24 March 2021

Keywords Studios PLC ("Keywords Studios", "Keywords", the "Group")

Full year results for the year to 31 December 2020

Strong performance, despite COVID-19 constraints

Keywords Studios, the international technical and creative services provider to the global video games industry, today announces its full year results for the year to 31 December 2020.

Financial Overview:

Results for the year to 31 December 2020	**2020**	**2019**	**% change**
Group revenue	**€373.5m**	**€326.5m**	**+14.4%**
Organic Revenue growth[1]	**+11.7%**	**+15.5%**	
Adjusted EBITDA[2]	**€74.2m**	**€57.6m**	**+28.8%**
Adjusted EBITDA margin	19.9%	17.6%	
EBITDA[2]	€66.8m	€43.4m	+53.9%
Adjusted profit before tax[3]	**€55.0m**	**€40.9m**	**+34.5%**
Profit before tax	€32.5m	€17.4m	+86.8%
Adjusted earnings per share[4]	**60.93c**	**48.78c**	**+24.9%**
Earnings per share	30.32c	15.23c	+99.1%
Total dividend per share	**0.0p**	**0.58p**	
Adjusted cash conversion rate[5]	**97.2%**	**80.2%**	
Net cash / (net debt)	**€102.9m**	**(€17.9m)**	

Highlights:

Strong revenue growth, despite COVID-19 disruptions, with healthy market backdrop

- Organic Revenue up 11.7% despite operational and content flow constraints in some service lines, particularly Testing, Audio and Localization
- Keywordians worked hard to deliver on robust demand, whilst the video games industry enjoyed significant increases in players and gameplay during lockdowns
- At the end of 2020, c. 6,900 Keywordians were working from home, representing a dramatic change in our working environment

Increased profitability and cash generation driving strong balance sheet and liquidity

- Adjusted EBITDA up 28.8% to €74.2m, with margin up 2.3% pts to 19.9% (2019: 17.6%)
- Strong cash conversion with Adjusted Free Cash Flow[6] of €53.4m (2019: €32.8m) and an Adjusted Cash Conversion rate of 97.2% (2019: 80.2%)
- Strong cash generation and €110m placing in May led to net cash of €102.9m (2019: €17.9m net debt) and a €100m undrawn Revolving Credit Facility, despite €39.9m net cash spend on acquisitions in the year

Delivered on our acquisition strategy following placing in May

- Seven highly complementary acquisitions announced in 2020, with total maximum consideration of up to €97.2m:
  - Maverick Media, g-Net and Indigo Pearl added significant scale to Marketing Services
  - Coconut Lizard, High Voltage, and Heavy Iron brought three high quality studios into Game Development
  - Jinglebell enhanced our offering in Audio
- In line with our strategy to strengthen Game Development and Marketing Services and become the suppliers of choice for our global client base, whilst selectively acquiring in other service lines
- Exited the year with Pro Forma Revenue[7] of €409.2m (2019: €333.6m)
- Recent post year end acquisition of an 85% share in Tantalus provides entry point into the Australian Game Development market, for total maximum consideration of up to US$46.8m
- Net cash and undrawn RCF provide significant resources for further selective acquisitions

Senior Management Update

- Sonia Sedler appointed as COO on 18 January 2021, to lead the organic business growth strategy and the operational performance of the business, bringing deep experience in driving operational excellence across an international footprint and delivering world class client services
- On 15 March 2021 the Board announced that Andrew Day, CEO, would take a temporary leave of absence from the business for health reasons, with immediate effect
- During this period, Jon Hauck, CFO, and Sonia Sedler, COO, have been appointed as joint interim CEOs, supported by the Group’s strong service line and regional management team. The Board will continue to determine the Group’s strategic direction
- Andrew Day is expected to return to his position following a period of recovery and he will remain a member of the Board of Directors

Strong demand in 2021 and beyond, supported by new generation console launches

- Trading in Q1 has started well with the momentum in the second half continuing into 2021, despite the ongoing COVID-19 related constraints
- Stronger demand across our service lines following newly launched PlayStation 5 and Xbox X|S Series consoles, alongside the ongoing development of new subscription based and streaming platforms
- Publishers expected to focus more on developing new content, to keep gamers engaged following increases in both numbers of gamers and gameplay
- With the continued strong trend towards outsourcing, Sonia Sedler brings significant experience in large, global outsourced professional services
- Well-funded to deliver on our value accretive acquisition strategy and continue to actively engage with selected targets from a healthy pipeline of opportunities
- The Board intends to resume its progressive dividend policy in 2021

Jon Hauck, Joint Interim CEO of Keywords Studios commented:

“The Group achieved a strong performance in a year that was heavily impacted by the global pandemic and, on behalf of the Board, we are prouder than ever of the dedication of all our talented Keywordians through this challenging year. We reacted with agility to fundamental changes to our ways of working, whilst continuing to deliver the excellent service that our clients have come to expect.

“The Group’s strong position in the buoyant video games market, our increasingly sought after 9,000 people strong resource base, a robust business model that has proven capable of continued growth in the face of the pandemic, together with our financial strength, places us well for further growth and long-term success.

"As we enter 2021, we are very confident in the Group's opportunity for growth due to the continued trend towards outsourcing and an increased focus on content creation in a growing video games market. This combined with our ability to increase our market share and to selectively acquire high quality businesses will allow us to further cement our position as the 'go to' provider of technical and creative services to a global client base."

A presentation of the full year results will be made to analysts at 9.30am this morning and the live webcast can be accessed via this link: http://bit.ly/KWS_FY20_results. To register for dial in access, or for any enquiries, please contact Charles Hirst or Isabella Grace at MHP Communications on +44 7595 461 231 / +44 7860 821978 or email keywords@mhpc.com.

For further information, please contact:

Keywords Studios (www.keywordsstudios.com) Jon Hauck, Joint Interim Chief Executive Officer Sonia Sedler, Joint Interim Chief Executive Officer Joseph Quinn, Investor Relations	**+353 190 22 730**
Numis (Financial Adviser, Nominated Adviser and Corporate Broker) Stuart Skinner/Kevin Cruickshank/Will Baunton	**020 7260 1000**
MHP Communications (Financial PR) Katie Hunt/James Midmer/Charles Hirst	**020 3128 8100** keywords@mhpc.com

About Keywords Studios (www.keywordsstudios.com)

Keywords Studios is an international technical services provider to the global video games industry. Established in 1998, and now with over 65 facilities in 22 countries strategically located in Asia, Australia, the Americas and Europe, it provides integrated art creation, marketing services, software engineering, testing, localization, audio and customer care services across more than 50 languages and 16 games platforms to a blue-chip client base of over 950 clients across the globe.

Keywords Studios has a strong market position, providing services to 23 of the top 25 most prominent games companies, including Activision Blizzard, Bandai Namco, Bethesda, Electronic Arts, Konami, Microsoft, Riot Games, Square Enix, Supercell, TakeTwo, Epic Games and Ubisoft. Recent titles worked on include Call of Duty: Modern Warfare, Anthem, Star Wars Jedi: Fallen Order, Assassin's Creed Odyssey, Valorant, League of Legends, Fortnite, Clash Royale and Doom Eternal. Keywords Studios is listed on AIM, the London Stock Exchange regulated market (KWS.L).

The Group reports a number of alternative performance measures (APMs) to present the financial performance of the business which are not GAAP measures as defined by International Financial Reporting Standards (IFRS). The Directors believe these measures provide valuable additional information for the users of the financial information to understand the underlying trading performance of the business. In particular, adjusted profit measures are used to provide the users of the accounts a clear understanding of the underlying profitability of the business over time. For full definitions and explanations of these measures and a reconciliation to the most directly referenceable IFRS line item, please refer to the APMs section at end of the statement.

[1] *Organic Revenue at constant exchange rates is calculated by adjusting the prior year revenues, adding pre-acquisition revenues for the corresponding period of ownership, and applying the prior year foreign exchange rates to both years.*

[2] *EBITDA comprises Operating profit as reported in the Consolidated statement of comprehensive income, adjusted for amortisation and impairment of intangible assets, depreciation, and deducting bank charges. Adjusted EBITDA comprises EBITDA, adjusted for share option expense, costs of acquisition and integration and non-controlling interest. In order to present the measure consistently year-on-year, the impact of COVID-19 government subsidies claimed and investment income are also excluded.*

[3] *Adjusted profit before tax comprises Profit before taxation as reported in the Consolidated statement of comprehensive income, adjusted for share option expense, costs of acquisition and integration, amortisation and impairment of intangible assets, non-controlling interest, foreign exchange gains and losses, and unwinding of discounted liabilities. In order to present the measure consistently year-on-year, the impact of COVID-19 government subsidies claimed and investment income are also excluded.*

4 *Adjusted earnings per share comprises the adjusted profit after tax divided by the non-diluted weighted average number of shares as reported. The adjusted profit after tax comprises the adjusted profit before tax, less the tax expense as reported in the Consolidated statement of comprehensive income, adjusted for the tax impact of the adjusting items in arriving at adjusted profit before tax.*

5 *Adjusted cash conversion rate is the adjusted free cash flow as a percentage of the adjusted profit before tax.*

6 *Adjusted free cash flow is a measure of cash flow adjusting for capital expenditure that is supporting growth in future periods (as measured by capital expenditure in excess of maintenance capital expenditure). In order to present the measure consistently year-on-year, the impact of COVID-19 government subsidies claimed is also excluded.*

7 *Pro Forma Revenue is calculated by adding pre-acquisition revenues of current year acquisitions to the current year revenue numbers, to illustrate the size of the Group had the acquisitions been included for a full financial year.*

Chairman's Statement 2020

This time last year no one predicted the difficult conditions brought about by the pandemic. Yet, many of the strengths of Keywords' business model have shone through, as it moved quickly to remote working, putting the wellbeing of our people first, and delivering the projects entrusted to us.

The flexibility shown by management and staff alike in adapting to new business practices, the continued strong demand for our services and the discipline shown over managing our cost base, enabled underlying revenues, margin and profit growth. This was despite organic growth having been held back by the COVID-19 production constraints that faced the Group.

Early in the crisis, the Board recognised the potential that this crisis gave us for enhanced expansion. Accordingly, €110m was raised in an equity placing, well supported by shareholders, to provide the Company with flexibility to capitalise on the strong pipeline and a unique opportunity in the market.

This support was vindicated both by the Group’s performance in the year and by the eight acquisitions since the placing, which further strengthen our Game Development, Marketing and Audio services in line with our strategy. In other ways, the teams in Keywords very much "stood up to the plate", as shown in the annual employee survey. The results showed a welcome appreciation of the efforts made to improve communication, staff recognition and engagement. This remains a focus, as does our Responsible Business agenda more broadly.

We were fortunate to have held our annual Strategy Conference in London in February 2020 before the pandemic really took hold. Thereafter the Board has not been able to make its customary visits to overseas locations and so much reliance has been placed on technologies such as Zoom and Teams to facilitate virtual face-to-face contact. It is our fervent hope that we shall be allowed to meet our colleagues in person before long and we look forward to the enhanced camaraderie and informal intellectual stimulation that this brings.

The video games industry has benefited from an expanded gaming population as more people have spent more of their leisure time on gaming. For our part, we continue to build scale in our existing activities and to identify new facets of video games service infrastructure that we can assist our clients with, supporting our continued expansion within video games. In addition, we continue to examine opportunities in adjacent sectors and our work in the broader media and entertainment sector with Netflix, Amazon, Apple TV+ and others has increased accordingly. We will continue to review opportunities that supplement our growth in video games to ensure we take advantage of the increasing convergence of content and leverage our mastery of the most interactive of all mediums, video games.

Every year I look back and think "we have done pretty well, but it could have been better". It is this determination for continuous improvement that helps underpin the Keywords' culture which views each year as a stepping stone to the next.

The appointment, in January, of a top class Chief Operating Officer, Sonia Sedler, with relevant experience in global outsourced professional services, is another important step in the quest to continually improve the Group’s operational excellence. With around 9,000 employees in 22 different countries Keywords is becoming a sizeable enterprise and the internal operational infrastructure needs to be fit for purpose. I am delighted to welcome Sonia who in the short period since her appointment in mid-January has already started to make an appreciable difference.

On 15 March 2021, we announced that we have agreed for Andrew Day, CEO, to take a temporary leave of absence from the business for health reasons, with immediate effect. During the interim period, Jon Hauck, who has become a key member of the senior team driving the Group’s strategic development since he joined in 2019 as CFO, and Sonia Sedler have been appointed as joint interim CEOs by the Board, ably supported by the Group’s strong service line and regional management teams. Whilst Andrew has been a driving force in building Keywords, a key part of his role has been the development of an exceptional leadership team who we are confident are well equipped to continue to both drive the Company's strategy forward and manage the Group's operational performance. Andrew is expected to return to his position following a period of recovery and he will remain a member of the Board of Directors.

As mentioned earlier, our management and staff have both performed admirably during an unprecedented year and the financial results are a testimony to the commitment of everyone involved, all of whom deserve a round of applause. Interestingly some of the new ways of working have also identified opportunities to improve the way we do things for the benefit of both ourselves and our clients.

Having previously suspended our dividend programme, we continue to expect to resume our progressive dividend policy in the 2021 financial year.

On behalf of the Board, we are extremely appreciative of the efforts across the business in the past year. This dedication, combined with our strong market position and scale, leaves Keywords well placed in a buoyant video games market which is driving increased demand for content creation and a structural trend towards outsourcing. With a strong balance sheet and an excellent leadership team in place, we look forward to the coming year with confidence as we continue to actively review a healthy pipeline of acquisition opportunities and cement our status as the 'go to' global video games services platform.

Ross Graham

Chairman

CEO Review

Strong performance, despite COVID-19 constraints

Keywords delivered a strong performance in FY2020, with revenues up by 14.4% to €373.5m, or by 11.7% on an organic constant currency basis. This performance reflected our team's hard work to deliver on the continued robust demand for our services, despite significant COVID-19 related production constraints which delayed the flow of some content in certain service lines. We are prouder than ever of the dedication of all our talented Keywordians through this challenging year, as we reacted with agility to fundamental changes to our ways of working, whilst continuing to deliver the excellent service which our clients have come to expect.

