effected by means of a relevant system (i.e. CREST) unless the CREST Regulations provide otherwise.

- (b) The Directors may decline to register any transfer of a certificated share, unless (i) the instrument of transfer is in respect of only one class of share, (ii) the instrument of transfer is lodged at the transfer office, duly stamped if required, accompanied by the relevant share certificate(s) or other evidence reasonably required by the Directors to show the transferor's right to make the transfer or, if the instrument of transfer is executed by some other person on the transferor's behalf, the authority of that person to do so, and (iii) the certificated share is fully paid up.
- (c) The Directors may refuse to register an allotment or transfer of shares in favour of more than four persons jointly.

#### **5.2.5 Restrictions Where Notice Not Complied With**

If any member or any other person appearing to be interested in shares (within the meaning of Part 22 of the Companies Act) has been duly served with a notice under section 793 of the Companies Act (which confers upon public companies the power to require information as to interests in its voting shares) and is in default for a period of 14 days in supplying to the Company the information required by that notice:

- (a) the member (for so long as the default continues) or any transferee of those shares shall not be entitled to attend or vote (in person or by proxy) or to exercise any other right conferred by membership at a general meeting, unless the Directors otherwise determine; and
- (b) the Directors may in their absolute discretion, where those shares represent 0.25 per cent. or more of the issued shares of a relevant class, by notice to the holder direct that:
  - (I) any dividend or part of a dividend (including shares issued in lieu of a dividend) or other money which would otherwise be payable on the shares will be retained by the Company without any liability for interest; and/or
  - (II) (with various exceptions set out in the Articles) transfers of the shares will not be registered.

#### **5.2.6 Forfeiture and Lien**

- (a) If a member fails to pay in full any sum which is due in respect of a share on or before the due date for payment, then, following notice by the Directors requiring payment of the unpaid amount with any accrued interest and any expenses incurred, and if the requirements of such notice are not complied with and the amount remains unpaid, such share may be forfeited by a resolution of the Directors to that effect (including all dividends declared in respect of the forfeited share and not actually paid before the forfeiture).
- (b) A member whose shares have been forfeited will cease to be a member in respect of the shares, but will remain liable to pay the Company all monies which at the date of forfeiture were presently payable together with interest at a rate of 15 per cent. The Directors may in their absolute discretion enforce payment without any allowance for the value of the shares at the time of forfeiture or for any consideration received on their disposal, or waive payment in whole or part.
- (c) The Company shall have a lien on every share that is not fully paid for all moneys in respect of the share's nominal value, or any premium at which it was issued, that have not been paid to the Company and are payable immediately or at a fixed time in the future, whether or not a call has been made on such sums. The Company's lien over a share takes priority over the rights of any third party and extends to any dividends or other sums payable by the Company in respect of that share. The Directors may waive any lien which has arisen and may resolve that any share shall for some limited period be exempt from such a lien, either wholly or partially.
- (d) A share forfeited or surrendered shall become the property of the Company and may be sold, re-allotted or otherwise disposed of to any person (including the person who was, before such forfeiture or surrender, the holder of that share or entitled to it) on such terms and in such manner as the Directors think fit. The Company may deliver an enforcement notice in respect of any share if a sum in respect of which a lien exists is due and has not

been paid. The Company may sell any share in respect of which an enforcement notice, delivered in accordance with the Articles, has been given if such notice has not been complied with. The proceeds of sale shall first be applied towards payment of the amount in respect of the lien to the extent that amount was due on the date of the enforcement notice, and then on surrender of the share certificate for cancellation, to the person entitled to the shares immediately prior to the sale.

### **5.3 General Meetings**

#### **5.3.1 Annual General Meeting**

An annual general meeting shall be held in each period of six months beginning with the day following the Company's accounting reference date, at such place or places, date and time as may be decided by the Directors.

#### **5.3.2 Convening of General Meetings**

The Directors may, whenever they think fit, call a general meeting. The Directors are required to call a general meeting once the Company has received requests from its members to do so in accordance with the Companies Act.

#### **5.3.3 Notice of General Meetings Etc.**

- (a) Notice of general meetings shall include all information required to be included by the Companies Act and shall be given to all members other than those members who are not entitled to receive such notices from the Company under the provisions of the Articles. The Company may determine that only those persons entered on the register at the close of business on a day decided by the Company, such day being no more than 21 days before the day that notice of the meeting is sent, shall be entitled to receive such a notice. If a member is added to the register after the day determined by the Company under this Article, this shall not invalidate the service of notice, nor entitle such member to receive notice of the meeting.
- (b) For the purposes of determining which persons are entitled to attend or vote at a meeting, and how many votes such persons may cast, the Company must specify in the notice of the meeting a time, not more than 48 hours before the time fixed for the meeting, by which a person must be entered on the register in order to have the right to attend or vote at the meeting. The Directors may in their discretion resolve that, in calculating such period, no account shall be taken of any part of any day that is not a working day (within the meaning of section 1173 of the Companies Act).
- (c) The Directors may resolve to postpone or cancel any general meeting or move the place of such meeting before the time at which it is to be held, except where the postponement or cancellation or move would be contrary to the Companies Act. The Directors may give notice of a postponement or cancellation or move as they think fit but any failure to give notice of postponement or cancellation or move does not invalidate any resolution passed at a postponed or moved meeting.

#### **5.3.4 Quorum**

No business other than the appointment of a chair shall be transacted at any general meeting unless a quorum is present at the time when the meeting proceeds to business. Pursuant to the Companies Act, two members present in person or by proxy shall be a quorum.

#### **5.3.5 Conditions of Admission**

- (a) The Directors may put in place such arrangements or restrictions as they think fit to ensure the safety and security of the attendees at a general meeting and the orderly conduct of the meeting, including requiring attendees attending physically to submit to searches and/or health and safety restrictions. Any member, proxy or other person who fails to comply with such arrangements or restrictions may be refused entry to, or removed from, the general meeting.
- (b) The Directors may decide that a general meeting shall be held at two or more locations to facilitate the organisation and administration of such meeting. A member present in person or by proxy at the designated "satellite" meeting place may be counted in the quorum and

may exercise all rights that they would have been able to exercise if they had been present at the principal meeting place. The Directors may make and change from time to time such arrangements as they shall in their absolute discretion consider appropriate to:

- (I) ensure that all members and proxies for members wishing to attend the meeting can do so;
  - (II) ensure that all persons attending the meeting are able to participate in the business of the meeting and to see and hear anyone else addressing the meeting;
  - (III) ensure the safety of persons attending the meeting and the orderly conduct of the meeting; and
  - (IV) restrict the numbers of members and proxies at any one location to such number as can safely and conveniently be accommodated there.
- (c) The entitlement of any member or proxy to attend a satellite meeting shall be subject to any such arrangements then in force and stated by the notice of meeting or adjourned meeting to apply to the meeting.
- (d) The Directors may decide to hold a general meeting as a combined physical and electronic general meeting and, in such case, shall provide details of the means for members to attend and participate in the meeting, including the physical place or places of meeting and the electronic platforms to be used. The Directors and the chair of a combined physical and electronic general meeting may make any arrangement and impose any requirement or restriction as is:
- (I) necessary to ensure the identification of those taking part and the security of the electronic communication; and
  - (II) proportionate to achieving these objectives,
- and any failure of such facilities will not affect the validity of such general meeting or any business conducted at such general meeting or any action taken pursuant to such general meeting.
- (e) It is immaterial whether any two or more persons attending the general meeting are in the same place as each other or how they are able to communicate with each other. Two or more persons who are not in the same place as each other attend a general meeting if their circumstances are such that if they have (or were to have) rights to speak or vote at that meeting, they are (or would be) able to exercise them.

## **5.4 Directors**

### **5.4.1 General Powers**

The Directors shall manage the business and affairs of the Company and may exercise all powers of the Company other than those that are required by the Companies Act or by the Articles to be exercised by the Company at the general meeting.

### **5.4.2 Number of Directors**

The Directors shall not be less than two in number and not more than nineteen, save that the Company may, by ordinary resolution, from time to time vary the minimum number and/or maximum number of Directors.

### **5.4.3 Share Qualification**

A Director shall not be required to hold any shares of the Company by way of qualification. A Director who is not a member of the Company shall nevertheless be entitled to attend and speak at general meetings.

### **5.4.4 Directors' Fees**

The ordinary remuneration of the Directors shall from time to time be determined by the Directors except that such remuneration shall not exceed £2,000,000 per annum in aggregate or such higher amount as may from time to time be determined by ordinary resolution of the shareholders.



#### **5.4.5 Executive Directors**

The Directors may from time to time appoint one or more of their number to be the holder of any executive office and may confer upon any Director holding an executive office any of the powers exercisable by them as Directors upon such terms and conditions, and with such restrictions, as they think fit. They may from time to time revoke, withdraw, alter or vary all or any of such delegated powers.

#### **5.4.6 Directors' Retirement**

When a Director retires at an annual general meeting in accordance with the Articles, the Company may, by ordinary resolution at the meeting, fill the office being vacated by re-electing the retiring Director. In the absence of such a resolution, the retiring Director shall nevertheless be deemed to have been re-elected, except in the cases identified by the Articles.