The Group's global footprint meant that we first experienced disruption from the COVID-19 pandemic in China from January, before experiencing a broader shutdown of the majority of its studios across the Group from March. Having learnt from our experience early on in China, we were able to quickly move the vast majority of our business to a remote working model. However, this was more of a challenge in our Testing and Audio businesses which had previously required work to be performed in secure or physical studios. During this period, the Group received €9.2m of COVID-19 related subsidies, largely in the Americas, which supported the continued employment of staff despite the interruption to the flow of work. The Group has since been able to facilitate and agree alternative solutions with our clients, allowing us to provide remote testing services in a work from home model and undertake some audio recordings virtually. This enabled us to stabilise trading at the end of the first half of the year and deliver 15.0% Organic Revenue growth in the second half of the year (H1: 8.0%), despite some ongoing operational constraints. Having exited 2020 with the majority of our business still working remotely, these workarounds are proving highly effective and will enable us to support customers for as long as remote working is needed.

Demand remained robust throughout the year and the video games industry has enjoyed significant increases in both player acquisition and gameplay during lockdowns. However, our business relies on the production of content and both we, and publishers, have been held back by operational constraints which have limited the flow of new content, as set out in more detail in our service line reviews. We do expect that, with the benefit of increased players and funds following recent demand, the current year will see publishers focus more on developing new content to keep gamers engaged.

Game Development continued its strong performance with Organic Revenues growing by 17.1% which, combined with recent acquisitions, positions it as a market leader of some scale with Pro Forma Revenues of €98m at the end of 2020 (before the inclusion of Heavy Iron and Tantalus Media that completed in January and March 2021, respectively). This excellent performance was delivered despite strong comparatives as we moved into the second half and the obvious challenges of recruiting and managing complex projects in a work from home model. Game Development received significant further investment during the year as we continue to build this business to scale across the major geographic territories. We were pleased, therefore, to be able to welcome to the Group through acquisition, Coconut Lizard (Newcastle, UK), High Voltage (Chicago and New Orleans, USA), Heavy Iron (Los Angeles, USA) and our recent acquisition Tantalus that gives us our first market entry into the Australian game development market. We enter 2021 with Game Development being our largest service line and, with a healthy acquisitions pipeline, we hope to see further development of this service line through the year.

Our Art Creation & Marketing service line also performed well in the period, despite some significant early COVID-19 impact particularly affecting our businesses in China and India. Our Marketing Services businesses have continued to benefit from ongoing investment in acquisitions and we were delighted to welcome Maverick Media in London, UK, g-Net (Los Angeles, USA) and Indigo Pearl (London, UK) into this group during the year. As a result, Marketing Services has now achieved sufficient scale, with Pro Forma Revenues of c. €35m and over 190 people employed globally across 8 studios, and we intend to report on it as a separate service line from the first half of 2021.

As expected, our Player Support business returned to growth during the year benefitting from new business wins and some increase in demand from certain of its existing contracts as they benefited from increased game playing activity since lockdown commenced.

Whilst demand was strong for most of our services, COVID-19 related operational and market disruption was particularly apparent in our Localization service line, where the flow of content into the business was affected, and in our Testing and Audio service lines, where the use of facilities was significantly curtailed. However, the strong operational response to these challenges led to significantly higher Organic Revenue growth in Functional Testing and Audio in H2, of 20.6% (H1: 10.7%) and 8.7% (H1: 0.5%) respectively, while our Localization Testing business delivered growth of 5.9% and Localization returned to growth in H2. As a result, we enter 2021 in a much better position and do not expect to be impacted in the same way, despite the continued COVID-19 related challenges ahead.

The Group’s Adjusted EBITDA increased by 28.8% to €74.2m, representing a 2.3% pts improvement in margin to 19.9%. This was driven by some operational leverage despite the recruitment constraints experienced in the year and continued good cost control, together with a reduction in certain costs due to COVID-19, such as travel and marketing costs.

We are pleased that this profit performance has also resulted in strong cash generation, with €53.4m of Adjusted Free Cash Flow representing a 97.2% Adjusted Cash Conversion rate in the period (2019: 80.2%), albeit 2020 included some phasing benefits as a result of COVID-19. This demonstrates the strong cash generating characteristics of the business in a challenging period which provides the Group with further resources to fund its acquisition strategy.

We enter 2021 very confident in the Group’s opportunity for growth through a continued trend towards outsourcing, an increased focus on content creation in a growing video games market, and in our ability to increase our market share.

Delivering on our strategy

Structural trends to outsourcing driving organic growth

Keywords strategy is to become the ‘go to’ provider of technical and creative services to the video games industry in a market where increased outsourcing has become a structural trend.

Through successful development both organically and through acquisitions, the Group increasingly stands out as the leader in a market characterised by highly fragmented, local, single-service providers, despite the growing needs of the major video games publishers and developers who act globally.

These customers are increasingly turning to external development and support services as a way of managing the demands of generating more sophisticated content whilst limiting their fixed costs, and so they require the quality, flexibility, and security of a full service provider of scale.

New consoles spearheading increased demands for content and support

Demand for video games has accelerated during the pandemic, with International Data Corporation (IDC) estimating that global revenues grew by 20% in 2020. For 2021, this is being driven forward by the launch of next generation games consoles, which is expected to refresh the entire console based gaming sector after a seven year run of the PS4 and Xbox One console generation. This is likely to result in an enlarged market for video games content over the coming years and an associated demand for new content creation, which in turn drives demand for Keywords services. Further development of new and existing video games streaming platforms will also increase demand for content and its ongoing support in live operation.

Keywords provides services to the leading game developers and publishers across all platforms including mobile, console, PC, streaming, and VR. The Group, therefore, benefits from the secular trends in gaming, with exposure to all the major gaming companies and all the leading platforms without the ‘hit or miss’ risk often associated with an individual platform or franchise.

Highly successful M&A programme continuing

We remain determined not to allow COVID-19 to halt our highly successful M&A programme that has always been an integral part of our strategy. Since our strongly supported €110m placing in May, we are pleased to have been able to welcome eight high quality new companies to the Keywords family, further strengthening the breadth and depth of the Group’s value-added services.

These brought three high quality studios into Game Development (High Voltage, Heavy Iron, Coconut Lizard), added significant scale to Marketing Services (g-Net, Maverick Media, Indigo Pearl) and enhanced our offering in Audio (Jinglebell). This has been supplemented by the recent acquisition of Tantalus which gives us our first entry point into the Australian Game Development market and provides us with a further platform for both organic and acquisition led growth in the region.

These acquisitions have been in line with our stated strategy to focus on building out our Game Development and Marketing service lines, as we seek to grow these services to become the suppliers of choice for our global client base, whilst selectively acquiring in other service lines.

The total consideration for these acquisitions including performance related contingent deferred consideration elements (including the acquisition of Heavy Iron that completed in January 2021 and more recently Tantalus in March 2021) is up to a maximum of c. €137m. This is comprised of €66m in cash, €23m through the issue of shares and €48m payable in a mixture of cash and shares subject to the businesses meeting certain performance targets or other conditions over the first 24 months post completion. We continue to actively review a healthy pipeline of further acquisition opportunities.

Embracing new ways of working

The senior management team at Keywords has long been used to working distanced from one another but, like many other businesses, COVID-19 has forced the same ways of working on the majority of Keywordians around the globe. In fact, by the end of the year, out of approximately 9,000 Keywordians, c.6,900 were working from home representing a dramatic change in the working environment.

We continue to review how we can best utilise our physical studio footprint once we are through COVID-19 restrictions, and we are constantly consulting those who really matter, our Keywordians. In our recent annual employee survey, 43% of people expressed a preference to continue to work from home, 10% would rather return to office based working, with 47% preferring a combination of working from the office and from home.

We see the future as a hybrid of creating vibrant, engaging and safe studio space, and enabling people to work securely and constructively from home. There is clearly a role for physical studios for the Group, particularly to allow for the exchange of creative ideas, for training, and in our Testing and Audio service lines. We have, therefore, continued to invest in new studios in Mexico City, New Delhi, Katowice and Singapore as well as opening a sixth studio in China in order to support our growth today and into the future.

We also continue to work hard to engage with and recognise the efforts of our Keywordians and to support their wellbeing, including communication to increase the awareness of Employee Assistance Programmes, with a number of new initiatives having been introduced during the year including guest speakers on mental health, virtual yoga and dance lessons, Friday evening online events, and team quiz nights to name but a few.

Responsible Business

At Keywords we have always been committed to conducting our business responsibly and operating to the highest standards of honesty, integrity and ethical conduct. We take our wider corporate responsibility seriously and are conscious of the role that our business plays in our communities and the impact it has on the environment. During 2020 we made good progress on our 6 priority areas of People, Diversity, Customer Centricity & Innovation, Communities and the Environment, underlined by Corporate Governance and Business Ethics:

- Our Code of Conduct was refreshed and relaunched and is now available on our website in 12 languages
- We have established a Global Diversity & Inclusivity Counsel and introduced unconscious bias training for individuals in hiring roles
- The Keywords Cares matching program was launched in which Keywords will match funds raised for good causes by our teams around the world
- We put in place a US$500,000 hardship fund to support colleagues experiencing financial hardship as a result of COVID-19
- For the first time we have quantified our greenhouse gas emissions focusing on scope 1 and 2 emissions

We have established a Responsible Business Board Committee and we look forward to reporting on the progress in each of our priority areas going forward.

Service line review

With the exception of our Localization business, which was held back by scheduling delays further upstream, all our services lines grew during 2020, despite the pandemic and the operational challenges it continues to present.

The following table provides a summary of our revenues by service line, their growth rates on a reported basis and Organic Revenue growth. We have also presented Pro Forma Revenue by service line, which includes the annualised revenue of all acquisitions made in the year, to provide a better overview of the size and balance of the business at the end of the year, together with the average number of operational staff in each service line, excluding managerial and support staff.

Revenue	% of 2020 Group revenue	2020 Revenue €m	2019 Revenue €m	Change from 2019 %	2020 Organic Revenue growth %	2020 Pro Forma Revenue €m	2020 Average number of operational staff by service line
Art Creation & Marketing	**15.3%**	57.3	43.6	31.4%	**17.9%**	**73.2**	1,294
Game Development	**21.4%**	80.0	66.3	20.7%	**17.1%**	**98.0**	1,036
Audio*	**12.6%**	47.2	41.9	12.6%	**5.8%**	**48.6**	230

Functional Testing	**21.0%**	78.5	68.9	13.9%	**16.1%**	**78.5**	2,703
Localization*	**12.2%**	45.4	47.1	(3.6)%	**(4.0)%**	**45.8**	375
Localization Testing	**6.3%**	23.3	22.6	3.1%	**4.4%**	**23.3**	591
Player Support	**11.2%**	41.8	36.1	15.8%	**17.5%**	**41.8**	1,539
Total	**100.0%**	**373.5**	**326.5**	**14.4%**	**11.7%**	**409.2**	

* The prior year comparative has been re-classified to reflect the current year presentation as the Directors consider this to be more meaningful.

Art Creation & Marketing (15.3% of Group revenues for the year)

Our Art Creation service line creates graphical art assets for video games including concept art creation, 2D and 3D art asset production and animation. Also included under Art Creation is Marketing services including game trailers, marketing art and materials, PR and full brand campaign strategies which we are building through acquisitions, and subsequent organic growth.

FY 2020 performance

Following some initial operational and commercial disruption from the very early stages of the COVID-19 pandemic, which forced the closure of studios in China and India particularly and some delays to early stage marketing planning, Art Creation has seen strong demand across all of its businesses and has settled firmly into new ways of working.

Art Creation & Marketing revenues grew by 31.4% to €57.3m (2019: €43.6m) with the benefit of full year contributions from 2019 acquisitions, Sunny Side Up and Ichi, and from the acquisitions of Maverick Media, g-Net and Indigo Pearl, made in August, November and December 2020 respectively. Organic Revenue, which excludes the impact of currency movements and acquisitions, grew by 17.9% for Art Creation & Marketing with a marked acceleration in H2, where revenues grew by 28.3% organically, reflecting more settled operations, some catch up demand from H1 and strong underlying client demand.

During the year we added significant scale to our Marketing services line with the acquisition of three high quality businesses:

- Maverick Media - one of the longest established video game creative agencies in Europe, based in London. It has an impressive 25-year track record in TV commercials, live action projects, video game trailers, key art and social media work for some of the world's leading games publishers, developers and brands.

- g-Net - a Los Angeles based, multi-award-winning studio providing creative and strategic marketing services for leading games publishers and media and entertainment companies. The 85-strong talented team bring significant scale and experience of working with some of the most iconic games franchises to the Group’s Marketing Services line.

- Indigo Pearl - a full service PR agency specialising in the video game sector, based in London. It supports its clients across traditional PR, social media and influencer driven campaigns, and technology-enabled PR and marketing asset management solutions.

The market opportunity and outlook

Art Creation & Marketing services operate in large addressable markets which remain highly fragmented. This is particularly true of Marketing, given the range of services provided both internally and externally which range from key art, trailer creation, advertising, PR, branding, campaign management, influencer marketing and management through to marketing analytics and community management. Our broad geographical spread enables us to transfer work between locations as needed, thereby offering greater business continuity than many of our competitors and positioning us well with our customers.

Through our ongoing organic efforts and further acquisitions, our aim is to establish our highly specialised video games Marketing Services business as the partner of choice for games publishers and developers when looking for global reach and deep expertise in a sector, which itself stands out due to the interactive nature of the product and the strength of the gaming communities that form around the games.

For both Art and Marketing we are starting 2021 with better than normal revenue visibility partly due to some carry forward from 2020 but perhaps also signalling a year of even stronger demand ahead.

As previously stated, we will be reporting separately on our Marketing service line at our first half 2021 results.

Game Development (21.4% of Group revenue for the year)

Our Game Development service line provides external development services to game developers and publishers including full game development, co-development, porting and general software engineering consultancy.