#### **5.4.7 Removal of a Director by Resolution of Company**

The Company may, by ordinary resolution of which special notice is given, remove any Director before the expiration of his period of office in accordance with the Companies Act, and elect another person in place of a Director so removed from office. Such removal may take place notwithstanding any provision of the Articles or of any agreement between the Company and such Director, but is without prejudice to any claim the Director may have for damages for breach of any such agreement.

#### **5.4.8 Proceedings of the Board**

- (a) Subject to the provisions of the Articles, the Directors may meet for the despatch of business and adjourn and otherwise regulate its proceedings as they think fit.
- (b) The quorum necessary for the transaction of business of the Directors may be fixed from time to time by the Directors and unless so fixed at any other number shall be two. A meeting of the Directors at which a quorum is present shall be competent to exercise all powers and discretions for the time being exercisable by the Directors.
- (c) The Directors may elect from their number a Chair and a Deputy Chair (or two or more Deputy Chairs) and decide the period for which each is to hold office.
- (d) Questions arising at any meeting of the Directors shall be determined by a majority of votes. In the case of an equality of votes, the Chair of the meeting shall have a second or casting vote.

#### **5.4.9 Directors' Interests**

- (a) For the purposes of section 175 of the Companies Act, the Directors shall have the power to authorise any matter which would or might otherwise constitute or give rise to a breach of the duty of a Director to avoid a situation in which he or she has, or can have, a direct or indirect interest that conflicts, or possibly may conflict, with the interests of the Company.
- (b) Any such authorisation will be effective only if:
  - (I) the matter in question was proposed in writing for consideration at a meeting of the Directors, in accordance with the Board's normal procedures or in such other manner as the Directors may resolve;
  - (II) any requirement as to the quorum at the meeting at which the matter is considered is met without counting the Director in question or any other interested Director; and
  - (III) the matter was agreed to without such interested Directors voting or would have been agreed to if their votes had not been counted.
- (c) The Directors may extend any such authorisation to any actual or potential conflict of interest which may arise out of the matter so authorised and may (whether at the time of the giving of the authorisation or subsequently) make any such authorisation subject to any limits or conditions they expressly impose, but such authorisation is otherwise given to the fullest extent permitted. The Directors may also terminate any such authorisation at any time.

- (d) A Director shall not, save as otherwise agreed by such Director, be accountable to the Company for any benefit which the Director (or a person connected with the Director) derives from any matter authorised by the Directors and any contract, transaction or arrangement relating to such a matter shall not be liable to be avoided on the grounds of any such benefit.

#### **5.4.10 Restrictions on Voting**

- (a) Except as provided below, a Director may not vote on any resolution in respect of any contract, arrangement or any other proposal in which he or she, or a person connected to him, is interested. Any vote of a Director in respect of a matter where he or she is not entitled to vote shall be disregarded.
- (b) Subject to the provisions of the Companies Act, a Director is entitled to vote and be counted in the quorum in respect of any resolution concerning any contract, transaction or arrangement, or any other proposal (*inter alia*):
  - (I) in which he or she has an interest, of which he or she is not aware, or which cannot be reasonably regarded as likely to give rise to a conflict of interest;
  - (II) in which he or she has an interest only by virtue of interests in the Company's shares, debentures or other securities or otherwise in or through the Company;
  - (III) which involves the giving of any security, guarantee or indemnity to the Director or any other person in respect of (i) money lent or obligations incurred by the Director or by any other person at the request of or for the benefit of the Company or any of its subsidiary undertakings or (ii) a debt or other obligation of the Company or any of its subsidiary undertakings for which the Director has assumed responsibility in whole or in part under a guarantee or indemnity or by the giving of security;
  - (IV) concerning an offer of securities by the Company or any of its subsidiary undertakings in which he or she is or may be entitled to participate as a holder of securities or as an underwriter or sub-underwriter;
  - (V) concerning any other body corporate in which he or she is directly or indirectly interested and whether as an officer, shareholder, creditor, employee or otherwise, provided that he or she and any connected persons do not own or have a beneficial interest in one per cent. or more of any class of share capital of such body corporate, or of the voting rights available to the members of such body corporate;
  - (VI) relating to an arrangement for the benefit of employees or former employees of the Company or any of its subsidiary undertakings which does not award him any privilege or benefit not generally awarded to the employees or former employees to whom such arrangement relates;
  - (VII) concerning the purchase or maintenance by the Company of insurance for any liability for the benefit of Directors;
  - (VIII) concerning the giving of indemnities in favour of the Directors;
  - (IX) concerning the funding of expenditure by any Director or Directors (A) on defending criminal, civil or regulatory proceedings or actions against him or them, (B) in connection with an application to the court for relief, (C) on defending him or them in any regulator investigations, or (D) incurred doing anything to enable him to avoid incurring such expenditure; or
  - (X) in which the Director's interest, or the interest of the Directors generally, has been authorised by ordinary resolution.

#### **5.4.11 Confidential Information**

If a Director, otherwise than by virtue of his position as Director, receives information in respect of which he or she owes a duty of confidentiality to a person other than the Company, he or she shall not be required to disclose such information to the Company or to the Directors, or to any Director, officer or employee of the Company, or otherwise use or apply such confidential information for the purpose of or in connection with the performance of his duties as a Director, provided that such an actual or potential conflict of interest arises from a permitted or authorised

interest under the Articles. This is without prejudice to any equitable principle or rule of law which may excuse or release the Director from disclosing the information, in circumstances where disclosure may otherwise be required under the Articles.

#### **5.4.12 Borrowing Powers**

Subject to the Articles and to the provisions of the Companies Act, the Directors may exercise all the powers of the Company to borrow money, mortgage or charge all or any part or parts of its undertaking, property and uncalled capital, and issue debentures and other securities, whether outright or as collateral security for any debt, liability or obligation of the Company or of any third party.

#### **5.4.13 Powers of the Directors**

- (a) The Directors may delegate any of their powers or discretions, including those involving the payment of remuneration or the conferring of any other benefit to the Directors, to such person or committee and in such manner as they think fit. Any such person or committee shall, unless the Directors otherwise resolve, have the power to sub-delegate any of the powers or discretions delegated to them. The Directors may make regulations in relation to the proceedings of committees or sub-committees.
- (b) The Directors may establish any local boards or appoint managers or agents to manage any of the affairs of the Company, either in the United Kingdom or elsewhere, and may:
  - (I) appoint persons to be members or agents or managers of such local board and fix their remuneration;
  - (II) delegate to any local board, manager or agent any of the powers, authorities and discretions vested in the Directors, with the power to sub-delegate;
  - (III) remove any person so appointed, and may annul or vary any such delegation; and
  - (IV) authorise the members of any local boards, or any of them, to fill any vacancies on such boards, and to act notwithstanding vacancies.
- (c) The Directors may appoint any person or fluctuating body of persons, whether nominated directly or indirectly by the Directors, to be the attorney of the Company with such purposes and with such powers, authorities and discretions and for such periods and subject to such conditions as they may think fit.
- (d) Any Director may at any time appoint any person (including another Director) to be his alternate director and may at any time terminate such appointment.

#### **5.4.14 Directors' Liabilities**

- (a) So far as may be permitted by the Companies Act, every Director, former Director or secretary of the Company or of an Associated Company (as defined in section 256 of the Companies Act) of the Company (each, a "**Relevant Officer**") may be indemnified by the Company out of its own funds against:
  - (I) any liability incurred by him or her in connection with any negligence, default, breach of duty or breach of trust by him or any other liability incurred by him in relation to the Company or any Associated Company of the Company other than any liability to the Company or to any Associated Company and any liability of the kind referred to in section 243(3) of the Companies Act; and
  - (II) any liability incurred by him or her in relation to or in connection with the relevant person's duties, powers or office, including in connection with the activities of the Company or an Associated Company in its capacity as a trustee of an occupational pension scheme.
- (b) The Directors may also purchase and maintain insurance for or for the benefit of:
  - (I) any person who is or was a director or Secretary of a Relevant Company (as defined in the Articles); or
  - (II) any person who is or was at any time a trustee of any pension fund or employees' share scheme in which employees of any Relevant Company are interested,

including insurance against any liability (including all related costs, charges, losses and expenses) incurred by or attaching to him in relation to his duties, powers or offices in relation to any Relevant Company, or any such pension fund or employees' share scheme.

- (c) So far as may be permitted by the Companies Act, the Company may provide a Relevant Officer with defence costs in relation to any criminal or civil proceedings in connection with any negligence, default, breach of duty or breach of trust by him in relation to the Company or an Associated Company of the Company, or in relation to an application for relief under section 205(5) of the Companies Act. The Company may do anything to enable such Relevant Officer to avoid incurring such expenditure.
- (d) So far as may be permitted by the Companies Act, the Company may provide a Relevant Officer with funds in connection with an investigation by a regulatory authority or against action proposed to be taken by a regulatory authority in connection with any alleged negligence, default, breach of duty or breach of trust by the Relevant Officer in relation to the Company or any Associated Company of the Company. The Company may do anything to enable any such Relevant Officer to avoid incurring such expenditure.