FY 2020 performance

Now our largest service line, Game Development increased revenues by 20.7% to €80.0m (2019: €66.3m). This increase reflected a full contribution from Wizcorp, which was acquired in April 2019 and contributions from Coconut Lizard and High Voltage acquired in June and December 2020 respectively. Game Development transitioned smoothly to a work from home model from March onwards in response to COVID-19 related lockdowns in the various cities in which we operate. Whilst we continue to work under restrictions in most of the countries in which we operate, Game Development achieved a 17.1% increase in Organic Revenue (which excludes the impact of currency movements and acquisitions), compared to FY 2019, despite strong comparatives as we moved into the second half of the year. As with other parts of our Group, Game Development was held back in 2020 due to the challenges of COVID-19, which affected our recruitment, training and on-boarding activities as well as curtailing our usual trade show-centric, business development activities. Nonetheless, we have started to benefit from our expansion in the latter part of 2019 and early in 2020 into Leamington Spa in the UK, Singapore and Austin, Texas.

Despite the challenges of the global pandemic, demand for these services remains very strong and we are continuing to build our Game Development service line through organic expansion as well as through acquisitions, where we maintain a focus on accessing pools of talent from which we can expand organically, as the industry continues to make greater use of external development services.

During the year we have announced three high quality businesses to grow and diversify our Game Development offering:

- Coconut Lizard - a well-regarded provider with particularly deep expertise in the video game development environment, Unreal Engine. Based in Gateshead near Newcastle, UK, Coconut Lizard draws from a regional talent pool that is well served by the local universities in the area.

- Heavy Iron - a specialised game development business primarily focused on high end console and PC games, based in Los Angeles. The acquisition was announced in September 2020 and closed in January 2021.

- High Voltage – an end to end full service AAA game developer with a 27 year track record of game development across all platform types and genres of games, based in Chicago, Illinois and New Orleans, Louisiana. High Voltage fits well geographically with our other North American studios, which are based in Orlando, Austin, Los Angeles and Ottawa, enabling us to draw on a broader spread of local talent.

In addition, we recently announce the acquisition of an 85% stake in Tantalus. Tantalus is a leading and prolific developer of high quality, multi-platform titles based in Melbourne, Australia and provides us with access to a new talent pool and offers an excellent entry point into the Australian market for further expansion in the region, both organically and through a healthy pipeline of acquisition opportunities.

The market opportunity and outlook

Game Development is our largest addressable market. The market is growing strongly and has the lowest proportion of services outsourced of all of the Group's service lines. Characterised by 'per project' engagements, rather than the ongoing service provision for many of our other service lines, Game Development revenues can be impacted by the transitions from one project to another. As a result of COVID-19, we have witnessed some delays in new projects flowing to our Game Development team, which may hold this service line back from maintaining the previously very strong growth rates, particularly against strong comparatives, albeit the underlying trend in this area of our business remains extremely positive with demand for its services very strong.

As previously communicated, Game Development remains an area of particular focus in our M&A programme, where we continue to assess companies that provide access to strong pools of talent to help support the fast pace of organic growth.

Audio (12.6% of Group revenue for the year)

Our Audio service line provides multi language voice-over, original language voice recording, music, sound design, accessibility and related services to the Video Games and Film and TV industries.

FY 2020 performance

Audio revenues rose by 12.6% in the period to €47.2m (2019: €41.9m), with the benefit of full contributions from the 2019 acquisitions of Descriptive Video Works, TV+SYNCHRON, and Syllabes and just a few days of contribution from the December 2020 acquisition of Jinglebell in Milan, Italy. Jinglebell added a boutique recording studio that provides audio recording, music production and sound design for video games and advertisements to a strong client base. Organic Revenue, which excludes the impact of currency movements and acquisitions, increased by 5.8% compared to FY 2019.

Our Audio services business was held back throughout the year but particularly in the first half by the closure of their recording studios during the lockdowns in their respective cities. We were able to partially mitigate the effects of these closures by introducing a remote recording solution. Whilst this is not our preferred method, it has proved a very reliable alternative. H2 Organic Revenue growth improved to 8.7%, following the 0.5% growth achieved in H1.

The market opportunity and outlook

Whilst COVID-19 restrictions continue during 2021, our adoption of a reliable remote recording solution will enable us to continue to deliver on our clients' needs.

Beyond the near term, the audio services market remains highly fragmented in terms of service provision, with clients and voice actors favouring professional, high quality sound studios for optimal voice recording. This represents an opportunity for us to grow our market share organically, as well as make acquisitions over time as we did with the acquisition of Jinglebell at the end of the year.

Our music management services, sound design and sound effects businesses have continued to grow as did our work in subtitling and dubbing of film and TV content where we serve clients such as Netflix, Amazon and other streaming providers.

Functional Testing (21.0% of Group revenue for the year)

Functional Testing is our second largest service line and provides quality assurance including the discovery and documentation of game defects; testing to ensure games are compatible with the various hardware devices and configurations they are played on; and testing to verify that games comply with console manufacturers' specifications.

FY 2020 performance

Functional Testing revenues increased by 13.9% to €78.5m (2019: €68.9m). Organic Revenue, which excludes the impact of currency movements and acquisitions, increased by 16.1%.

This represented a strong performance, given that this service line was considerably constrained at the beginning of the lockdowns in H1, as we worked through our agreements with our clients to reflect the new security protocols required in a remote working environment, rather than our norm of conducting these services in our secure testing studios. During H2 and into 2021, we are continuing to operate this business with a remote working structure, focusing our limited use of our secure facilities for recruitment, training and a limited amount of testing, where it is safe to do so.

The market opportunity and outlook

Despite the limited use of our facilities and some constraints on our ability to recruit and train staff, Functional Testing scaled well into the seasonal peak months of September and October, delivering a strong 20.6% Organic Revenue growth rate in H2, despite the strong comparatives of H2 2019.

We remain a leading player in this large and growing area of the market that is seeing an accelerating trend towards outsourcing. Our scale, flexibility, geographical spread and proven robustness, even in the most challenging of circumstances, positions us well as games companies continue to increase the proportion of functional testing that they outsource.

Localization (12.2% of Group revenue for the year)

Our Localization service line provides translation of in-game text, audio scripts, cultural and local adaptation, packaging and marketing materials. We have also recently added neural machine translation technology and a global crowd sourcing translation platform, through the acquisition of Kantan in December 2019.

FY 2020 performance

Localization revenues were down by 3.6% to €45.4m (2019: €47.1m). Organic Revenue, which excludes the impact of currency movements and acquisitions, was down by 4.0%. This reflected some delays in the receipt of content in H1, as production schedules further upstream were disrupted at some of our clients. However, Localization returned to Organic Revenue growth in H2, which was up 0.3% on the comparative period in 2019.

The market opportunity and outlook

Having strengthened our sales efforts, we expect to build on the improvement seen in H2 2020 as we move into 2021.

The Localization market remains highly fragmented and characterized by most competitors being single language providers without the scale to deliver simultaneous multi-jurisdictional localization projects for our global video games customer base. In this context, we plan to build on our team's leading market position through an increasingly differentiated offering. This combines the market leading expertise we have built up in localization over the past 20 years, with proprietary software tools, like XLoc, and the recently acquired Artificial

Intelligence (AI) and Machine Learning (ML) technology from Kantan, which enables us to manage a greater volume of content for our clients.

Localization Testing (6.3% of Group revenue for the year)

Our Localization Testing service line identifies out of context translations, truncations, overlaps, spelling, grammar, age-rating and cultural issues and tests for console manufacturer compliance requirements in over 30 languages using native speakers.

FY 2020 performance

Localization Testing revenue increased by 3.1% to €23.3m (2019: €22.6m). On an Organic basis, which excludes the impact of currency movements, Localization Testing was 4.4% higher compared to FY 2019.

Localization Testing experienced the same operational disruption and constraints seen in our Functional Testing division during H1, compounded by some lack of availability of native language resources due to people returning to be with their families in their home countries and the subsequent travel restrictions. However, as in the case of Functional Testing, we have successfully transitioned the majority of people to remote working and are also now using our studios for priority activities, where it is safe to do so.

Localization Testing experienced good demand in the second half in relation to a number of AAA game releases, including some for the new Microsoft and Sony console releases. Whilst the pandemic continues to present challenges for the recruitment and training of native language testers, our efforts to mitigate these enabled higher Organic Revenue growth in H2 2020 of 5.9% compared to H2 2019.

The market opportunity and outlook

Having worked to mitigate the operational constraints experienced in 2020, we expect Localization Testing to build on the momentum seen in H2 during 2021.

In this service line, the Group's scale, breadth of languages, multi-location operations and resourcing agility enable it to offer a cost effective, flexible and high quality service which is difficult for smaller competitors to replicate. Our market leadership positions us well for further growth as we continue to develop our operations in Montreal, Dublin, Katowice, Milan, Singapore and Tokyo.

Player Support (11.2% of Group revenue for the year)

Our Player Support service line provides multi-lingual, cost effective and flexible customer care services including managing communities of gamers across all forms of social media, within the games themselves and on the official game forums.

FY 2020 performance

Player Support increased revenue by 15.8% to €41.8m (2019: €36.1m) and Organic Revenue, which is on a constant currency basis, by 17.5%.

Player Support returned to growth in H1, and successfully transitioned its teams around the world to remote working arrangements enabling it to provide continuous support to its clients. Good demand throughout H2, with this service line being a more direct beneficiary of increased game play, combined with well-focussed business development campaigns, helped Organic Revenues grow 29.7% in H2 compared to H2 2019.

The market opportunity and outlook

Player Support's progress in the year, demonstrates the benefits of our strategy to differentiate it from the large generalist call centre operators and immerse ourselves even further into gaming communities. This has been achieved by extending our services to cover more ‘touch points’ of gamer engagement, and by developing our systems and tools to enable us to manage increased volumes of transactions efficiently.

Our specialist video games “DNA”, extensive range of capabilities and fundamental understanding of what is important to players, continues to position us well in terms of the quality of our service delivery compared to more generalist providers, and we expect to make further progress in 2021 albeit at a more moderate growth rate.

Outlook

Trading in 2021 has started well despite the ongoing COVID-19 related constraints. The vast majority of our business continues to operate a remote working model that we have supported efficiently and robustly and, having put in place effective alternative remote solutions for our Audio and Testing service lines, the Group is well placed to support its clients through further restrictions.

On an ongoing basis, we are adopting an approach tailored to a studio’s needs in each of the 65+ locations in which we have our production operations. Each studio continually assesses the needs and desires of its staff, local guidelines, and the requirements of our customers in determining how much, if any, of its operations move back into studios. As such, we are retaining a very flexible approach to where and how we work in order to adapt to the evolving COVID-19 related challenges and keep Keywordians safe over the months ahead.

The underlying drivers of growth across the video games market have been accentuated during the pandemic. Publishers have experienced strong growth in both the number of players and the amount of game play, yet they have faced content production constraints through the pandemic. As such, we expect them to turn their focus in the near to medium term to increased development of new content to keep their expanded player base engaged.

We are already experiencing strong demand across all our service lines, as we are starting to see the benefit of the newly launched PlayStation 5 and Xbox Series X|S consoles, alongside the ongoing development of new subscription and streaming platforms.

We also continue to see strong evidence of the trend to outsourcing, in which context we are delighted to have been joined on the Board by Sonia Sedler as Group COO, and subsequently as Joint Interim CEO. Sonia brings significant operational and business development experience for large, global professional services and BPO companies such as Accenture, Sutherland and Diebold Nixdorf to the Group. Her appointment provides further breadth to the management team, as we drive the Group’s continued organic and acquisition led growth in the years ahead.

Having acquired eight high quality businesses since our successful placing in May, deploying total capital of up to c. €137m, the cash generative nature of the business means we remain well placed to continue to execute on selective acquisition opportunities. We have a dedicated acquisition team who work with the Service Line Directors and the Regional Managing Directors to identify high quality targets to help build out our global service platform. We will continue to invest in scaling our Marketing Services and Game Development businesses to the point where they are seen as the “go to” providers. We will also seek to acquire businesses in our service lines to add specific expertise, access to new talent pools or where doing so leads to meaningful operational synergies.

We maintain an active interest in neighbouring markets such as film and television services where we are seeing an increased convergence towards game technology and where our mastery of AI game engines, localization, audio, visual effects and art creation for the most complex and interactive form of content can be readily deployed. Throughout 2020, we have made steady progress in developing our subtitling, dubbing, audio description and sound design services primarily for over the top (OTT) providers such as Netflix and Amazon, and we are pleased to see the increasing adoption of video game based production techniques as these industries look for faster and more cost effective ways of generating content.

The Group's strong position in the buoyant video games market, our increasingly sought after 9,000-people strong resource base, a robust business model that has proven to be not just resilient in the face of the pandemic but capable of continued rapid growth, together with our financial strength place us well for further growth and long-term success.

Jon Hauck
Joint Interim CEO

Financial and Operating Review

Resilient performance in a period of significant disruption

Revenue

Revenue for 2020 increased by 14.4% to €373.5m (2019: €326.5m). This growth was supplemented by the full year impact of acquisitions in 2019 and the acquisitions made in 2020, but offset by the impact of currency movements, particularly the weakening of the US dollar in the second half of the year, and certain service lines having been held back by COVID-19 disruptions during the year.

Organic Revenue growth (which adjusts for the impact of currency movements and acquisitions) was up 11.7%. This was driven by a robust performance in most service lines, despite being held back in the first half of the year due to the studio closures, particularly in our Testing and Audio businesses, and short term client side disruption to content flowing into Localization. The business delivered a stronger performance in the second half of the year with Organic Revenue growth of 15.0% (H1: 8.0%) driven by continued strong demand for most of our services and with all businesses settling down into the new ways of working.

Gross margin

Gross margin in 2020 was €141.8m (2019: €120.2m) representing an increase of 17.9%. The gross margin improved by 1.2% pts to 38.0% (2019: 36.8%) despite the margin improvement having been held back by the revenue shortfalls from March onwards compared to pre-COVID-19 expectations, particularly in our Testing, Audio and Localization service lines.

Operating costs

Adjusted operating costs increased by 7.9% to €67.6m (2019: €62.6m), reflecting a larger Group, but reduced to 18.1% of revenue versus 19.2% in 2019. This was driven by operational leverage and good cost control, together with a reduction in certain costs due to COVID-19, such as travel and marketing costs.

EBITDA

Adjusted EBITDA increased 28.8% to €74.2m compared with €57.6m for 2019 resulting in an improvement in Adjusted EBITDA margin of 2.3% pts to 19.9% (2019: 17.6%). As noted above, the margin partly benefited from a reduction in certain costs during COVID-19, albeit it was held back by the revenue shortfalls from March onwards versus previously anticipated levels.