## **5.5 Dividends**

- (a) The Company may, by ordinary resolution, declare final dividends to be paid to its Shareholders. However, no dividend shall be declared unless it has been recommended by the Directors and does not exceed the amount recommended by the Directors.
- (b) No dividend or payment or other distribution in respect of any share in relation to a call that remains unpaid shall be paid or distributed.
- (c) If the Directors believe that the profits of the Company justify such payment, they may pay dividends on any class of share where the dividend is payable on fixed dates. They may also pay interim dividends on shares of any class in amounts and on dates and periods as they think fit. Provided the Directors act in good faith, they shall not incur any liability to the holders of any shares for any loss they may suffer by the payment of dividends on any other class of shares having rights ranking equally with or behind those shares.
- (d) Unless the share rights otherwise provide, all dividends shall be declared and paid according to the amounts paid up on the shares on which the dividend is paid, and apportioned and paid proportionately according to the amounts paid on the shares during any portion or portions of the period in respect of which the dividend is paid.
- (e) If a dividend remains unclaimed for 12 years from the date on which it was declared or became due for payment, it shall be forfeited and shall revert to the Company. The Company shall not be liable in any respect, nor be required to account to the relevant member or person entitled by virtue of transmission on death or bankruptcy or otherwise by operation of law to such dividends or other moneys and the Company shall be entitled to use such dividends for the Company's benefit in any manner that the Directors from time to time may think fit.
- (f) The Directors may, if authorised by ordinary resolution, offer to ordinary shareholders the right to elect to receive, in lieu of a dividend, an allotment of new Ordinary Shares credited as fully paid.

## **5.6 Failure to Supply an Address**

A shareholder who is on the Company's principal share register and has no registered address within the United Kingdom, and has not supplied to the Company an address within the United Kingdom or an electronic address for the service of notices will not be entitled to receive notices from the Company.

## **5.7 Changes in Capital**

The provisions of the Articles governing the conditions under which the Company may alter its share capital are no more stringent than the conditions imposed by the Companies Act.

## **6 Directors and Senior Management**

- 6.1** The Directors and members of Senior Management, their functions within the Group and brief biographies are set out in Part VI: "*Directors, Senior Management and Corporate Governance*".

- 6.2** The companies and partnerships of which the Directors and members of Senior Management are, or have been, within the past five years, members of the administrative, management or supervisory bodies or partners (excluding the Company and its subsidiaries and also excluding the subsidiaries of the companies listed below) are as follows:

<b>Name of Director / Senior Manager</b>	<b>Current directorships/partnerships</b>	<b>Former directorships/partnerships</b>
John Lofton Holt	Achronix Semiconductor Corporation	Holt Brothers Capital LLC Holt Brothers Real Estate & Construction LLC July Two Capital LLC
Tony Pialis	Pitech Investments Inc. Pitech Corp.	N/A
Daniel Aharoni	N/A	N/A
Jon Rogers	Ontario 2641239 Inc.	N/A
Rajeevan Mahadevan	N/A	N/A
Sehat Sutardja	FLC Technology Group, Inc. Danger Devices Inc. Zerro Power Systems Pte Ltd NextInput, Inc. Wolley Tech, Inc. DreamBig Semiconductor Inc. Blue Cheetah Analog Design, Inc. Nuvia Inc.	Marvell Technology Group
Jan Frykhammar	ITAB Shop Concept AB Nordic Semiconductor ASA Aspia AB Clavister Holding AB OX2 AB Roima Intelligence OY Telavox AB Quickbit eu AB Celltick Technologies Ltd	Kvdcar AB Openet Telecom Ltd Ratos AB Utimaco GmbH Attendo AB Telefonaktiebolaget LM Ericsson AB
Michelle Senecal de Fonseca	Citrix Systems UK Limited FDM Group (Holdings) plc Women in Telecoms and Technology (WiTT) Limited Move Capital LLP	N/A
Paul Boudre	Soitec S.A. Fogale Nanotech S.A.S.	N/A
Victoria Hull	Ultra Electronics Holdings PLC Network International Holdings PLC RBG Holdings PLC La Pleiade Limited	N/A
Susan Buttsworth	CKH IOD Data Limited G&S Buttsworth Holdings Pty Ltd Buttswann Nominees Pty Ltd Cherrybooks Pty Ltd	N/A
Rosalind Singleton	Spring Fibre Limited Angel Academe TWSU Nominee Ltd	N/A

- 6.3** Save as set out above, none of the Directors, any member of the Senior Management or the Company Secretary has any business interests, or performs any activities, outside the Group which are significant with respect to the Group.

- 6.4** There are no family relationships between any Directors, between any members of Senior Management or between any Directors and members of Senior Management.
- 6.5** As of the date of this Registration Document, none of the Directors or any member of Senior Management has, at any time within the last five years:
- 6.5.1** had any prior convictions in relation to fraudulent offences;
  - 6.5.2** been declared bankrupt or been the subject of any individual voluntary arrangement;
  - 6.5.3** been associated with any bankruptcies, receiverships or liquidations when acting in the capacity of a member of the administrative, management or supervisory body or of a senior manager;
  - 6.5.4** been subject to any official public incrimination and/or sanction by any statutory or regulatory authority (including designated professional bodies);
  - 6.5.5** been disqualified by a court from acting in the management or conduct of the affairs of any company;
  - 6.5.6** been disqualified by a court from acting as a member of the administrative, management or supervisory bodies of any company;
  - 6.5.7** been a partner or senior manager in a partnership which, while he or she was a partner or within 12 months of his or her ceasing to be a partner, was put into compulsory liquidation or administration or which entered into any partnership voluntary arrangement;
  - 6.5.8** owned any assets which have been subject to a receivership or been a partner in a partnership subject to a receivership where he or she was a partner at a time or within the 12 months preceding such event; or
  - 6.5.9** been an executive director or senior manager of a company which has been placed in receivership, compulsory liquidation, creditors' voluntary liquidation or administration or which entered into any company voluntary arrangement or any composition or arrangement with its creditors generally or any class of creditors, at any time during which he or she was an executive director or senior manager of that company or within 12 months of his or her ceasing to be an executive director or senior manager.
- 6.6** The total amount set aside or accrued by the Group to provide pension, retirement or similar benefits for the Directors and Senior Managers for the year ended 31 December 2020 was nil.
- 6.7** The aggregate remuneration paid (including any contingent or deferred compensation) and benefits in kind granted to the Directors and Senior Managers for services in all capacities for the year ended 31 December 2020 was CaD 759,000.
- 6.8** As of the date of this Registration Document, there are no restrictions agreed by any Director or Senior Manager on the disposal within a certain time of their holdings in the Company's securities.

## **7 Directors' Service Agreements, Letters of Appointment and Other Matters**

### **7.1 Executive Directors**

Prior to any potential Admission, the Company will enter into service agreements with each of the Executive Directors, effective from any potential Admission, which will replace any previous agreements in relation to the provision of their services to the Group. The particulars of the service agreements between the Company and each Executive Director (or in the case of Sehat Sutardja, the expected particulars of his service agreement) are set out below.

(a) *General terms*

<u>Name</u>	<u>Current salary per annum<sup>(1)</sup></u> (£)	<u>Notice by the Company</u> (months)	<u>Notice by Executive Director</u>	<u>Place of work</u>	<u>Role</u>
John Lofton Holt . . . . .	450,000	12	12	London, UK	Executive Chairman
Tony Pialis . . . . .	450,000 <sup>(2)</sup>	12	12	Ontario, Canada	Group Chief Executive Officer
Daniel Aharoni . . . . .	365,000	12	12	London, UK	Group Chief Financial Officer
Sehat Sutardja . . . . .	85,000 <sup>(2)(3)</sup>	1	1	Nevada, USA	Executive Officer

Notes:

- (1) Salaries will be reviewed annually, but the Company will be under no obligation to award an increase following a salary review.
- (2) Tony Pialis' and Sehat Sutardja's salaries will be paid in local currency (CaD and USD respectively) based on the average conversion rate (using the average between the buy and sell rates) for the twelve month period preceding the payroll cut off date
- (3) Sehat Sutardja's salary reflects his part-time working arrangement of 5 per cent.

Any payments made or benefits granted to an Executive Director (including on termination of his service agreement) will be subject to the Director's remuneration policy as approved by the Shareholders from time to time (see paragraph 7.3 below).

John Lofton Holt and Daniel Aharoni were appointed as directors of the Company with effect from 11 January 2021. Tony Pialis and Sehat Sutardja were appointed as directors of the Company with effect from 16 April 2021.

The Executive Directors will be eligible to participate in such long-term and/or short-term incentive schemes as the Company shall determine from time to time (save that Sehat Sutardja will not participate in any such schemes and John Lofton Holt and Tony Pialis will waive their participation in the Long Term Incentive Plan for the first year of the plan's operation).

The Executive Directors (other than Sehat Sutardja, who will not be entitled to any benefits in kind other than those required by applicable law and the reimbursement of reasonable expenses) will be entitled to such benefits in kind as the Company makes available to senior executives based in their location from time to time. The Company will refund the Executive Directors for reasonable expenses properly incurred by them in performing their duties, provided these are in line with Company policy from time to time.

The Executive Directors (other than Sehat Sutardja) will be entitled to 25 days' paid holiday per annum (in addition to public and statutory holidays in their place of work) and to participate in such pension scheme on such terms as may be made available to senior executives based in their place of work from time to time and in compliance with any applicable legislation or regulations from time to time in force. Sehat Sutardja will only be entitled to benefits that are required by applicable law.

The Company will have customary directors' and officers' indemnity insurance in place in respect of each Executive Director and each of them will have the benefit of a deed of indemnity against certain liabilities that may be incurred as a result of their office to the extent permitted by section 234 of the Companies Act 2006.

In order to protect the interests of the Company, each Executive Director will be subject to standard business protection provisions, including garden leave, confidentiality undertakings and post termination restrictive covenants (including non-compete restrictions).

(b) *Termination provisions*

The Company may terminate each Executive Director's service contract by giving the notice specified in paragraph (a) above. Alternatively, the Company may elect to terminate the service contract by making payment in lieu of notice of a sum equal to the basic salary the Executive Director would have been entitled to receive during any unexpired period of notice. Payment in lieu of notice can be made in monthly instalments, subject to mitigation (save in relation to Sehat Sutardja, whose notice period is one month). On termination, any incentive entitlements will be determined in accordance with their terms and the Director's remuneration policy.

## 7.2 Non-Executive Directors

The particulars of the letters of appointment that the Company will enter into with each Non-Executive Director prior to any potential Admission are set out below.

<u>Name</u>	<u>Title</u>	<u>Date of appointment</u>	<u>Initial term<sup>(1)</sup></u> <i>(years)</i>	<u>Total fees per year</u> <i>(£)</i>
Jan Frykhammar	Senior Independent Non-Executive Director Chair of the Remuneration Committee Member of the Audit Committee and Nomination Committee	16 April 2021	3	120,000 <sup>(2)</sup>
Michelle Senecal de Fonseca	Independent Non-Executive Director Member of the Audit Committee	16 April 2021	3	75,000 <sup>(3)</sup>
Paul Boudre	Independent Non-Executive Director Member of the Remuneration Committee	16 April 2021	3	75,000 <sup>(4)</sup>
Victoria Hull	Independent Non-Executive Director Chair of the Audit Committee Member of the Remuneration Committee	16 April 2021	3	90,000 <sup>(5)</sup>
Susan Buttsworth	Independent Non-Executive Director Member of the Nomination Committee	16 April 2021	3	75,000 <sup>(6)</sup>
Rosalind Singleton	Independent Non-Executive Director	16 April 2021	3	65,000 <sup>(7)</sup>

Notes:

- (1) The appointment of each of these Directors is expected to continue for two three-year terms, but the Board may invite each of the Non-Executive Directors to continue their appointment for an additional period. There is no fixed term of appointment and the appointment of each Non-Executive Director will be terminable by either party upon one month's notice.
- (2) Jan Frykhammar's total fees comprise £85,000 as non-executive director base fee, £15,000 as fee for acting as Chair of the Remuneration Committee and £20,000 as fees for acting as a member of the Audit Committee and the Nomination Committee.
- (3) Michelle Senecal de Fonseca's total fees comprise £65,000 as non-executive director base fee and £10,000 as fee for acting as a member of the Audit Committee.
- (4) Paul Boudre's total fees comprise £65,000 as non-executive director base fee and £10,000 as fee for acting as a member of the Remuneration Committee.
- (5) Victoria Hull's total fees comprise £65,000 as non-executive director base fee, £15,000 as fee for acting as Chair of the Audit Committee and £10,000 as fee for acting as a member of the Remuneration Committee.
- (6) Susan Buttsworth's total fees comprise £65,000 as non-executive director base fee and £10,000 as fee for acting as a member of the Nomination Committee.
- (7) Rosalind Singleton's total fees comprise £65,000 as non-executive director base fee.

Each Non-Executive Director's letter of appointment will take effect from any potential Admission. The appointment of each Non-Executive Director will be subject to the Articles of Association.

Each Non-Executive Director will be entitled to elect to use up to 100% of their fee (after deductions for tax and national insurance contributions) to acquire shares in the Company. The Non-Executive Directors will not be entitled to receive any compensation on termination of their appointments (save for notice, where due).

Each Non-Executive Director will be subject to re-election at the first AGM following any potential Admission and for annual re-election at each AGM thereafter.

The Non-Executive Directors will be subject to confidentiality undertakings. The Company will reimburse each Non-Executive Director for reasonable expenses properly incurred by them in performing their duties and will have customary directors' and officers' indemnity insurance in place in respect of each Non-Executive Director.

Each Non-Executive Director will have the benefit of a deed of indemnity against certain liabilities that may be incurred as a result of their office to the extent permitted by section 234 of the Companies



Act 2006. Each Non-Executive Director will also be entitled to consult independent professional advisers at the Company's expense where appropriate in the furtherance of their duties as a director.

### 7.3 Remuneration

The remuneration arrangements for the Directors described above were approved by the Remuneration Committee on 16 April 2021. Whilst it is expected that the remuneration arrangements for the Directors would be reviewed by the Remuneration Committee following any potential Admission, the current expectation is that the remuneration arrangements described above and in paragraph 10 of this Part X: “*Additional Information—Employee Share Plans*” would apply. The Company will operate a Long Term Incentive Plan and annual bonus arrangements, including deferral of at least one third of bonus into shares in the Company for at least two years. In due course, the Company will also operate all employee share plans. In accordance with the regulations set out in the Large and Medium-sized Companies and Groups (Accounts and Reports) (Amendment) Regulations 2013, shareholder approval will be sought for the Directors' remuneration policy at the annual general meeting of the Company in the first full financial year following any potential Admission.

## 8 Interests of the Directors and Senior Management

8.1 The table below sets out the interests of the Directors and Senior Management in the share capital of the Company following the Pre-IPO Reorganisation (all of which, unless otherwise stated, are beneficial and include the interest of persons connected with them).

	Following the Pre-IPO Reorganisation <sup>(1)</sup>	
	Number of Ordinary Shares	Percentage of issued share capital
<b>Name of Director</b>		
John Lofton Holt <sup>(2)</sup>	1,321,756	4.69
Tony Pialis <sup>(3)</sup>	5,931,389	21.04
Daniel Aharoni	200,000	0.71
Sehat Sutardja <sup>(4)</sup>	4,816,949	17.09
Jan Frykhammar	—	—
Michelle Senecal de Fonseca	—	—
Paul Boudre	—	—
Victoria Hull	—	—
Susan Buttsworth	—	—
Rosalind Singleton	—	—
<b>Name of Senior Manager</b>		
Jonathan Rogers <sup>(5)</sup>	5,931,388	21.04
Rajeevan Mahadevan <sup>(6)</sup>	5,931,389	21.04

Notes:

- (1) On the assumption that Alphawave IP Inc. shares are exchanged for Ordinary Shares on a one-for-one basis (which may or may not be the case).
- (2) John Lofton Holt's interest in Ordinary Shares will, following the Pre-IPO Reorganisation, be held through July Twelve Capital Limited. July Twelve Capital Limited is a person closely associated with Mr Holt (within the meaning of the Market Abuse Regulation (EU) 596/2014 as it forms part of retained EU law). In addition to the interests listed in this table, July Twelve Capital Limited also has an option to purchase up to 3,457,224 Alphawave IP Inc. shares in aggregate from The Tony Pialis (2017) Family Trust, 2641239 Ontario Inc. and The Rajeevan Mahadevan (2017) Family Trust.
- (3) Tony Pialis' shares in the Company will, following the Pre-IPO Reorganisation, be held through The Tony Pialis (2017) Family Trust of which Tony is the trustee and a discretionary beneficiary.
- (4) Sehat Sutardja's shares in the Company will, following the Pre-IPO Reorganisation, be held through Sutardja Family LLC. Sehat Sutardja holds 10 per cent. of the shares in Sutardja Family LLC. The remaining shares are held by his family members.
- (5) Jonathan Rogers' shares in the Company will, following the Pre-IPO Reorganisation, be held through 2641239 Ontario Inc., a company whose voting shares are wholly owned by The Jonathan Rogers (2018) Family Trust of which Jonathan is the trustee.
- (6) Rajeevan Mahadevan's shares in the Company will, following the Pre-IPO Reorganisation, be held through The Rajeevan Mahadevan (2017) Family Trust of which Rajeevan is the trustee and (through a wholly owned company) a discretionary beneficiary.

- 8.2** None of the Directors or Senior Managers have (or would be expected to have immediately following any potential Admission) any interests in options to acquire shares in the Company under the Equity Incentive Plan and the Long Term Incentive Plan (which is described in paragraph 10 below).
- 8.3** The interests of the Directors and Senior Management together (including options to acquire shares in the Company granted under the Equity Incentive Plan and the Long Term Incentive Plan) would be expected to represent 84.9 per cent. of the issued share capital of the Company immediately following any potential Admission.
- 8.4** Save as set out in this paragraph 8 and in Part IX: “*Historical Financial Information*”, none of the Directors has any interests in the share or loan capital of the Company or any of its subsidiaries.