Net finance costs

Net finance costs increased by €4.4m to €8.6m (2019: €4.2m) largely driven by a €4.4m increase in the net foreign exchange loss which is described in more detail below. Underlying interest costs on bank debt (excluding IFRS 16 interest, deferred consideration discount unwind, bank charges and foreign exchange) increased by €0.1m to €1.0m (2019: €0.9m). This reflected the repayment of drawings on the RCF following the successful €110m placing in May, since when we have maintained a strong net cash position despite the Group's acquisition spend.

Alternative performance measures (APMs)

The Group reports a number of APMs to present the financial performance of the business which are not GAAP measures as defined by IFRS. The Directors believe these measures provide valuable additional information for the users of the financial information to understand the underlying trading performance of the business. In particular, adjusted profit measures are used to provide the users of the accounts a clear understanding of the underlying profitability of the business over time. A breakdown of the adjusting factors is provided in the table below:

	2020 €m	2019 €m
Share option expense	15.4	9.8
Acquisition and integration costs	2.6	4.3
Amortisation and impairment of intangible assets	8.8	7.3
COVID-19 government subsidies claimed	(9.2)	-
Investment income	(1.4)	-
Foreign exchange and other items	6.3	2.1
	22.5	**23.5**

2.3m of options were granted under the Share Option Scheme and Long Term Incentive Plan in H1 2020. This, together with grants from previous years, has resulted in a non-cash share option expense of €15.4m in 2020 (2019: €9.8m). The increase is largely due to an increase in the fair value charge for the more recent grants compared to previous years reflecting the increase in the share price.

One-off costs associated with the acquisition and integration of businesses amounted to €2.6m (2019: €4.3m).

The amortisation and impairment charge of €8.8m (2019: €7.3m) includes a €2.1m non-cash charge relating to an impairment of intangible assets in certain pre-revenue businesses. These businesses have potentially exciting prospects but their speed to market has been hampered by COVID-19.

During the year the Group benefited from €9.2m of COVID-19 related government subsidies, largely in the Americas aimed at supporting employment during the COVID-19 crisis. In addition, the Group made a €1.4m gain on the disposal of an investment in Hutch Games that was acquired with the acquisition of Liquid Development in 2015. Due to the one off nature of both items the income was excluded in arriving at the adjusted profit measures in order to assist with the understanding of the underlying trading performance.

Foreign exchange and other items amounted to a net charge of €6.3m (2019: €2.1m). Keywords does not hedge foreign currency exposures. The effect on the Group's results of movements in exchange rates and the foreign exchange gains and losses incurred during the year mainly relate to the effect of translating net current assets held in foreign currencies. This resulted in a net foreign exchange loss of €6.1m, recorded within financing cost (2019: €1.7m loss).

A more detailed explanation of the measures used together with a reconciliation to the corresponding GAAP measures is provided in the APMs section at the end of the statement.

Profit before taxation

Profit before tax increased by €15.1m (+87.1% year on year) to €32.5m (2019: €17.4m). Adjusted Profit Before Tax, which adjusts for the items described in the APMs section above increased by €14.1m (+34.5% year on year) to €55.0m compared with €40.9m in 2019. This represents an improvement in Adjusted profit before tax margin of 2.2% pts to 14.7% (2019: 12.5%) and is in line with our historical margin delivery of between 14-15%.

Taxation

The tax charge increased by €3.5m to €11.0m (2019: €7.5m) largely reflecting the increase in the profit before tax of the business. After adjusting for the items noted in the APMs section above and the tax impact arising on the bridging items, the Adjusted Effective Tax Rate for 2020 was 21.5% (H1 2020: 21.5%) compared with the rate of 22.4% in 2019. This improvement was partly driven by the non-repeat of a legacy pre-acquisition tax charge of €0.5m incurred in the prior year.

Earnings per share

Basic earnings per share increased by 99.1% to 30.32c (2019: 15.23c) reflecting the increase in the statutory profit after tax of 116.6%, partially offset by an 8.8% increase in the weighted average number of shares following the 10.5% equity placing in May of 2020. Fully diluted earnings per share, reflecting the impact of unvested share options, increased by 94.9% to 28.71c (2019: 14.73c)

Adjusted earnings per share which adjusts for the items noted in the APMs section and the tax impact arising on the bridging items above was 60.93c representing an increase of 24.9% (2019: 48.78c).

Cash flow and net debt

Cash flow statement	2020 €m	2019 €m	Change €m
Adjusted EBITDA	**74.2**	**57.6**	**16.6**
MMTC and VGTR	0.6	(5.9)	6.5
Working capital and other items	(2.2)	(1.7)	(0.5)
Capex - property, plant and equipment (PPE)	(13.9)	(13.1)	(0.8)
Capex - intangible assets	(0.3)	(0.4)	0.1
Payments of principal on lease liabilities	(8.2)	(7.4)	(0.8)
COVID-19 employment support subsidies	9.2	-	9.2
Operating cash flows	**59.4**	**29.1**	**30.3**
Net Interest paid	(1.6)	(2.1)	0.5
Free cash flow before tax	**57.8**	**27.0**	**30.8**
Tax	(4.5)	(13.3)	8.8
Free cash flow	**53.3**	**13.7**	**39.6**
M&A - acquisition spend	(39.9)	(27.8)	(12.1)
M&A - acquisition and integration costs	(2.3)	(3.8)	1.5
Investment income	1.4	-	1.4
Dividends paid	-	(1.2)	1.2
Shares issued for cash	111.7	0.8	110.9
Underlying increase / (decrease) in net cash / (debt)	**124.3**	**(18.3)**	**142.5**
FX and other items	(3.4)	0.8	(4.2)
Increase in net cash / (debt)	**120.8**	**(17.5)**	**138.3**
Opening net cash / (debt)	(17.9)	(0.4)	
Closing net cash / (debt)	**102.9**	**(17.9)**	

The Group generated Adjusted EBITDA of €74.2m in 2020, an increase of €16.6m from €57.6m in 2019. There was a €0.6m inflow in respect of the amounts due for Multi-Media Tax Credits (MMTC) that are earned in the year of production, and are collected a year in arrears, and Video Games Tax Relief (VGTR). This includes ~€2.5m of accelerated receipts as a result of COVID-19 that would otherwise have been received in 2021. Other working capital outflows of €2.2m were broadly in line with the prior year with trade receivable days improving by 2 days to 42 days (2019: 44 days).

Investment in property, plant and equipment amounted to €13.9m (2019: €13.1m) reflecting a 22.3% increase in the level of equipment expenditure driven by the increased revenues of the business and the working from home arrangements that required some additional investment in equipment, partially offset by a reduction in the level of expansionary capex relative to the prior year. Property lease payments of principal of €8.2m were 10.8% higher than the prior year (2019: €7.4m) reflecting the increased size of the business.

COVID-19 government employment retention subsidies amounted to €9.2m, resulting in operating cash flows of €59.4m (2019: €29.1m), an increase of €30.3m on 2019.

Interest payments were €1.6m, a decrease of €0.5m on 2019 as a result of the repayment of drawings on the RCF following the placing in May. Tax payments amounted to €4.5m (2019: €13.3m) a reduction of €8.8m on 2019. 2019 included tax payments of approximately €5m relating to previous years and the Group has benefitted from other timing differences resulting in less payments in the year in respect of the 2020 tax payable.

This resulted in Free Cash Flow of €53.3m (2019: €13.7m), an increase of €39.6m on 2019. Adjusted Free Cash Flow, which adjusts for capital expenditure that is supporting growth in future periods and the COVID-19 government employment retention subsidies, was €53.4m in 2020, an increase of €20.6m (+62.8%) on the levels delivered in 2019. This resulted in an Adjusted Cash Conversion rate of 97.2% (2019: 80.2%) albeit as noted above 2020 benefited from some timing differences as a result of COVID-19.

Cash spent on acquisitions totalled €42.2m of which €39.9m was in respect of the cash component of both current and prior year acquisitions and €2.3m was in relation to acquisition and integration costs. In addition, the Group received €1.4m from the disposal of an investment in Hutch Games that was brought into the Group via an acquisition in 2015, as noted earlier. These items, together with the strong Free Cash Flow generation and the €110m received from the successful equity placing in May and foreign exchange movements of €3.4m resulted in an increase in cash of €120.8m in 2020 (2019: increase in net debt: €17.5m) and resulted in closing net cash of €102.9m (2019: net debt €17.9m).

Balance sheet and liquidity

The Group funds itself primarily through cash generation and a syndicated revolving credit facility (RCF) of €100m, with an accordion option to increase this up to €140m. The RCF matures in October 2022 with an option to extend it for up to a further 2 years.

The majority of Group borrowings are subject to two financial covenants that are calculated in accordance with the facility agreement:

- Leverage: Maximum Total Net Borrowings to Adjusted EBITDA ratio of 3 times; and
- Interest cover: Minimum Adjusted Operating Profit to Net Finance Costs ratio of 4 times.

The Group entered the year with a strong balance sheet, with net debt (excluding IFRS 16 leases) of €17.9m as at 31 December 2019 representing a net debt to Adjusted EBITDA ratio of 0.3x. In May, the Group placed 6,900,000 new ordinary shares representing c.10.5% of the Group's issued share capital, generating net proceeds of approximately €110m. The placing has allowed the Group to continue to pursue its value accretive acquisition strategy whilst maintaining a strong balance sheet.

The funds were used to repay drawings under the RCF and to support the value accretive M&A programme, with €40m of cash deployed in the year. At the end of 2020, the Group had net cash of €102.9m and undrawn committed facilities of €100m.

Dividend

The Group has delivered a robust performance in the year and has demonstrated the resilience of the Group's business model, the benefit of its diversified services platform, and the continued strong demand for its services. Our service lines have performed well given the operational and market disruption caused by COVID-19, delivering revenue and profit growth along with continued cash generation. The Board intends to resume its progressive dividend policy in 2021.

Guidance for 2021

We have made a good start to the year with the Organic Revenue growth momentum in the second half of 2020 flowing into 2021, offset by the full year impact of the weakening of the US dollar in the second half of 2020 assuming rates remain at their current levels. In addition, 2021 revenue will benefit from the additional contribution from the Tantalus acquisition announced in March.

Adjusted profit before tax margins are expected to be maintained following the improvements in 2020 and within the 14 – 15% historical range and the Adjusted Effective Tax rate is expected to be in line with the 2020 rate of ~21%.

We are anticipating capex at a higher level to 2020 relative to revenue reflecting some expansionary capex and investment in equipment to support the new console cycle and an overall Adjusted Cash Conversion rate of ~80% representing a slight reduction on 2020 and reflecting the unwinding of some of the phasing benefits in 2020 as a result of COVID-19.

With the exception of the incremental impact of the Tantalus acquisition announced recently all of the above items are reflected in the current revenue and profit market consensus for 2021.

Jon Hauck
Chief Financial Officer

Consolidated statement of comprehensive income

	Note	Years ended 31 December 2020 €'000	2019 €'000
Revenue from contracts with customers	4	**373,538**	326,463
Cost of sales	5	**(231,766)**	(206,234)
Gross profit		**141,772**	120,229
Investment income	5	**1,437**	-
Share option expense	17	**(15,350)**	(9,775)
Costs of acquisition and integration	5	**(2,650)**	(4,348)
Amortisation and impairment of intangible assets	11	**(8,808)**	(7,318)
COVID-19 government subsidies claimed	28	**9,231**	-
Total of items excluded from adjusted profit measures		**(17,577)**	(21,441)
Other administration expenses		**(84,513)**	(77,246)
Administrative expenses		**(102,090)**	(98,687)
Operating profit		**41,119**	21,542
Financing income	6	**76**	74
Financing cost	6	**(8,701)**	(4,245)
Profit before taxation		**32,494**	17,371
Taxation	7	**(11,027)**	(7,462)
Profit		**21,467**	9,909
Other comprehensive income:			
Items that will not be reclassified subsequently to profit or loss			
Actuarial gain / (loss) on defined benefit plans	19	**(421)**	(167)
Items that may be reclassified subsequently to profit or loss			
Exchange gain / (loss) in net investment in foreign operations		**(4,909)**	1,267
Exchange gain / (loss) on translation of foreign operations		**(10,843)**	5,960
Total comprehensive income / (expense)		**5,294**	16,969
Profit / (loss) for the period attributable to:			
Owners of the parent		**21,552**	10,022
Non-controlling interest		**(85)**	(113)
		21,467	9,909
Total comprehensive income / (expense) attributable to:			
Owners of the parent		**5,379**	17,082
Non-controlling interest		**(85)**	(113)
		5,294	16,969
Earnings per share		**€ cent**	€ cent
Basic earnings per ordinary share	8	**30.32**	15.23
Diluted earnings per ordinary share	8	**28.71**	14.73

The notes form an integral part of these consolidated financial statements.

On behalf of the Board

Sonia Sedler
Director
24 March 2021

Jon Hauck
Director

Consolidated statement of financial position

	Note	At 31 December 2020 €'000	2019 Restated (note 16) €'000
Non-current assets			
Property, plant and equipment	13	**26,419**	22,163
Right of use assets	12	**27,807**	21,469
Intangible assets	11	**240,810**	196,769
Deferred tax assets	22	**14,649**	5,060
		309,685	245,461
Current assets			
Trade receivables	14	**47,832**	43,243
Other receivables	15	**38,665**	35,413
Cash and cash equivalents		**103,070**	41,827
		189,567	120,483
Current liabilities			
Trade payables		**8,170**	8,027
Other payables	18	**62,958**	38,712
Loans and borrowings	20	**73**	80
Corporation tax liabilities		**12,568**	2,732
Lease liabilities	21	**7,361**	7,741
		91,130	57,292
Net current assets/(liabilities)		**98,437**	63,191
Non-current liabilities			
Other payables	18	**1,994**	285
Employee defined benefit plans	19	**2,693**	2,049
Loans and borrowings	20	**122**	59,671
Deferred tax liabilities	22	**10,575**	9,523
Lease liabilities	21	**21,503**	14,166
		36,887	85,694
Net assets		**371,235**	222,958
Equity			
Share capital	16	**879**	780
Share capital - to be issued	16	**13,047**	5,310
Share premium	16	**22,951**	20,718
Merger reserve	16	**250,276**	132,712
Foreign exchange reserve		**(9,988)**	5,764
Shares held in Employee Benefit Trust ("EBT")		**(1,997)**	(1,997)
Share option reserve		**31,799**	16,449
Retained earnings		**64,318**	43,187
		371,285	222,923
Non-controlling interest		**(50)**	35
Total equity		**371,235**	222,958

The notes form an integral part of these consolidated financial statements. The financial statements were approved and authorised for issue by the Board on 24 March 2021.