**9 Interests of Significant Shareholders**

- (a) As of the date of this Registration Document, the Company has a single ordinary share in issue which is held by John Lofton Holt.
- (b) Following the Pre-IPO Reorganisation, the following persons will be directly or indirectly interested (within the meaning of the Companies Act 2006) in 3 per cent. or more of the Company’s issued ordinary share capital or voting rights.

<u>Shareholder</u>	<u>Following the Pre-IPO Reorganisation<sup>(1)</sup></u>	
	<u>Number of Ordinary Shares</u>	<u>Percentage of issued ordinary share capital</u>
The Tony Pialis (2017) Family Trust <sup>(2)</sup> . . . . .	5,931,389	21.04
The Rajeevan Mahadevan (2017) Family Trust <sup>(3)</sup> . . . . .	5,931,389	21.04
2641239 Ontario Inc. <sup>(4)</sup> . . . . .	5,931,388	21.04
Sutardja Family LLC <sup>(5)</sup> . . . . .	4,816,949	17.09
July Twelve Capital Limited <sup>(6)</sup> . . . . .	1,321,756	4.69
Wise Road Alpha Investment Fund I, L.P . . . . .	1,851,852	6.57
Wise Road Industry Investment Fund I, L.P . . . . .	925,926	3.28

Notes:

- (1) On the assumption that Alphawave IP Inc. shares are exchanged for Ordinary Shares on a one-for-one basis (which may or may not be the case).
- (2) Tony Pialis is the trustee of The Tony Pialis (2017) Family Trust and he is also a discretionary beneficiary.
- (3) Rajeevan Mahadevan is the trustee of The Rajeevan Mahadevan (2017) Family Trust and (through a wholly owned company) he is also a discretionary beneficiary.
- (4) The shares of 2641239 Ontario Inc. are wholly owned by The Jonathan Rogers (2018) Family Trust. Jonathan Rogers is the trustee of The Jonathan Rogers (2018) Family Trust.
- (5) Sehat Sutardja holds 10 per cent. of the shares in Sutardja Family LLC. The remaining shares are held by his family members.
- (6) July Twelve Capital Limited is a person closely associated with John Lofton Holt (within the meaning of the Market Abuse Regulation (EU) 596/2014 as it forms part of retained EU law). In addition to the interests listed in this table, July Twelve Capital Limited also has an option to purchase up to 3,457,224 Alphawave IP Inc. shares in aggregate from The Tony Pialis (2017) Family Trust, 2641239 Ontario Inc. and The Rajeevan Mahadevan (2017) Family Trust.
- (c) Save as set out above, the Company is not aware of any holdings of voting rights (within the meaning of Chapter 5 of the Disclosure Guidance and Transparency Rules) which represent 3 per cent. or more of the total voting rights in respect of the issued share capital of the Company.
- (d) There are no differences between the voting rights enjoyed by the Shareholders as set out in this paragraph 9 and those enjoyed by any other holders of Ordinary Shares in the Company.
- (e) The directors have no knowledge of any arrangements the operation of which may at a subsequent date result in a change of control of the Company.

## **10 Employee Share Plans**

### **10.1 Introduction**

The Company believes that share ownership should form a central part of the culture and incentives structure for senior executives of the business.

### **10.2 Equity Incentive Plan**

Options and restricted stock units over 5,283,289 Alphawave IP Inc. shares have been granted to employees and consultants of Alphawave IP Inc. and its subsidiaries under the Alphawave IP Equity Incentive Plan (the “EIP Awards”) which was adopted by Alphawave IP Inc. in 2017. No more EIP Awards would be granted under the Equity Incentive Plan after any potential Admission.

All outstanding EIP Awards are intended to be amended so that EIP Awards will be over Ordinary Shares. The amended EIP Awards would vest or become exercisable at the same time as the corresponding awards over Alphawave IP Inc. shares but they will become awards under the rules of the Long Term Incentive Plan, to take account of any potential Admission and the fact that they would relate to Ordinary Shares.

The number of Ordinary Shares subject to each amended EIP Award would be based on the exchange ratio for Ordinary Shares applicable to shareholders under the Pre-IPO Reorganisation. However, if required, the number of Ordinary Shares to which a holder of an amended EIP Award would be entitled on vesting or exercise of the amended EIP Award would be reduced such that the excess (if any) of the aggregate fair market value of the Ordinary Shares underlying such holder’s amended EIP Award immediately following Admission over the aggregate exercise price (if any) of such amended EIP Award did not exceed the excess (if any) of the aggregate fair market value of the Ordinary Shares underlying the holder’s EIP Award immediately before Admission over the aggregate exercise price (if any) of such EIP Award; and any fraction of an Ordinary Share that such holder would be entitled to receive (after aggregating all Ordinary Shares issuable to such holder in respect of all such holder’s EIP Awards that are exercised on a particular date) would be rounded down to the nearest whole number. In the case of options, the price payable to exercise each amended EIP Award in full would be divided by the exchange multiple.

The key terms of the amended EIP Awards are as follows:

#### **10.2.1 Vesting and exercise**

EIP Awards can only be exercised to the extent vested.

They typically vest as to 25 per cent. of the shares on the first anniversary of the vesting commencement date and in equal monthly instalments thereafter until the fourth anniversary. They remain exercisable, to the extent vested, up to the fifth anniversary of the vesting commencement date. The board of Alphawave IP Inc. can accelerate the exercise of any EIP Award.

#### **10.2.2 Leaving Alphawave**

If the holder of an amended EIP Award leaves Alphawave, their options will normally lapse, to the extent not vested. To the extent vested, they may be exercised for a limited period after leaving after which they lapse. But vested and unvested options will lapse if the holder is terminated for cause or breach of contract or, in the case of consultants, voluntary termination (unless, in any case, the board of Alphawave decides otherwise).

#### **10.2.3 Change of control**

The amended EIP Awards will vest and become exercisable or may be exchanged on a change of control of the Company on the same basis as awards under the Long Term Incentive Plan (as described in paragraph 10.4 below).

#### **10.2.4 Adjustments and amendments**

The number of Ordinary Shares subject to amended EIP Awards and/or the exercise price can be adjusted to reflect any rights issue or similar transaction and the terms of EIP Awards can be amended on the same basis as awards under the Long Term Incentive Plan (as described in paragraph 10.4 below).

### 10.3 After any potential Admission

The Company intends to adopt a discretionary share plan called the Alphawave Long Term Incentive Plan (the “**Long Term Incentive Plan**”). The Company would expect to first offer annual awards under the Long Term Incentive Plan to the Executive Directors (apart from the CEO and the Executive Chairman for at least the first year of the plan’s operation) and other selected senior executives of the Company in early 2022 in the form of Long Term Incentive Plan awards (“**LTIP Awards**”), and annually thereafter. The Long Term Incentive Plan is also intended to be used each year to defer a portion of annual bonus earned by the Executive Directors in respect of financial years (or part thereof).

The Company also intends to adopt the Sharesave Plan and the Share Incentive Plan, the principal features of which are summarised below.

### 10.4 Principal features of the Long Term Incentive Plan

#### 10.4.1 Eligibility

All employees (including Executive Directors) of the Group will be eligible to participate in the Long Term Incentive Plan, excepting the CEO and the Executive Chairman who will waive their participation for the first year of the plan’s operation.

The Remuneration Committee or its delegate will select which eligible employees will be granted awards at its discretion.

#### 10.4.2 Structure of awards

An LTIP Award under the Plan can take the form of:

- a conditional right to acquire Ordinary Shares at no cost to the participant (a “**Conditional Award**”);
- an option to acquire Ordinary Shares at an exercise price set at grant (which may be nil) (an “**LTIP Option**”);
- Ordinary Shares allocated on grant on the basis that they cannot be transferred until vesting and will be forfeited to the extent that the LTIP Award lapses (“**Forfeitable Shares**”).

Conditional Awards and LTIP Options may be satisfied with a cash payment equal to the value of the Ordinary Shares which would otherwise have been issued or transferred and may be granted on the basis that they will always be satisfied in that way.

Some or all of a participant’s bonus may be paid in the form of an LTIP Award. This is called a “**Bonus Deferral Award**”.

#### 10.4.3 Individual limits

The market value (taken at the date of grant) of Ordinary Shares subject to LTIP Awards (other than Bonus Deferral Awards) granted to any one person in or in respect of any one financial year must not be more than 300 per cent. of that person’s annual base salary.

LTIP Awards granted to Executive Directors will also be subject to any limits set out in any approved directors’ remuneration policy.

Rights to dividends and dividend equivalents are ignored when calculating this limit.

#### 10.4.4 Dividends and dividend equivalent

The Remuneration Committee may determine that the number of Ordinary Shares to which a participant is entitled on vesting or exercise of a Conditional Award or LTIP Option will be increased to take account of dividends paid on the number of Ordinary Shares in respect of which the LTIP Award has vested or is exercised on such terms as determined by the Remuneration Committee.

Participants will be entitled to any dividends payable on Forfeitable Shares from the date of grant.