On behalf of the Board

Sonia Sedler
Director
24 March 2021

Jon Hauck
Director

Consolidated statement of changes in equity

	Share capital	Share capital - to be issued	Share premium	Merger reserve	Foreign exchange reserve	Shares held in EBT	Share option reserve	Retained earnings	Total attributable to owners of parent	Non-controlling interest	Total equity
	€'000	**€'000**	**€'000**	**€'000**	**€'000**	**€'000**	**€'000**	**€'000**	**€'000**	**€'000**	**€'000**
At 01 January 2019	763	15,648	102,225	35,996	(1,463)	(1,997)	6,674	34,529	192,375	-	**192,375**
Reclassification of Share premium within Reserves (note 16)	-	-	(82,261)	82,261	-	-	-	-	-	-	**-**
At 01 January 2019 (restated)	**763**	**15,648**	**19,964**	**118,257**	**(1,463)**	**(1,997)**	**6,674**	**34,529**	**192,375**	**-**	**192,375**
Profit / (loss) for the period	-	-	-	-	-	-	-	10,022	10,022	(113)	**9,909**
Other comprehensive income	-	-	-	-	7,227	-	-	(167)	7,060	-	**7,060**
Total comprehensive income for the period	-	-	-	-	7,227	-	-	9,855	17,082	(113)	**16,969**
Contributions by and contributions to the owners:											
Share option expense	-	-	-	-	-	-	9,775	-	9,775	-	**9,775**
Share options exercised	7	-	754	-	-	-	-	-	761	-	**761**
Dividends	-	-	-	-	-	-	-	(1,197)	(1,197)	-	**(1,197)**
Acquisition related issuance of shares	10	(10,338)	-	14,455	-	-	-	-	4,127	-	**4,127**
Net assets on acquisition of AppSecTest	-	-	-	-	-	-	-	-	-	148	**148**
Contributions by and contributions to the owners	17	(10,338)	754	14,455	-	-	9,775	(1,197)	13,466	148	**13,614**
At 31 December 2019 (restated)	**780**	**5,310**	**20,718**	**132,712**	**5,764**	**(1,997)**	**16,449**	**43,187**	**222,923**	**35**	**222,958**
Profit / (loss) for the period	-	-	-	-	-	-	-	21,552	21,552	(85)	**21,467**
Other comprehensive income	-	-	-	-	(15,752)	-	-	(421)	(16,173)	-	**(16,173)**
Total comprehensive income for the period	-	-	-	-	(15,752)	-	-	21,131	5,379	(85)	**5,294**
Contributions by and contributions to the owners:											
Shares issued for cash	77	-	-	109,372	-	-	-	-	109,449	-	**109,449**
Share option expense	-	-	-	-	-	-	15,350	-	15,350	-	**15,350**
Share options exercised	16	-	2,233	-	-	-	-	-	2,249	-	**2,249**
Acquisition related issuance of shares	6	7,737	-	8,192	-	-	-	-	15,935	-	**15,935**
Contributions by and contributions to the owners	99	7,737	2,233	117,564	-	-	15,350	-	142,983	-	**142,983**
At 31 December 2020	**879**	**13,047**	**22,951**	**250,276**	**(9,988)**	**(1,997)**	**31,799**	**64,318**	**371,285**	**(50)**	**371,235**

Consolidated statement of cash flows

		Years ended 31 December	
		2020	2019
	Note	**€'000**	€'000
Cash flows from operating activities			
Profit after tax		**21,467**	9,909
Income and expenses not affecting operating cash flows			
Depreciation - property, plant and equipment	13	**8,983**	7,295
Depreciation - right of use assets	12	**8,402**	7,849
Amortisation and impairment of intangible assets	11	**8,808**	7,318
Taxation	7	**11,027**	7,462
Share option expense	17	**15,350**	9,775
Fair value adjustments to contingent consideration	5	**(66)**	493
Fair value adjustments to right of use assets	12	**434**	-
Disposal of property, plant and equipment	13	**-**	200
Unwinding of discounted liabilities - deferred consideration	6	**132**	330
Unwinding of discounted liabilities - lease liabilities	6	**843**	694
Interest receivable	6	**(76)**	(74)
Fair value adjustments to employee defined benefit plans	19	**354**	504
Interest expense	6	**1,071**	934
Unrealised foreign exchange (gain) / loss		**1,874**	(577)
		57,136	42,203
Changes in operating assets and liabilities			
Decrease / (increase) in trade receivables		**(4,255)**	(4,370)
Decrease / (increase) in MMTC and VGTR receivable		**555**	(5,913)
Decrease / (increase) in other receivables		**(3,902)**	(2,162)
(Decrease) / increase in accruals, trade and other payables		**9,878**	6,402
		2,276	(6,043)
Taxation paid		**(4,459)**	(13,288)
Net cash generated by / (used in) operating activities		**76,420**	32,781
Cash flows from investing activities			
Current year acquisition of subsidiaries net of cash acquired	27	**(37,447)**	(13,051)
Settlement of deferred liabilities on acquisitions	18	**(2,489)**	(14,711)
Acquisition of property, plant and equipment	13	**(13,908)**	(13,145)
Investment in intangible assets	11	**(259)**	(391)
Interest received		**76**	74
Net cash generated by / (used in) investing activities		**(54,027)**	(41,224)
Cash flows from financing activities			
Repayment of loans	20	**(64,030)**	(7,973)
Drawdown of loans	20	**4,500**	27,000
Payments of principal on lease liabilities		**(8,170)**	(7,355)
Interest paid on principal of lease liabilities	6	**(843)**	(694)
Dividends paid		**-**	(1,197)
Shares issued for cash*	16	**111,698**	761
Interest paid		**(879)**	(1,436)
Net cash generated by / (used in) financing activities		**42,276**	9,106
Increase / (decrease) in cash and cash equivalents		**64,669**	663
Exchange gain / (loss) on cash and cash equivalents		**(3,426)**	1,293
Cash and cash equivalents at beginning of the period		**41,827**	39,871
Cash and cash equivalents at end of the period		**103,070**	41,827

* Please note Shares issued for cash includes net proceeds of €109.5m related to the share placing in May 2020 (see note 16), being gross proceeds of €111.7m (£100m) less transaction costs of €2.2m (£2m).

Notes forming part of the consolidated financial statements

1 Basis of Preparation

Keywords Studios PLC (the "Company") is a company incorporated in the UK. The consolidated financial statements include the financial statements of the Company and its subsidiaries (the "Group") made up to 31 December 2020. The Group was formed on 8 July 2013 when Keywords Studios PLC (formerly Keywords Studios Limited) acquired the entire share capital of Keywords International Limited through the issue of 31,901,332 ordinary shares.

The consolidated financial statements have been prepared in accordance with international accounting standards in conformity with the requirements of the Companies Act 2006.

The financial statements have been prepared in thousands ('000) and the financial statements are presented in Euro (€) which is the functional currency of the Group.

Please note there has been an amendment to the previous year reserves to reclassify certain reserves within Share premium to Merger reserve, as outlined in note 16.

Going Concern Basis of Accounting

After making enquiries, the Directors consider it appropriate to continue to adopt the going concern basis in preparing the consolidated financial statements. In doing so, the Directors have considered the uncertain nature of the current COVID-19 pandemic, but have noted:

- the strong cash flow performance of the Group through the year;
- the continued demand for the Group's services;
- the ability to operate most of its services in a work from home model where studios are temporarily closed;
- the historical resilience of the broader video games industry in times of economic downturn; and,
- the ability of the Group to flex its cost base in response to a reduction in trading activity.

The Directors have also considered the Group's strong liquidity position with net cash of €102.9m as at 31 December 2020, and committed undrawn facilities of €100m under the Revolving Credit Facility ("RCF").

The Directors have applied downside sensitivities to the Group's cash flow projections to evaluate the Group's ability to withstand a further prolonged period of studio closures as a result of the COVID-19 pandemic, leading to a reduction in production capability. Under this severe case the Group would have sufficient liquidity and remain within its banking covenants. The Directors have a reasonable expectation that the Group has adequate resources to continue to operate and meet liabilities as they fall due for the foreseeable future, a period considered to be at least 12 months from the date of these financial statements and therefore the going concern basis of preparation continues to be appropriate.

New Standards, Interpretations and Amendments effective 1 January 2020

A number of new amendments and interpretations to accounting standards are effective from 1 January 2020 including:

- Definition of Material – amendments to IAS 1 and IAS 8
- Definition of a Business – amendments to IFRS 3
- Revised Conceptual Framework for Financial Reporting
- Interest Rate Benchmark Reform – amendments to IFRS 9, IAS 39 and IFRS 7

These amendments and interpretations would not have resulted in the accounting applied by the Group changing and would not have had a material effect on the Group's financial statements.

On 28 May 2020, the IASB issued amendments to IFRS 16: COVID-19 Related Rent Concessions. These amendments introduce a practical expedient available to lessees in accounting for rent concessions (e.g. rent holidays and deferrals of lease payments) that are a direct consequence of the COVID-19 pandemic and that satisfy certain other criteria. As the relevant topics have not had a material impact on the Group's financial statements, the Group has not availed of these practical expedients.

Other accounting pronouncements which have become effective from 1 January 2020 have not had a material impact on the Group.

New standards, interpretations and amendments not yet effective

There are a number of standards, amendments to standards, and interpretations which have been issued by the IASB that are effective in future accounting periods that the Group has decided not to adopt early.

The following amendments are effective for the period beginning 1 January 2022:

- Onerous Contracts – Cost of Fulfilling a Contract (Amendments to IAS 37);
- Property, Plant and Equipment: Proceeds before Intended Use (Amendments to IAS 16);
- Annual Improvements to IFRS Standards 2018-2020 (Amendments to IFRS 1, IFRS 9, IFRS 16 and IAS 41); and
- References to Conceptual Framework (Amendments to IFRS 3).

The Group does not expect any other standards issued by the IASB, but not yet effective, to have a material impact on the Group.

2 Significant Accounting Policies

Basis of Consolidation

Where the Company has control over an investee, it is classified as a subsidiary. The Company controls an investee if all three of the following elements are present: power over the investee, exposure to variable returns from the investee, and the ability of the investor to use its power to affect those variable returns. Control is reassessed whenever facts and circumstances indicate that there may be a change in any of these elements of control.

De-facto control exists in situations where the Company has the practical ability to direct the relevant activities of the investee without holding the majority of the voting rights. In determining whether de-facto control exists, the Company considers all relevant facts and circumstances, including:

- The size of the Company's voting rights relative to both the size and dispersion of other parties who hold voting rights;
- Substantive potential voting rights held by the Company and by other parties;
- Other contractual arrangements; and
- Historic patterns in voting attendance.

2 Significant Accounting Policies *(continued)*

The consolidated financial statements present the results of the Company and its subsidiaries ("the Group") as if they formed a single entity. Intercompany transactions and balances between Group companies are eliminated in full.

Business Combinations
The consolidated financial statements incorporate the results of business combinations using the purchase method. In the Consolidated Statement of Financial Position, the acquired identifiable assets, liabilities and contingent liabilities are initially recognised at their fair values at the acquisition date. The results of acquired operations are included in the consolidated income statement from the date on which control is obtained. They are consolidated until the date on which control ceases.

Any contingent consideration payable is recognised at fair value at the acquisition date and is split between current liabilities and long-term liabilities depending on when it is due. The fair value of contingent consideration at acquisition date is arrived at through discounting the expected payment (based on scenario modelling) to present value. In general, in order for contingent consideration to become payable, pre-defined profit and / or revenue targets must be exceeded. At each balance sheet date, the fair value of the contingent consideration is revalued, with the expected pay-out determined separately in respect of each individual acquisition and any change recognised in the Statements of Comprehensive Income.

For deferred consideration which is to be provided for by the issue of a fixed number of shares at a future defined date, where there is no obligation on Keywords to offer a variable number of shares, the deferred consideration is classified as an equity arrangement and the value of the shares is fixed at the date of the acquisition. Deferred consideration may also be in the form of cash consideration payable at a future defined date. Such consideration is recognised at fair value at the acquisition date and is split between current liabilities and non-current liabilities depending on when it is due.

Intangible Assets
The Group's Intangible Assets comprise Goodwill, Customer Relationships and Other Intangible Assets.

Goodwill
Goodwill represents the excess of the cost of a business combination over the total acquisition date fair value of the identifiable assets, liabilities and contingent liabilities acquired. The cost comprises the fair value of assets given, liabilities assumed and equity instruments issued, plus the amount of any non-controlling interests in the acquiree plus, if the business combination is achieved in stages, the fair value of the existing equity interest in the acquiree. Contingent consideration is included at fair value on the acquisition date and, in the case of contingent consideration classified as a financial liability, re-measured subsequently through the profit and loss. Acquisition-related costs are recognised immediately as an expense in the periods in which the costs are incurred and the services are received. Goodwill is capitalised as an intangible asset with any impairment in carrying value being charged to the consolidated statement of comprehensive income.

Customer Relationships
Intangible assets, separately identified from goodwill acquired as part of a business combination (mainly Customer Relationships), are initially stated at fair value. The fair value attributed is determined by discounting the expected future cash flows generated from the net margin of the business from the main customers taken on at acquisition. The assets are amortised on a straight-line basis (to administration expenses) over their useful economic lives (typically five years is deemed appropriate, however, this is re-examined for each acquisition).

Other Intangible Assets
Other intangible assets include Intellectual Property and Music Licences, both acquired and internally developed. Other intangible assets are recognised as assets where it is probable that the use of the asset will generate future economic benefits and where the costs of the asset can be determined reliably. Other intangible assets that are acquired by the Group are stated at cost less accumulated amortization (see below) and impairment losses, if any. Subsequent expenditures on capitalised intangible assets are capitalised only when they increase the future economic benefits embodied in the specific assets to which they relate. All other expenditure is expensed as incurred. Other intangible assets with definite useful lives are amortised from the date they are available for use on a straight-line basis over their useful lives, being the estimated period over which the Group will use the assets. Residual amounts, useful lives and the amortization methods are reviewed at the end of every accounting period.