#### 10.4.5 Vesting

LTIP Awards will normally vest over a period set by the Remuneration Committee at grant.

They will only vest to the extent that any performance conditions set by the Remuneration Committee at grant have been met. LTIP Awards granted to Executive Directors will always be subject to performance conditions which will be set in accordance with any approved directors' remuneration policy.

Subject to any holding period (see paragraph 10.4.6 below), to the extent:

- a Conditional Award has vested, the relevant number of Ordinary Shares will be automatically issued or transferred to the participant;
- an LTIP Option has vested, the participant may exercise it until the tenth anniversary of grant (or until any earlier lapse under the rules);
- Forfeitable Shares have vested, any applicable restrictions will cease to apply.

#### **10.4.6 Holding period**

LTIP Awards received by Executive Directors will (and other awards may) be subject to a two-year post-vesting holding period in line with the UK Corporate Governance Code and UK market practice.

During the post-vesting holding period, the participant cannot normally transfer any Ordinary Shares received on vesting (except to cover tax and similar limited exceptions). The Remuneration Committee will set the length of the holding period at grant and may waive the holding period in the event of certain corporate events.

#### **10.4.7 Malus and clawback**

The Remuneration Committee can decide to reduce the number of Ordinary Shares in respect of which a LTIP Award vests and/or, in some cases, may claw back Ordinary Shares or cash received in certain circumstances, including those relating to material misstatement of accounts, errors in calculating the LTIP Award, corporate failure and a participant's conduct resulting in material reputational damage.

#### **10.4.8 Leaving Alphawave**

If the participant leaves Alphawave, their LTIP Award will normally lapse on leaving (but not if they leave during any holding period except if the participant leaves in circumstances in which their employment could have been terminated without notice or otherwise due to their misconduct).

However, if they leave for certain defined reasons (e.g. ill-health, injury, redundancy, sale of employer) or in other circumstances if the Remuneration Committee allows, their LTIP Award will continue in effect. The number of Ordinary Shares in respect of which it eventually vests will be determined in accordance with any performance condition and, unless the Remuneration Committee decides otherwise, will be reduced on a pro-rata basis to reflect the fact that the participant left early.

In these circumstances, the Remuneration Committee may instead decide that the LTIP Award will vest on or after leaving. If they do so, the number of Ordinary Shares in respect of which it vests will be determined by the Remuneration Committee having regard to any performance condition and, unless it decides otherwise, the number of Ordinary Shares vesting will be reduced on a pro-rata basis to reflect the fact that the participant left early.

If the participant dies, LTIP Awards will normally vest on death in full.

Options which do not lapse on leaving will be exercisable for 6 months (or 12 months in the case of death) from the date of leaving or the date of vesting, if later. The Remuneration Committee may extend exercise periods.

A Bonus Deferral Award will not normally lapse on leaving Alphawave (on the basis that it is deferral of a bonus already earned).

#### **10.4.9 Change of control and other transactions**

Each LTIP Award will vest early if there is a change of control of the Company. The number of Ordinary Shares in respect of which it vests will be determined by the Remuneration Committee having regard to any performance condition and, unless it decides otherwise, the number of

Ordinary Shares vesting will be reduced on a pro-rata basis to reflect the fact that it is vesting early.

Options will be exercisable to that extent for a limited period after which they will lapse.

Alternatively, the Remuneration Committee may allow or require participants to exchange LTIP Awards for equivalent awards which relate to shares in the company which acquires control or a related company.

If other corporate events occur such as a winding-up of the Company, demerger, delisting, special dividend or other event which, in the opinion of the Remuneration Committee, may affect the current or future value of Ordinary Shares, the Remuneration Committee may determine that LTIP Awards will vest early (wholly or in part) having regard to any performance condition and, unless it decides otherwise, the number of Ordinary Shares vesting will be reduced on a pro-rata basis to reflect the fact that it is vesting early.

#### **10.4.10 Dilution controls**

In any five-year period, the number of Ordinary Shares which may be issued under the Long Term Incentive Plan and under any other discretionary share plan adopted by the Company may not exceed five per cent. of the issued ordinary share capital of the Company from time to time.

In any five-year period, the number of Ordinary Shares which may be issued under any other employees' share plan operated by the Company (including the Long Term Incentive Plan) may not exceed ten per cent. of the issued ordinary share capital of the Company from time to time.

For the purposes of these limits, treasury shares will be treated as newly issued for the purpose of these limits until such time as guidelines published by institutional investor representative bodies determine otherwise.

Whilst it is recognised that the UK standard is to maintain award levels within a ten per cent. limit over ten years, the Company views the proposed policy limit as necessary to continue to support the importance the Company has always placed on meaningful employee-wide share ownership (in order to encourage entrepreneurialism), and to enable the Company to retain and compete for talent against US-based competitors.

#### **10.4.11 Changes to the Long Term Incentive Plan**

The Board can amend the Long Term Incentive Plan in any way but shareholder approval will be required to amend certain provisions to the advantage of participants. These provisions relate to: eligibility; individual and plan limits; exercise price; rights attaching to options and shares; adjustments on variation in the Company's share capital; and the amendment power.

The Board can, without shareholder approval:

- change the Long Term Incentive Plan to obtain or maintain favourable tax treatment;
- make certain minor amendments (e.g. to benefit administration);
- establish further plans based on the Long Term Incentive Plan, but modified to take account of local securities laws, exchange controls or tax legislation (but shares made available under such further plans will be treated as counting against any limits on participation in the main plan); and
- change any performance condition in accordance with its terms or if anything happens which causes the Remuneration Committee to consider it appropriate to do so.

#### **10.4.12 General**

LTIP Awards may be satisfied using newly issued Ordinary Shares, treasury shares or Ordinary Shares purchased in the market.

Any Ordinary Shares issued pursuant to LTIP Awards will rank equally with Ordinary Shares in issue on the date of allotment except in respect of rights arising by reference to a prior record date.

The exercise price and/or number or type of shares subject to LTIP Options and Conditional Awards may be adjusted in such manner as the Remuneration Committee considers reasonable to

take account of any rights issue (or similar transaction), demerger, delisting, special dividend or variation in the share capital of the Company.

The vesting and exercise of awards and options and the issue or transfer of Ordinary Shares are subject to obtaining any necessary approvals or consents from the FCA, the Company's share dealing policy and any other applicable laws or regulations.

LTIP Awards are not transferable (other than on death or in exceptional circumstances) and are not pensionable.

## **10.5 All-employee plans: the Alphawave sharesave plan (the "Sharesave Plan") and the Alphawave share incentive plan (the "Share Incentive Plan")**

The Company also intends to adopt two all-employee plans, the principal features of which are set out below. The dilution controls, limits on the amendment powers and the general terms described above in relation to the Long Term Incentive Plan apply, with appropriate modifications, to the Sharesave Plan and the Share Incentive Plan.

## **10.6 Principal features of the Sharesave Plan**

### **10.6.1 Operation**

There is no immediate intention to operate the Sharesave Plan.

### **10.6.2 Eligibility**

All UK employees and full-time directors of the Company and any participating subsidiary may participate in this Plan. However, the Directors may set a qualifying period of continuous employment (which cannot exceed five years) for eligibility. When this plan is operated, all eligible employees must be invited to participate. Other employees may also be invited to participate at the discretion of the Directors.

### **10.6.3 Savings contract**

Under this plan, participants are granted an option over Ordinary Shares and must enter into a savings contract, in connection with the option, to save between £5 and £500 per month by deduction from their salary. Ordinary Shares can normally only be acquired with the amount saved (plus any interest or bonus).

### **10.6.4 Option price**

The Directors set the option price which normally must not be less than 80 per cent. of the market value of an Ordinary Share on the business day before the date of grant or the average market value over the five preceding business days.

### **10.6.5 Exercise of options**

Options can normally only be exercised for six months starting three or five years after the start of the savings contract.

Options may, however, be exercised early in certain circumstances. These include, for example, an employee leaving because of ill-health, retirement, death or redundancy or where the company or business for which the participant works leaves the Group. On cessation of employment for other reasons, options will normally lapse.

Options may also be exercised early in the event of a change of control of the Company, including a court sanctioning a scheme of arrangement, a compromise, or on a winding-up of the Company if certain conditions are met.

### **10.6.6 US tax qualified options**

The plan allows for the grant of options on a broadly similar basis to that described above which qualify for favourable tax treatment in the US. These are exercised at the end of a purchase period of no more than 27 months from the date of grant. The value of shares, at grant, is limited to \$25,000 and the exercise price of the option must not be less than 85 per cent. of the price on the date of grant or on the date of exercise or the lesser of the two.

## **10.7 Principal features of the Share Incentive Plan**

### **10.7.1 Eligibility**

All employees and executive directors of the company and any participating subsidiary may participate in this plan. The Directors may set a qualifying period of continuous employment (which cannot exceed 18 months) for eligibility. When this plan is operated, all eligible employees must be invited to participate. In addition, the Directors may offer participation to any other employees.

### **10.7.2 Operation**

There is no immediate intention to operate the Share Incentive Plan.