Development costs are capitalised as an intangible asset if all of the following criteria are met:

- The technical feasibility of completing the intangible asset so that it will be available for use or sale;
- The intention to complete the intangible asset and use or sell it;
- The ability to use or sell the intangible asset;
- The asset will generate probable future economic benefits and demonstrate the existence of a market or the usefulness of the intangible asset if it is to be used internally;
- The availability of adequate technical, financial and other resources to complete the development and to use or sell it;
- The ability to measure reliably the expenditure attributable to the intangible asset during its development.

Following initial recognition of the development expenditure as an intangible asset, the cost model is applied requiring the intangible asset to be carried at cost, less any accumulated amortization and accumulated impairment losses. The intangible asset is amortised on a straight-line basis over the period of its expected benefit, starting from the date of full commercial use of the product. During the period of development, the asset is tested for impairment annually. If specific events indicate that impairment of an item of intangible asset may have taken place, the item's recoverability is assessed by comparing its carrying amount with its recoverable amount. The recoverable amount is the higher of the fair value net of disposal costs and the value in use.

Impairment
Impairment tests on goodwill and other intangible assets with indefinite useful economic lives are undertaken annually at the financial year end. Other non-financial assets are subject to impairment tests whenever events or changes in circumstances indicate that their carrying amount may not be recoverable. Where the carrying value of an asset exceeds its recoverable amount (i.e. the higher of value in use and fair value less costs to sell), the asset is written down accordingly.

Where it is not possible to estimate the recoverable amount of an individual asset, the impairment test is carried out on the smallest group of assets to which it belongs for which there are separately identifiable cash flows; its cash generating units ("CGUs"). Goodwill is allocated on initial recognition to each of the Group's CGUs that are expected to benefit from a business combination that gives rise to the goodwill.

The Group has one CGU. This CGU represents the lowest level at which goodwill is monitored by the Group and the lowest level at which management captures information for internal management reporting purposes about the benefits of the goodwill. Impairment charges are included in profit or loss, except to the extent they reverse gains previously recognised in other comprehensive income. An impairment loss recognised for goodwill is not reversed.

2 Significant Accounting Policies *(continued)*

Cash and Cash Equivalents
For the purpose of presentation in the Statements of financial position and on the Statements of cash flows, cash and cash equivalents include cash on hand and on call deposits with financial institutions.

Foreign Currency
The Consolidated Financial Statements are presented in Euro, which is the presentation currency of the Group and the functional currency of the Parent Company.

Transactions entered into by Group entities in a currency other than the currency of the primary economic environment in which they operate (their "functional currency") are recorded at the rates ruling when the transactions occur. Foreign currency monetary assets and liabilities are translated at the rates ruling at the reporting date. Exchange differences arising on the retranslation of unsettled monetary assets and liabilities are recognised immediately in profit or loss.

On consolidation, the results of overseas operations are translated into Euro at rates approximating to this ruling when the transactions took place. All assets and liabilities of overseas operations, including goodwill arising on the acquisition of those operations, are translated at the rate ruling at the reporting date. Exchange differences arising on translating the opening net assets at opening rate and the results of overseas operations at actual rate are recognised in other comprehensive income and accumulated in the foreign exchange reserve.

Exchange differences recognised in profit or loss in Group entities' separate financial statements on the translation of long-term items forming part of the Group's net investment in the overseas operation concerned are classified to other comprehensive income and accumulated in the foreign exchange reserve on consolidation. On disposal of a foreign operation, the cumulative exchange differences recognised in the foreign exchange reserve relating to that operation up to the date of disposal are transferred to the consolidated statement of comprehensive income as part of the profit or loss on disposal.

Revenue from Contracts with Customers
Contracts are typically for services, performing agreed-upon tasks for a customer and can be time-and-materials or milestone based. Most contracts are short term in duration (generally less than one month), however milestone based contracts can be longer term and extend to several months (or in some cases over a year). Where there are multiple performance obligations outlined in a contract, each performance obligation is separately assessed, the transaction price is allocated to each obligation, and related revenues are recognised as services or assets are transferred to the customer. Performance obligations are typically satisfied over time, as the majority of contracts meet the criteria outlined in IFRS 15 paragraph 35 (a) and (c).

Due to the nature of the services provided and the competitive nature of the market, contracts generally allocate specific transaction prices to separate performance obligations. Individual services or individual milestones generally involve extensive commercial negotiation to arrive at the specific agreed-upon tasks, and the related pricing outlined in the contract. Such negotiations extend further for milestone based contracts to also include the criteria involved in the periodic and regular process of milestone acceptance by the customer. Such criteria may involve qualitative, as well as quantitative measures and judgements.

In measuring progress towards complete satisfaction of performance obligations, the input method is considered to be the most appropriate method to depict the underlying nature of the contracts with customers, the interactive way the service is delivered and projects are managed with the customer. For time-and-materials contracts, other than tracking and valuing time expended, significant judgement is not normally involved. For milestone based contracts, progress is generally measured based on the proportion of contract costs incurred at the balance sheet date, (e.g. worked days) relative to the total estimated costs of the contract, involving estimates of the cost to completion etc. Added to this significant judgement can be involved in measuring progress towards customer acceptance of the milestone. Significant judgement may also be involved where circumstances arise that may change the original estimates of revenues, costs or extent of progress towards complete satisfaction of the performance obligations. In such circumstances estimates are revised. These revisions may result in increases or decreases in revenue or costs and are reflected in income in the period in which the circumstances that give rise to the revision became known. When the outcome of a contract cannot be measured reliably, contract revenue is recognised only to the extent that milestone have been accepted by the customer. Contract costs are recognised as incurred. When it is probable that total contract costs will exceed total contract revenue, the expected loss is recognised immediately.

Revenue recognised represents the consideration received or receivable, net of sales taxes, rebates discounts and after eliminating intercompany sales. Revenue is recognised only where it is probable that consideration will be received. Where consideration is received and the related revenue has not been recognised, the consideration received is recognised as a contract liability (Deferred Revenue), until either revenue is recognised or the consideration is refunded.

Revenue is derived from seven main service groupings:

- Art Creation & Marketing – Art Creation & Marketing services relate to the production of graphical art assets for inclusion in the video game including concept art creation along with 2D and 3D art asset production and animation. Contracts can be either time-and-materials based or milestone based, with performance obligations satisfied over time. Contracts are generally short term in duration, however for longer term contracts the input method is used to measure progress (e.g. worked days relative to the total expected inputs). Time and materials based contract revenue is recognised as the related services are rendered. For milestone based contracts where progress can be measured reliably towards complete satisfaction of the performance obligation, revenue is recognised using the input method to measure progress. Where progress cannot be measured reliably, revenue is recognised on milestone acceptance.
- Game Development – Game Development relates to software engineering services which are integrated with client processes to develop video games. Contracts can be either time-and-materials based or milestone based, with performance obligations satisfied over time. Contracts are generally longer term in duration. Time and materials based contract revenue is recognised as the related services are rendered. For milestone based contracts where progress can be measured reliably towards complete satisfaction of the performance obligation, revenue is recognised using the input method to measure progress. Where progress cannot be measured reliably, revenue is recognised on milestone acceptance.
- Audio – Audio services relate to the audio production process for computer games and includes script translation, actor selection and talent management through pre-production, audio direction, recording, and post-production, including native language quality assurance of the recordings. Audio contracts may also involve music licencing or selling music soundtracks. Audio service contracts are typically milestone based, with performance obligations satisfied over time. Audio services contracts are generally short term in duration, however for longer term contracts where progress towards complete satisfaction of the performance obligation can be measured reliably, revenue is recognised using the input method to measure progress. Where progress cannot be measured reliably, audio services revenue is recognised on milestone acceptance. Music licencing and music soundtracks performance obligations are assessed separately, and related revenue is recognised on licence inception and on delivery of the soundtracks, respectively.
- Functional Testing – Functional Testing relates to quality assurance services provided to game producers to ensure games function as required. Contracts are typically time-and-materials based and performance obligations are satisfied over time. Contracts are generally short term in duration, however for longer term contracts the input method is used to measure progress. Revenue is recognised as the related services are rendered.

2 Significant Accounting Policies *(continued)*

- Localization – Localization services relate to translation and cultural adaptation of in-game text and audio scripts across multiple game platforms and genres. Contracts are typically time-and-materials based and performance obligations are satisfied over time. Contracts are generally short term in duration, however for longer contracts the input method is used to measure progress. Localization contracts may also involve licencing translation software as a service. Such revenue is assessed separately. Revenue is recognised as the related services are rendered.
- Localization Testing – Localization Testing involves testing the linguistic correctness and cultural acceptability of computer games. Contracts are typically time-and-materials based and performance obligations are satisfied over time. Contracts are generally short term in duration, however for longer term contracts the input method is used to measure progress. Revenue is recognised as the related services are rendered.
- Player Support – Player Support relates to the live operations support services such as community management, player support and associated services provided to producers of games to ensure that consumers have a positive user experience. Contracts are typically time-and-materials based and performance obligations are satisfied over time. Contracts are generally long term with the input method used to measure progress. Revenue is recognised as the related services are rendered.

Multimedia Tax Credits / Video Game Tax Relief
The multimedia tax credits ("MMTC") received in Canada and video games tax relief ("VGTR") in the UK, are a tax credit related to staff costs. Tax credits are recognised as income over the periods necessary to match the credit on a systematic basis with the costs that it is intended to compensate. Thus credits are taken as a deduction against direct costs each period, but typically paid in the following financial year once the claims have been submitted and agreed. The nature of the grants is such that they are not dependent on taxable profits, and are recognised (under IAS 20), at their fair value when there is a reasonable assurance that the grant will be received and all attaching conditions have been complied with.

Government Subsidies
Government subsidies are recognised at their fair value when there is a reasonable assurance that the subsidy will be received and all attaching conditions have been complied with. Subsidies are recognised in the period the subsidy is designated to compensate.

Share-based Payments
The Company issues equity settled share-based payments to certain employees and Directors under a share options plan and a Long-Term Incentive Plan ("LTIP").

The fair value determined at the grant date is expensed on a straight-line basis over the vesting period. Other than continuous service, grants do not have non-market-based vesting conditions. At each reporting date the Company adjusts for unvested forfeitures and the impact is recognised in profit or loss, with a corresponding adjustment to equity reserves. The Company has no legal or constructive obligation to repurchase or settle the options in cash.

Where share-based payments are issued to employees of subsidiary companies, the annual cost of the options are recharged to the subsidiary company through an inter-company re-charge.

Share Option Plan
These are measured at fair value on the grant date using a Black-Scholes option pricing model which calculates the fair value of an option by using the vesting period, the expected volatility of the share price, the current share price, the exercise price and the risk-free interest rate. The fair value of the option is amortised over the vesting period, with one-third of the options vesting after two years, one-third after three years, and the balance vest after four years. The only vesting condition is continuous service. There is no requirement to revalue the option at any subsequent date.

LTIP
The exercise of LTIP awards are subject to the Company's share price (stock symbol: KWS) performance versus the designated Share Index in terms of shareholder return over a three-year period. For the awards granted up to 2015, one-third of the share options vested if the Company exceeded the Total Shareholder Returns (TSR) of the Numis Small Cap Index (excluding Investment Trusts) by 10%, two-thirds if the TSR exceeded the Index by 20% and full vesting if the TSR exceeded the Index by 30%. This was amended for the 2016 and 2017 awards to 100% vesting if the shareholder return exceeds the Index by 45%, and a pro-rated return between 10% if the TSR matches the Index, to 100% if the TSR exceeds the Index by 45%. The scheme was further amended in 2018 to 100% vesting if the TSR exceeds the Index by 20%, and a pro-rated return between 10% and 100% if the TSR exceeds by between 0% and 20%. In 2019 the benchmark Index was amended for future grants to be the FTSE Small Cap Index, with the same performance conditions as 2018.

These are measured at fair value, taking into account market vesting conditions but not non-market vesting conditions, at the date of grant, measured by using the Monte Carlo binomial model.

Dividend Distribution
Final dividends are recorded in the Group's financial statements in the period in which they are approved by the Group's shareholders. Interim dividends are recognised when paid.

Income Taxes and Deferred Taxation
Provision for income taxes is calculated in accordance with the tax legislations and applicable tax rates in force at the reporting date in the countries in which the Group companies have been incorporated.

Deferred tax assets and liabilities are recognised where the carrying amount of an asset or liability in the consolidated statement of financial position differs from its tax base, except for differences arising on:

- The initial recognition of an asset or liability in a transaction which is not a business combination and at the time of the transaction affects neither accounting or taxable profit; and
- Investments in subsidiaries and jointly controlled entities where the Group is able to control the timing of the reversal of the difference and it is probable that the difference will not reverse in the foreseeable future.

The amount of the asset or liability is determined using tax rates that have been enacted or substantively enacted by the reporting date and are expected to apply when the deferred tax liabilities / (assets) are settled / (recovered).

Deferred tax assets and liabilities are offset when the Group has a legally enforceable right to offset current tax assets and liabilities and the deferred tax assets and liabilities relate to taxes levied by the same tax authority on either:

- The same taxable Group company; or
- Different Group entities which intend either to settle current tax assets and liabilities on a net basis, or to realise the assets and settle the liabilities simultaneously, in each future period in which significant amounts of deferred tax assets or liabilities are expected to be settled or recovered.

2 Significant Accounting Policies *(continued)*

Property, Plant and Equipment
Property, plant and equipment comprise computers, leasehold improvements, and office furniture and equipment, and are stated at cost less accumulated depreciation. Carrying amounts are reviewed for impairment whenever events or changes in circumstances indicate that their carrying amount may not be recoverable. Where the carrying amount of an asset is greater than its estimated recoverable amount, it is written down immediately to its recoverable amount.

Property, plant and equipment acquired through business combinations are valued at fair value on the date of acquisition.

Depreciation is calculated to write off the cost of fixed assets on a straight-line basis over the expected useful lives of the assets concerned. The principal annual rates used for this purpose are:

Computers and software	3 - 5 years
Office furniture and equipment	10 years
Leasehold improvements	over the length of the lease

Gains and losses on disposals are determined by comparing proceeds with carrying amount and are included in the Consolidated statement of comprehensive income.

Financial Assets
The Group's most significant financial assets comprise trade and other receivables and cash and cash equivalents in the Consolidated statement of financial position.

Trade Receivables
Trade receivables, which principally represent amounts due from customers, are recognised at amortised cost as they meet the IFRS 9 classification test of being held to collect, and the cash flow characteristics represent solely payments of principal and interest.

The Group's impairment methodology is in line with the requirements of IFRS 9. The simplified approach to providing for expected credit losses has been applied to trade receivables, which requires the use of a lifetime expected loss provision.

Intercompany Receivables
Intercompany receivables are recognised at amortised cost as they meet the IFRS 9 classification test of being held to collect, and the cash flow characteristics represent solely payments of principal and interest.

The Group applies the general approach to applying the expected credit losses to its related party loans. Under the General Approach, at each reporting date, the Group determines whether there has been a Significant Increase in Credit Risk (SICR) since initial recognition and whether any balances are credit impaired. This determines the amount, if any, of expected credit losses to be recognised.

Cash and Cash Equivalents
Cash and cash equivalents are held to meet the working capital requirements of the Group. They include cash in hand, deposits held at call with banks and other short-term highly liquid investments. Where cash is on deposit with maturity dates greater than three months, it is disclosed as short-term investments.

Accrued Income from Contracts with Customers
Accrued income from contracts with customers, arising from Revenue from Contracts with Customers, is recognised in accordance with our Revenue Recognition policy, as discussed separately in this note. The Group applies the simplified approach to assessing expected credit losses in relation to such assets, as their maturities are less than 12 months. Based upon the recoverability of contract assets at year end, no significant expected credit loss provision has been applied.

Share Capital
Financial instruments issued by the Group are treated as equity only to the extent that they do not meet the definition of a financial liability. The Group's ordinary shares are classified as equity instruments.

Financial Liabilities
Contingent consideration is initially recognised at fair value and subsequently re-measured through the profit and loss. Trade payables, bank borrowings and other monetary liabilities are initially recognised at fair value and subsequently carried at amortised cost using the effective interest rate method.

Leased Assets
A lease is defined as 'a contract, or part of a contract, that conveys the right to use an asset (the underlying asset) for a period of time in exchange for consideration'.

At lease commencement date, the Group recognises a right of use asset and a lease liability on the balance sheet. The right of use asset is measured at cost, which is made up of the initial measurement of the lease liability, any initial direct costs incurred by the Group, an estimate of any costs to dismantle and remove the asset at the end of the lease, and any lease payments made in advance of the lease commencement date (net of any incentives received).

The Group depreciates the right of use assets on a straight-line basis from the lease commencement date to the earlier of the end of the useful life of the right of use asset or the end of the lease term. The Group also assesses the right of use asset for impairment when such indicators exist. At the commencement date, the Group measures the lease liability at the present value of the lease payments unpaid at that date, discounted using the interest rate implicit in the lease if that rate is readily available or the Group's incremental borrowing rate. Lease payments included in the measurement of the lease liability are made up of fixed payments (including in substance fixed), variable payments based on an index or rate, amounts expected to be payable under a residual value guarantee, and payments arising from purchase and extension options reasonably certain to be exercised.

Subsequent to initial measurement, the liability will be reduced for payments made and increased for interest. It is remeasured to reflect any reassessment or modification, or if there are changes to in substance fixed payments. When the lease liability is remeasured, the corresponding adjustment is reflected in the right of use asset, or profit and loss if the right of use asset is already reduced to zero.

The Group has elected to account for short-term leases and leases of low value assets using the practical expedients. Instead of recognising a right of use asset and lease liability, the payments in relation to these are recognised as an expense in profit or loss on a straight-line basis over the lease term.

The Group has applied judgement to determine the lease term for contracts in which it is a lessee that include renewal options. The assessment of whether the Group is reasonably certain to exercise such options impacts the lease term, which significantly affects the lease liabilities and right of use assets recognised.

Employee Benefit Trust
Ordinary shares purchased by the Employee Benefit Trust on behalf of the parent company under the Terms of the Share Option Plan are deducted from equity on the face of the Consolidated Statement of Financial Position. No gain or loss is recognised in relation to the purchase, sale, issue or cancellation of the parent company's ordinary shares.

3 Critical Accounting Estimates and Judgements

The Group makes certain estimates and assumptions regarding the future. Estimates and judgements are continually evaluated based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. In the future, actual experience may differ from these estimates and assumptions.

Judgements
The judgements, apart from those involving estimations, that management have made in the process of applying the Group's accounting policies and that have the most significant effect on the amounts recognised in the financial statement, are outlined below.

- **Group**
  - **Functional Currency**: The Directors have considered the requirements of IAS 21 in determining the currency that most faithfully represents the economic effects of the underlying transactions, events and conditions to determine the Group's functional currency. Detailed consideration has been given to both the Primary and Secondary Indicators in forming this conclusion. The Primary Indicators relate to revenues, regulation, competitive forces and costs, while the Secondary Indicators are primarily concerned with financing the business and the currency in which receipts from operating activities are usually retained. With a mix of currencies dominating the indicators, there is no clear single currency that influences the Group, however the EUR remains marginally the most dominant when all factors are considered. Therefore the Directors consider the EUR as the currency that most faithfully represents the economic effects of the underlying transactions, events and conditions.
  - **Business Combinations**: When acquiring a business, the Group is required to identify and recognise intangible assets, the determination of which requires a significant degree of judgement. Acquisitions may also result in intangible benefits being brought into the Group, some of which qualify for recognition as intangible assets while other such benefits do not meet the recognition requirements of IFRS and therefore form part of goodwill. Customer relationships are recognised as separate assets where revenues are recurring in nature and material revenues have been generated with the customer for a continuous period of 3 years. For the Game Development service line, the key asset acquired is typically "know-how", an asset that is not readily measurable and thus intrinsically linked to goodwill. Relationships are typically short term contract based rather than relationship based. Therefore neither customer contracts nor customer relationships are typically recognised on the acquisition of a Game Development business.
  - **IFRS 16 Leases:** The Group has determined that the Group's incremental borrowing rate is the appropriate rate to use to discount lease liabilities. The Group has applied judgement to determine the lease term for contracts in which it is a lessee that include renewal options. The assessment of whether the Group is reasonably certain to exercise such options impacts the lease term, which significantly affects the lease liabilities and right of use assets recognised.
  - **Significant Events and Transactions:** The effects of COVID-19 have required significant judgements and estimates to be made. These issues are considered in note 28 in the context of the impact the pandemic has had on the Group.

Estimates and assumptions
The Group makes certain estimates and assumptions regarding the future. Estimates and judgements are continually evaluated based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. In the future, actual experience may differ from these estimates and assumptions.

A number of areas requiring the use of estimates and critical judgements impact the Group's earnings and financial position. These include revenue recognition, the computation of income taxes, the value of goodwill and intangible assets arising on acquisitions, the valuation of multimedia tax credits / video game tax relief, leasing and the valuation of defined retirement benefits. The Directors consider that no reasonably possible changes to any of the assumptions used in the estimates would in the view of the Directors give rise to significant risk of a material adjustment to the carrying value of the associated balances in the subsequent financial year.

4 Revenue from Contracts with Customers and Segmental Analysis

Revenue from Contracts with Customers

Revenue recognised in the reporting period arises from contracts with customers, and is predominantly recognised over time. There were no significant amounts of revenue recognised in the reporting period that were included in a contract liability balance at the beginning of the reporting period, or from performance obligations satisfied in the previous reporting period.

Revenue by line of business

	2020	2019
	€'000	€'000
Art Creation & Marketing	**57,324**	43,601
Game Development	**80,017**	66,290
Audio*	**47,232**	41,856
Functional Testing	**78,479**	68,930
Localization*	**45,357**	47,060
Localization Testing	**23,323**	22,638
Player Support	**41,806**	36,088
	373,538	326,463

*The prior year comparative has been re-classified to reflect the current year presentation as the Directors consider this to be more meaningful.

Analysis by geographical regions is made according to the Group's operational jurisdictions. For many contracts, operations are completed in multiple sites. Revenue is associated with the jurisdiction from which the final invoice to the client is raised. This does not reflect the region of the Group's customers; whose locations are worldwide.

Geographical analysis of revenues

	2020	2019
	€'000	€'000
Ireland	**149,185**	118,095
United States	**62,890**	52,265
United Kingdom	**56,932**	41,768
Canada	**37,564**	48,112
Switzerland	**17,823**	19,045
Japan	**17,518**	15,501
Italy	**7,960**	9,395
France	**6,341**	7,606
India	**5,171**	6,355
Germany	**4,973**	1,920
Singapore	**2,159**	1,637
Spain	**1,293**	1,588
Mexico	**1,158**	398
Poland	**943**	1,285
China	**857**	691
Brazil	**771**	802
	373,538	326,463

No single customer accounted for more than 10% of the Group's revenue during the year in either year presented.

Revenue Expected to be Recognised

For Game Development, games are developed to an agreed specification and time schedule, and often have delivery schedules and / or milestones that extend well into the future. The following are Game Development revenues expected to be recognised for contracts with a schedule of work that extends beyond one year, representing the aggregate amount of the transaction price allocated to the performance obligations that are unsatisfied (or partially unsatisfied) as of the end of the reporting period:

Revenue expected to be recognised	**Total undelivered**	**Scheduled completion within 1 year**	**Scheduled completion 1-2 years**
	€'000	**€'000**	**€'000**
At 31 December 2020	**13,538**	**12,991**	**547**
At 31 December 2019	24,645	23,593	1,052

For all service lines excluding Game Development, contracts do not extend to more than one year, therefore information concerning unsatisfied performance obligations are not disclosed, as allowed under the practical expedient exemption under IFRS 15. This practical expedient is also availed of for Game Development contracts of less than one year in duration.

Segmental Analysis

Management considers that the Group's activity as a single source supplier of Services to the gaming industry constitutes one operating and reporting segment, as defined under IFRS 8.

Management review the performance of the Group by reference to Group-wide profit measures and the revenues derived from seven main service groupings.

There is no allocation of operating expenses, profit measures, assets and liabilities to individual product groupings. Accordingly, the disclosures above are provided on a Group-wide basis.

Activities are reported in a manner consistent with the internal reporting provided to the chief operating decision-maker. The chief operating decision-maker has been identified as the executive management team made up of the Chief Executive Officer and the Chief Financial Officer.

Geographical analysis of non-current assets from continuing businesses

	2020	2019
	€'000	€'000
United States	**131,405**	84,139
United Kingdom	**57,611**	52,233
Canada	**27,094**	29,772
Italy	**13,480**	12,222
Switzerland	**10,116**	10,644
Ireland	**13,514**	9,296
China	**7,491**	8,776
France	**7,302**	6,725
Spain	**5,101**	5,924
Germany	**5,291**	5,250
Japan	**5,551**	3,905
Philippines	**2,110**	2,798
India	**2,182**	2,526
Mexico	**1,901**	2,164
Poland	**1,777**	1,563
Brazil	**835**	1,247
Russia	**681**	925
Singapore	**1,532**	225
Netherlands	**59**	64
Taiwan	**3**	3
	295,036	240,401

Geographical analysis of non-current assets from continuing businesses	**295,036**	240,401
Deferred tax assets	**14,649**	5,060
Non-current assets	**309,685**	245,461

5 Cost of Sales and Operating Profit

	2020	2019
Cost of sales	**€'000**	€'000
Operating expenses	**238,664**	213,011
Multimedia tax credits / video game tax relief	**(15,593)**	(16,063)
Other direct costs	**8,695**	9,286
	231,766	206,234

	2020	2019
Operating profit is stated after charging / (crediting):	**€'000**	€'000
Depreciation – property, plant and equipment	**8,983**	7,295
Depreciation – right of use assets	**8,402**	7,849
Amortisation of intangible assets	**8,808**	7,318
Costs of acquisition and integration	**2,650**	4,348
Auditor's remuneration	**553**	499
Short term leases	**1,747**	1,616
Investment income	**(1,437)**	-

Costs of acquisition and integration	**2020** **€'000**	2019 €'000
Acquisition and integrations costs re: current year acquisitions (note 27)	**307**	535
Acquisition and integrations costs re: prior acquisitions	**743**	406
Fair value adjustments to contingent consideration (note 18)	**(66)**	493
Deferred consideration related to continuing employment	**649**	567
Acquisition related and other borrowing costs	**-**	262
Acquisition team and related costs	**247**	550
Fair value adjustments to right of use assets (note 12)	**434**	-
Other re-organisation and restructuring costs	**336**	1,535
	2,650	4,348

Auditor's remuneration	**2020** **€'000**	2019 €'000
Audit services:		
Parent company and Group audit	**290**	285
Subsidiary companies audit	**250**	202
Non-audit services:		
Audit related assurance services	**13**	12
	553	499

Investment income	**2020** **€'000**	2019 €'000
Gain on disposal of investment	**(1,437)**	-
	(1,437)	-

The Group acquired a minor holding in Hutch Games Limited, when Keywords purchased Liquid Development studio in 2015. During 2020, Hutch Games was acquired and the Group received proceeds of USD$1.7m (€1.4m) in December, and will become entitled to receive further consideration of up to USD$450K over the period 2022 through 2025, subject to earn out targets being met.