Employees may be offered free, partnership and/or matching shares, as the Directors decide, each time they operate the plan. The plan may also offer dividend reinvestment. This will allow the Directors to implement the plan in the way they consider most appropriate for the Company.

The plan operates in conjunction with a trust, which will hold Ordinary Shares on behalf of participants.

### **10.7.3 Free shares**

Participants can be given free Ordinary Shares (“**free shares**”) with a market value limited by the tax legislation to, currently, £3,600 a year. The free shares must generally be offered to all eligible employees on similar terms but the number of free shares can vary by reference to the participant’s remuneration, length of service or hours worked. The Directors may make the awards of free shares subject to performance targets.

Free shares must generally be held in trust for between three and five years. The Directors may require free shares to be forfeited if the participant leaves employment within three years other than through death, retirement, redundancy, injury or disability, or his employing company or business being sold out of the Group.

### **10.7.4 Partnership shares**

Employees may be offered the opportunity to buy Ordinary Shares (“**partnership shares**”) by deduction from their pre-tax salary. Under current legislation, they can buy up to £1,800 in each tax year or, if less, 10 per cent. of salary.

The trustee may use the deductions from participants’ salary to buy partnership shares on their behalf immediately. Alternatively, it may accumulate them for a period of up to one year and then use them to buy partnership shares at the end of the period. If this happens, participants will be allocated partnership shares by reference to the lower of their market value at the beginning or end of the period.

Participants can stop their salary deductions at any time. Any sums repaid will be subject to tax.

Participants can also withdraw partnership shares from the plan at any time, although there are tax advantages if the partnership shares are retained in the plan.

### **10.7.5 Matching Shares**

The Directors may award additional free Ordinary Shares (“**matching shares**”) on a matching basis to participants who buy partnership shares. Under the current legislation, up to a maximum of two matching shares can be offered for each partnership share. Matching shares must be offered on the same basis to each participant purchasing partnership shares on each occasion. Matching shares must generally be held in trust for a holding period of between 3 and 5 years. The Directors may decide that matching shares will be forfeited on the same basis as free shares or if the corresponding partnership shares out of the plan or leaves employment.

### **10.7.6 Dividends**

Cash dividends paid on Ordinary Shares held in the plan may be reinvested in Ordinary Shares up to certain limits set out in the legislation.

### **10.7.7 Voting rights**

The trustees can only vote shares held in the plan in accordance with participants’ instructions.



## 10.8 Annual bonus

All employees, including Executive Directors, will be eligible to participate. The bonus will be based on a balanced commercial scorecard, including at least 60 per cent. financial performance measures, with the rest based on operational performance measures. At least a third of the bonus will be subject to deferral into shares for at least two years. Malus and clawback provisions will apply in broadly the same way as described for LTIP Awards.

## 10.9 Shareholding guidelines

Executive Directors will be encouraged to build their personal shareholding to align interests with the interests of shareholders. In-employment guidelines will be 200 per cent. of salary, to be built up over a period of five years for new joiners. This guideline amount should be maintained for two years following cessation.

## 11 Subsidiaries, Joint Ventures and Associates

Following completion of the Pre-IPO Reorganisation, the Company will be the principal holding company of the Group and the principal subsidiaries and subsidiary undertakings of the Company will be as follows:

<u>Name</u>	<u>Country of incorporation and registered office</u>	<u>Percentage of shares held following completion of the Pre-IPO Reorganisation</u>	<u>Principal activity</u>
Alphawave IP Inc.	Canada	100%	Operating company
Alphawave IP Corp.	US	100%	Operating company

## 12 Material Contracts

The following contracts (not being entered into in the ordinary course of business) have been entered into by the Company or another member of the Group within the two years immediately preceding the date of this Registration Document and are or may be material.

### 12.1 BoM Facility

**12.1.1** The Group has a credit facility with Bank of Montreal, which includes an approved operating line that can be drawn upon to a maximum of \$8,150,000. This facility comprises:

- a \$1,000,000 operating facility, for general operating requirements;
- a \$7,000,000 asset and capital financing facility, to finance up to 100 per cent. of pre-shipment costs of export sales contracts and/or purchase orders; and
- \$150,000, in aggregate, across corporate credit card and treasury (interest and foreign exchange risk) hedging facilities.

Amounts can be borrowed under the operating and the asset and capital financing facilities in CaD or USD, and they incur interest at the Canadian prime rate or US base rate (as applicable) plus 1.50 per cent. Amounts borrowed under the BoM Facility are guaranteed by Export Development Canada and are repayable upon demand. The Group is subject to financial covenants and periodic reporting requirements pursuant to the terms of the BoM Facility. In connection with entry into the BoM Facility, the Group has granted Bank of Montreal conventional security interest in assets of the Group.

At 31 December 2020, the Group's borrowed balance under the BoM Facility was nil.

## 13 Legal Proceedings and Investigations

There are no governmental, legal or arbitration proceedings (including any such proceedings which are pending or threatened or of which the Group is aware) during the 12 months preceding the date of this Registration Document which may have, or have had in the recent past, a significant effect on the Company's and/or the Group's financial position or profitability.

## **14 Related Party Transactions and Other Arrangements**

Details of related party transactions entered into by members of the Group during the period covered by the historical financial information contained in this Registration Document are set out in note 25 of Part B of Part IX: “*Historical Financial Information*”.

Save as set out above, there are no related party transactions that were entered into during the period covered by the Consolidated Historical Financial Information.

## **15 No Significant Change**

**15.1** There has been no significant change in the financial position of the Company since 9 December 2020, being the date of its incorporation.

**15.2** There has been no significant change in the financial position or financial performance of the Group since 31 December 2020, being the date to which the audited consolidated financial information of the Group as set out in Part B of Part IX: “*Historical Financial Information*” was published.

## **16 Auditors**

The auditors of the Company for the period from incorporation on 9 December 2020 to the present have been KPMG LLP, Chartered accountants, whose registered address is at 15 Canada Square, London E14 5GL.

## **17 Consents**

**17.1** KPMG LLP, a member firm of the Institute of Chartered Accountants in England and Wales and whose registered address is at 15 Canada Square, London E14 5GL, has given and has not withdrawn its written consent to the inclusion of the report included in Part A of Part IX: “*Historical Financial Information*”, and has authorised the contents of its report for the purposes of Rule 5.3.2R(2)(f) of the Prospectus Regulation Rules and Item 1.3 of Annex 1 of Commission Delegated Regulation (EU) 2019/980 as it forms part of retained EU law as defined in the European Union (Withdrawal) Act 2018.

## **18 General**

The financial information contained in this Registration Document does not amount to statutory accounts within the meaning of section 434(3) of the Companies Act 2006.

## **19 Documents Available for Inspection**

Copies of the following documents are available for inspection during usual business hours (Saturdays, Sundays and public holidays excepted) for a period of 12 months following the date of this Registration Document at the offices of Linklaters LLP at One Silk Street, London EC2Y 8HQ and at the Company’s registered office at 6th Floor, 65 Gresham Street, London, EC2V 7NQ, United Kingdom and on the Group’s website at [www.awaveip.com](http://www.awaveip.com):

- (a) the Articles of Association;
- (b) the consent letter referred to in “Consents” in paragraph 17 of this Part X: “*Additional Information—Consents*”;
- (c) the reports of KPMG LLP which are set out in Part A of Part IX: “*Historical Financial Information*”; and
- (d) this Registration Document.

This Registration Document will be published in electronic form and be available on the Group’s website at [www.awaveip.com](http://www.awaveip.com).

Dated: 22 April 2021

## PART XI DEFINITIONS

### Definitions

The following definitions apply throughout this Registration Document unless the context requires otherwise:

<b>Admission</b>	the potential admission of the Ordinary Shares to the standard listing segment of the Official List and to trading on the London Stock Exchange's main market for listed securities becoming effective in accordance with, respectively, the Listing Rules and the Admission and Disclosure Standards published by the London Stock Exchange
<b>AI</b>	artificial intelligence
<b>Articles of Association or Articles</b>	the articles of association of the Company
<b>Alphawave or Group</b>	the Company and its consolidated subsidiary undertakings, or (where referring or relating to periods prior to the Pre-IPO Reorganisation), Alphawave IP Inc. and its consolidated subsidiary undertakings
<b>Alphawave IP Inc.</b>	Alphawave IP Inc., a company incorporated under the laws of the Province of Ontario, Canada
<b>Audit Committee</b>	the audit committee of the Board
<b>backlog</b>	the value of contracted revenue that has yet to be recognised, as at the relevant date
<b>Board or Directors</b>	the board of directors of the Company
<b>Board Observer</b>	a person entitled to receive notice of, and attend and speak, but not to vote at, meetings of the Board
<b>bookings</b>	the total value of projected licence fee, NRE, support and maintenance and royalties arising from customer contracts entered into in the period then ended
<b>capex or capital expenditure</b>	comprises "Purchase of property and equipment and purchase of intangible assets" as presented in the Group's consolidated statement of cash flows
<b>CEO</b>	the chief executive officer of the Company
<b>Companies Act</b>	the Companies Act 2006, as such act may be amended, modified or re-enacted from time to time
<b>Company</b>	Alphawave IP Group plc
<b>Consolidated Historical Financial Information</b>	the Group's consolidated financial information as at and for the year ended 31 December 2020, as at and for the seven months ended 31 December 2019, as at and for the year ended 31 May 2019 and as at and for the year ended 31 May 2018
<b>CREST</b>	the UK-based system for the paperless settlement of trades in listed securities, of which Euroclear UK & Ireland is the operator
<b>CREST Regulations</b>	the Uncertified Securities Regulations 2001 (512001/3755)
<b>Disclosure Guidance and Transparency Rules</b>	the disclosure guidance and transparency rules produced by the FCA and forming part of the handbook of the FCA as, from time to time, amended
<b>EBITDA</b>	reported profit before tax, less interest income, plus interest expense and depreciation
<b>EBITDA Margin</b>	EBITDA, divided by revenue, expressed as a percentage
<b>Equity Incentive Plan</b>	the Alphawave IP Employee Incentive Plan which is described in paragraph 10.2 of Part X: " <i>Additional Information</i> "
<b>EU</b>	the European Union

<b>Executive Directors</b>	the executive Directors of the Company
<b>FCA</b>	the UK Financial Conduct Authority
<b>FRC</b>	the Financial Reporting Council
<b>FSMA</b>	the Financial Services and Markets Act 2000, as amended
<b>IFRS</b>	UK-adopted international accounting standards
<b>KPMG</b>	KPMG LLP
<b>Listing Rules</b>	the rules relating to admission to the Official List made under section 73A(2) of FSMA
<b>London Stock Exchange</b>	London Stock Exchange plc
<b>Long Term Incentive Plan</b>	the Alphawave long term incentive plan which is described in paragraph 10.4 of Part X: “ <i>Additional Information</i> ”
<b>LTIP Awards</b>	awards granted under the Long Term Incentive Plan
<b>Nomination Committee</b>	the nomination committee of the Board
<b>Non-Executive Directors</b>	the non-executive Directors of the Company
<b>Official List</b>	the Official List of the Financial Conduct Authority
<b>Ordinary Shares</b>	the ordinary shares in the capital of the Company, having the rights set out in the Articles
<b>PLC/Inc Loan Agreement</b>	the loan agreement entered into between the Company and Alphawave IP Inc., pursuant to which Alphawave IP Inc. advanced the Company a non-interest bearing loan of \$500,000 with a repayment date of 1 September 2021 (or such later date as may be agreed in writing) for funding expenses in connection with operational set up of the Company and any potential Admission
<b>PR Regulation</b>	Delegated Regulation (EU) 2019/980 of 14 March 2019 supplementing the Prospectus Regulation, as it forms part of retained EU law
<b>Pre-IPO Reorganisation</b>	the proposed reorganisation of the Group pursuant to which the Company will acquire (directly or indirectly) 100 per cent. of the issued share capital of Alphawave IP Inc.
<b>Product Partnership</b>	relationship with Wise Road Capital in relation to IP sales and development activities in China and other Asia-Pacific region countries
<b>Prospectus Regulation Rules</b>	the prospectus rules published by the FCA under section 73 A of FSMA
<b>Qualified Institutional Buyers or QIBs</b>	has the meaning given by Rule 144A under the US Securities Act
<b>Remuneration Committee</b>	the remuneration committee of the Board
<b>retained EU law</b>	has the meaning given to it in the Withdrawal Act
<b>Senior Management or Senior Manager</b>	members of the Group’s senior management team, details of whom are set out in Part VI: “ <i>Directors, Senior Management and Corporate Governance</i> ”
<b>Share Incentive Plan</b>	the Alphawave share incentive plan which is described in paragraph 10.7 of Part X: “ <i>Additional Information</i> ”
<b>Shareholders</b>	the holders of Ordinary Shares
<b>Sharesave Plan</b>	the Alphawave sharesave plan which is described in paragraph 10.6 of Part X “ <i>Additional Information</i> ”
<b>Trust</b>	the Alphawave employee benefit trust
<b>TSMC</b>	Taiwan Semiconductor Manufacturing Company
<b>United Kingdom or UK</b>	the United Kingdom of Great Britain and Northern Ireland

<b>UK Corporate Governance Code</b>	the UK Corporate Governance Code published by the Financial Reporting Council and dated July 2018, as amended from time to time
<b>UK Prospectus Regulation</b>	the Prospectus Regulation (EU) 2017/1129, as it forms part of retained EU law
<b>United States or US</b>	the United States of America, its territories and possessions, any State of the United States of America and the District of Columbia
<b>US GAAP</b>	generally accepted accounting principles in the United States
<b>US Securities Act</b>	the United States Securities Act of 1933
<b>Withdrawal Act</b>	the European Union (Withdrawal) Act 2018 (as amended)

**PART XII**  
**GLOSSARY**

<b>112G</b>	112 gigabit per second connectivity transmission speed for transmission of data
<b>224G</b>	224 gigabit per second connectivity transmission speed for transmission of data
<b>ASIC</b>	application-specific integrated circuit (or system on chip (“ <b>SO</b> C”)) that integrates all or most components of a computer or other electronic system
<b>CDR</b>	clock-data recovery, component of a connectivity process, which extracts timing information from a serial data stream to allow the receiving circuit to decode the transmitted symbols
<b>chiplet</b>	smaller modular pieces of silicon, or chiplets, utilised in a design technique to break integrated circuits into smaller pieces that can be individually designed and integrated together using die-to-die interfaces
<b>CPU</b>	central processing unit, or microprocessor, of electronic circuitry that executes instructions comprising a programme
<b>CXL</b>	compute express link, open standard interconnection for high-speed central processing unit-to-device and CPU-to-memory, for data centres
<b>DSP</b>	digital signal processing capabilities, enabled to perform a wide variety of signal processing operations
<b>EDA</b>	Electronic design automation tools
<b>FinFET</b>	fin field-effect transistor, semiconductor gate design for transmission of information
<b>form factor</b>	design aspect that defines and prescribes the size, shape and other physical specifications of hardware components
<b>FPGA</b>	field programmable gate arrays, an integrated circuit designed to be configured by a customer or a designer after manufacturing
<b>GPU</b>	graphics processing unit, the specialised electronic circuit utilised in the creation of images for output to a display device
<b>IaaS</b>	infrastructure-as-a-service, comprising the provision of virtualised computing resources via cloud computing
<b>IDM</b>	integrated device manufacturer, a semiconductor company which designs, manufactures, and sells integrated circuit product
<b>IEEE</b>	Institute of Electrical and Electronics Engineers, an electronics industry body, including educational and technical advancement of electrical and electronic engineering, telecommunications, computer engineering and allied disciplines, including standardisation
<b>IoT</b>	internet of things, network of physical objects that are embedded with sensors, software and other technologies for the purpose of connecting and exchanging data with other devices and systems over the internet
<b>IP / silicon IP</b>	intellectual property core, IP core, or IP block is a reusable unit of logic, cell, or integrated circuit layout design
<b>M2M</b>	machine-to-machine connectivity, permitting IoT data exchange without human interface or interaction
<b>modulation schemes</b>	specific technique of signal modulation when converting data into electrical signals for transmission
<b>node</b>	technology nodes, or process technologies, referring to the specific semiconductor manufacturing process and its design rules, generally designated by the process’s minimum feature size (in nanometres)

<b>NRE</b>	non-recurring engineering, in reference to revenue earned in respect of one-time early-stage customer services including for research, design, development and testing
<b>NVMe</b>	non-volatile memory interface for accessing external non-volatile storage media utilising PCIe connectivity standard
<b>OEM</b>	original equipment manufacturer that produces systems, parts or equipment utilised in the production of another device or product
<b>OIF</b>	Optical Internetworking Forum, an electronics industry body promoting standardisation, including for optical networking products, network processing elements, and component technologies
<b>PAM</b>	pulse amplitude modulations, form of signal modulation where the message information is encoded in the amplitude of a series of signal pulses, such as PAM2 (aka NRZ), PAM4, PAM6 and PAM8
<b>PCIe</b>	PCI-Express, a high-speed serial computer expansion bus standard
<b>PHY</b>	physical interface or “physical layer” processor interface in an integrated circuit
<b>PLL</b>	phase-locked loop, component of a connectivity block providing a control system that generates an output signal whose phase is related to the phase of an input signal
<b>SerDes</b>	wired connectivity component to interface between integrated circuits, which converts parallel streams of data (used as connectivity within integrated circuits) to serial streams (used in longer-distance transmission outside chips) and vice versa
<b>SIG</b>	Special Interest Group, an electronics industry consortium responsible for specifying the Peripheral Component Interconnect, PCI-X, and PCI Express computer buses
<b>SIP</b>	silicon in package, format for packaging multiple smaller dies in a SOC
<b>SOC</b>	system on chip (or ASIC) that integrates all or most components of a computer or other electronic system
<b>Tier-1</b>	semiconductor and component manufacturers that supply parts or systems directly to OEMs
<b>wafer</b>	in the fabrication of integrated circuits, the thin slice of semiconductor (such as a crystalline silicon) in and upon which microelectronic devices are built