6 Financing Income and Cost

	2020 **€'000**	2019 €'000
Financing income		
Interest received	**76**	74
	76	74
Financing cost		
Bank charges	**(552)**	(629)
Interest expense	**(1,071)**	(934)
Unwinding of discounted liabilities - lease liabilities	**(843)**	(694)
Unwinding of discounted liabilities - deferred consideration	**(132)**	(330)
Foreign exchange loss	**(6,103)**	(1,658)
	(8,701)	(4,245)
Net financing income / (cost)	**(8,625)**	(4,171)

7 Taxation

	2020 €'000	2019 €'000
Current income tax		
Income tax on profits of parent company	**-**	(3)
Income tax on profits of subsidiaries	**13,899**	8,523
Deferred tax (note 22)	**(2,872)**	(1,058)
	11,027	7,462

The tax charge for the year can be reconciled to accounting profit as follows:

	2020 €'000	2019 €'000
Profit before tax	**32,494**	17,371
Tax charge based on the Effective Tax Rate*	**8,071**	4,519
Tax settlement regarding a pre-acquisition issue	**-**	491
Income tax prior year (over) / under provision	**(1,302)**	(929)
Deferred tax prior year (over) / under provision and impact of change in tax rates	**402**	(369)
Items disallowed for tax purposes	**3,846**	4,354
Exempt and non-taxable income	**258**	(133)
Tax incentives	**(892)**	(1,524)
Current year tax losses utilised	**(3)**	(1,176)
Current year tax losses where deferred tax has not been provided	**477**	1,064
State and other direct taxes	**548**	1,473
Other differences - net	**(378)**	(308)
Total tax charge	**11,027**	7,462
*Effective tax rate - being the statutory tax rate relative to the profit before tax in each jurisdiction	**24.8%**	26.0%

The Group's subsidiaries are located in different jurisdictions and are taxed on their residual profit in those jurisdictions. The effective tax rate will vary year on year due to the effect of changes in tax rates and changes in the proportion of profits in each jurisdiction.

Tax effects relating to each component of other comprehensive income	2020 €'000	2019 €'000
Exchange gain / (loss) in net investments foreign operations	**(4,909)**	1,267
Tax (expense) / benefit	**614**	-
Net of tax amount	**(4,295)**	1,267
Actuarial gain / (loss) on defined benefit plans	**(421)**	(167)
Tax (expense) / benefit	**-**	5
Net of tax amount	**(421)**	(162)
Exchange gain / (loss) on translation of foreign operations	**(10,843)**	5,960
Tax (expense) / benefit	**-**	-
Net of tax amount	**(10,843)**	5,960

8 Earnings per Share

	2020	2019
	€ cent	€ cent
Basic	**30.32**	15.23
Diluted	**28.71**	14.73

Earnings	**€'000**	€'000
Profit for the period from continuing operations	**21,467**	9,909

Weighted average number of equity shares	**Number**	Number
Basic (i)	**70,800,455**	65,081,403
Diluting impact of Share options (ii)	**3,959,878**	2,187,083
Diluted (i)	**74,760,333**	67,268,486

(i) Includes (weighted average) shares to be issued:

	Number	Number
	242,077	510,350

(ii) Contingently issuable Ordinary Shares have been excluded where the conditions governing exercisability have not been satisfied:

	Number	Number
LTIPs	**-**	2,067,536
Share options	**-**	1,128,000
	-	3,195,536

Details of the number of share options outstanding at the year-end are set out in note 17.

9 Dividends

Dividends paid	**In respect of**	**Approval date**	**€ cent per share**	**Pence STG per share**	**Total dividend €'000**	**Payment date**
Final	2018	Apr-19	1.21	1.08	773	Jun-19
Interim	2019	Sep-19	0.65	0.58	424	Oct-19
Dividends paid to shareholders 2019			1.86	1.66	1,197	

At 31 December 2020, Retained earnings available for distribution (being retained earnings plus share option reserve) in the Company were €25.5m (2019: €16.4m). In addition, certain amounts within Merger reserve are considered distributable (see note 16).

In light of COVID-19 the Directors have not recommended any dividend payments for 2020, however the Directors do not foresee any impediment in continuing to implement the dividend policy of the Group moving forward.

The Group does not recognise deferred tax on unremitted retained earnings, as in general, retained earnings (as dividends) are only remitted where there are minimal or no tax consequences.

10 Staff Costs

	Group	
	2020	2019
Total staff costs (including Directors)	**€'000**	€'000
Salaries and related costs	**198,064**	177,156
Social welfare costs	**21,623**	19,340
Pension costs	**5,212**	4,662
Share option expense	**15,350**	9,775
	240,249	210,933

	Group	
Average number of employees	**2020**	2019
Operations	**7,768**	6,778
General and administration*	**585**	646
	8,353	7,424

* In 2020 certain support functions (approximately 80 staff) that are managed by Operations were re-designated to Operations.

	2020	2019
Key management compensation	**€'000**	€'000
Salaries and related costs	**1,188**	1,384
Social welfare costs	**366**	140
Pension costs	**45**	35
Share option expense	**1,604**	943
	3,203	2,502

The key management compensation includes compensation to seven Directors of Keywords Studios PLC during the year (2019: eight), and also includes additional executives of the Group.

11 Intangible Assets

	Goodwill	Customer relationships	Intellectual property / Development costs	Music licences	Total
	€'000	€'000	€'000	€'000	€'000
Cost					
At 1 January 2019	154,202	36,713	1,521	436	192,872
Recognition on acquisition of subsidiaries	16,950	-	1,615	-	18,565
Additions	-	-	391	-	391
Exchange rate movement	4,487	907	-	18	5,412
At 31 December 2019	**175,639**	**37,620**	**3,527**	**454**	**217,240**
Recognition on acquisition of subsidiaries	**47,112**	**17,673**	**-**	**-**	**64,785**
Additions	**-**	**-**	**259**	**-**	**259**
Exchange rate movement	**(10,587)**	**(2,870)**	**13**	**-**	**(13,444)**
At 31 December 2020	**212,164**	**52,423**	**3,799**	**454**	**268,840**
Accumulated amortisation					
At 1 January 2019	**-**	12,671	-	115	12,786
Amortisation charge	**-**	7,001	-	317	7,318
Exchange rate movement	**-**	346	-	21	367
At 31 December 2019	**-**	**20,018**	**-**	**453**	**20,471**
Amortisation charge	**-**	**6,421**	**327**	**-**	**6,748**
Impairment charge	**147**	**-**	**1,913**	**-**	**2,060**
Exchange rate movement	**-**	**(1,261)**	**11**	**1**	**(1,249)**
At 31 December 2020	**147**	**25,178**	**2,251**	**454**	**28,030**
Net book value					
At 1 January 2020	175,639	17,602	3,527	1	196,769
At 31 December 2020	**212,017**	**27,245**	**1,548**	**-**	**240,810**

Customer relationships, intellectual property / development costs and music licences are amortised on a straight-line basis over five years. Customer relationships and music licence amortisation commences on acquisition, whereas intellectual property / development costs amortisation commences when the product is launched.

Impairment tests for goodwill
The Group assesses the carrying value of goodwill each year on the basis of budget projections for the coming year extrapolated using a one to five year growth rate and a terminal value calculated using a long term growth rate projection. The discount rate used of 12.5% (2019: 12.5%) is based on the Board's assessment of the weighted average cost of capital ("WACC") of the Group. The WACC assessment is supported by an annual independently calculated report, using the Capital Asset Pricing Model. However, the Board have excluded the impact of short term market volatility on these calculations in determining the Group WACC.

Key assumptions

	Actual		Sensitivity analysis			
	2020	2019	**2020**	2019	**2020**	2019
1 to 5 year growth rate assumption	**10%**	10%	**15%**	15%	**5%**	5%
Long term growth rate assumption	**2%**	2%	**2%**	2%	**2%**	2%
Value in use (€m)	**532**	469	**636**	560	**452**	398
Carrying value - goodwill (€m)	**212**	176				

The value in use calculations were consistently calculated year over year, with no significant changes in the assumptions made. The result of the value in use calculations was that no impairment is required in this period. The Directors consider that no reasonably probable change in the assumptions would result in an impairment.

Specific impairment reviews
Specific impairment reviews were performed for other intangible asset classes where it was considered COVID-19 had the potential to trigger an impairment. Due to the uncertainty caused by COVID-19 an impairment charge of €2,060k (2019: €nil) was recognised in the period, related to intangible assets in certain early technology pre-revenue businesses, fully impairing their carrying value.

12 Right of Use Assets

The Group has entered into leases, across the business, principally relating to property. These property leases have varying terms and renewal rights.

	Group	
	2020	2019
	€'000	€'000
Cost		
At 1 January	**29,384**	-
Adjustments from adoption of IFRS 16	**-**	23,138
Additions	**15,035**	4,315
Recognition on acquisition of subsidiaries	**2,376**	990
Exchange rate movement	**(2,703)**	941
At 31 December	**44,092**	29,384
Accumulated depreciation		
At 1 January	**7,915**	-
Depreciation charge	**8,402**	7,849
Impairment charge	**434**	-
Exchange rate movement	**(466)**	66
At 31 December	**16,285**	7,915
Net book value		
At 1 January	**21,469**	-
At 31 December	**27,807**	21,469

13 Property, Plant and Equipment

Group

	Computers and software	Office furniture and equipment	Leasehold improvements	Total
	€'000	€'000	€'000	€'000
Cost				
At 1 January 2019	18,325	5,407	5,804	29,536
Exchange rate movement	1,042	275	497	1,814
Additions	6,815	1,657	4,673	13,145
Acquisitions through business combinations at fair value	300	232	231	763
Disposals	(1,639)	(824)	(44)	(2,507)
At 31 December 2019	**24,843**	**6,747**	**11,161**	**42,751**
Exchange rate movement	**(2,058)**	**(155)**	**(1,339)**	**(3,552)**
Additions	**8,338**	**541**	**5,029**	**13,908**
Acquisitions through business combinations at fair value	**523**	**125**	**197**	**845**
Disposals	**(2,440)**	**(352)**	**(136)**	**(2,928)**
At 31 December 2020	**29,206**	**6,906**	**14,912**	**51,024**
Accumulated depreciation				
At 1 January 2019	10,361	2,691	1,482	14,534
Exchange rate movement	639	160	267	1,066
Depreciation charge	5,226	703	1,366	7,295
Disposals	(1,501)	(803)	(3)	(2,307)
At 31 December 2019	**14,725**	**2,751**	**3,112**	**20,588**
Exchange rate movement	**(1,378)**	**35**	**(695)**	**(2,038)**
Depreciation charge	**5,979**	**868**	**2,136**	**8,983**
Disposals	**(2,440)**	**(352)**	**(136)**	**(2,928)**
At 31 December 2020	**16,886**	**3,302**	**4,417**	**24,605**
Net book value				
At 1 January 2020	10,118	3,996	8,049	22,163
At 31 December 2020	**12,320**	**3,604**	**10,495**	**26,419**

14 Trade Receivables

	2020	2019
	€'000	€'000
Trade receivables	**49,814**	44,526
Provision for bad debts (note 23)	**(1,982)**	(1,283)
Financial asset held at amortised cost	**47,832**	43,243

Trade receivables arise from revenues derived from contracts with customers.

15 Other Receivables

	2020	2019
Group - Short term	**€'000**	€'000
Accrued income from contracts with customers	**9,202**	7,010
Prepayments	**4,608**	4,089
Rent deposits and other receivables	**4,816**	3,151
Multimedia tax credits / video games tax relief	**16,668**	17,626
Tax and social security	**3,371**	3,537
	38,665	35,413

Accrued income from contracts with customers, represent mainly contract assets in process and related items. The movement in the year is comprised of transfers in and out as items are accrued and subsequently invoiced to customers, with no significant amounts written off or impaired in the period, or no significant amounts recognised on the acquisition of subsidiaries.

16 Shareholders' Equity and Prior Year Restatement of Share Premium to Merger Reserve

Share Capital

	Issue date	Per share €	Number of ordinary £0.01 shares	Number of ordinary £0.01 shares - to be issued	Share capital €'000	Share capital - to be issued €'000	Share premium €'000	Merger reserve €'000
At 01 January 2019 (restated)			**63,788,286**	**923,139**	**763**	**15,648**	**19,964**	**118,257**
Acquisition related issuance of shares:								
Sunny Side Up	04-Jan-19	12.46	-	60,179	-	750	-	-
Sperasoft	16-Jan-19	16.48	243,442	(243,442)	3	(4,013)	-	4,010
Sperasoft re: bonus to employees	16-Jan-19	14.13	7,801	-	-	-	-	110
Fire Without Smoke	04-Jun-19	20.12	77,006	(77,006)	1	(1,549)	-	1,548
Red Hot	06-Jun-19	9.12	160,297	(160,842)	2	(1,468)	-	1,461
Descriptive Video Works	11-Jun-19	17.93	-	35,560	-	638	-	-
Blindlight	26-Jun-19	20.57	64,521	(64,521)	1	(1,327)	-	1,326
Snowed in	12-Aug-19	19.55	37,983	(37,983)	-	(743)	-	743
Studio Gobo and Electric Square	20-Aug-19	19.74	254,949	(254,529)	3	(5,024)	-	5,021
The Trailerfarm	24-Sep-19	21.31	11,070	(11,070)	-	(236)	-	236
TV+SYNCHRON	01-Oct-19	13.12	-	68,608	-	900	-	-
Ichi	26-Nov-19	15.94	-	70,246	-	1,120	-	-
Kantan	12-Dec-19	15.86	-	41,382	-	614	-	-
Acquisition related issuance of shares			**857,069**	**(573,418)**	**10**	**(10,338)**	**-**	**14,455**
Issue of shares on exercise of share options		1.34	567,160	-	7	-	754	-
At 31 December 2019 (restated)			**65,212,515**	**349,721**	**780**	**5,310**	**20,718**	**132,712**
Acquisition related issuance of shares:								
Sunny Side Up	06-Jan-20	12.46	60,179	(60,179)	1	(750)	-	749
Laced	14-Apr-20	17.48	8,194	(8,194)	-	(143)	-	143
Cord Worldwide	14-Apr-20	17.48	65,550	(65,550)	1	(1,145)	-	1,145
Descriptive Video Works	12-Jun-20	17.93	35,560	(35,560)	-	(638)	-	637
Coconut Lizard	25-Jun-20	20.23	-	19,739	-	399	-	-
Studio Gobo and Electric Square	19-Aug-20	16.72	198,576	-	2	-	-	3,319
Maverick Media	26-Aug-20	24.63	-	13,579	-	334	-	-
TV+SYNCHRON	05-Oct-20	13.12	68,608	(68,608)	1	(900)	-	899
Ichi	02-Dec-20	15.95	55,612	(55,612)	1	(886)	-	886
G-Net Media	24-Nov-20	23.26	-	130,448	-	3,034	-	-
Jinglebell	10-Dec-20	25.94	-	11,564	-	300	-	-
High Voltage Software	14-Dec-20	26.06	-	307,597	-	8,017	-	-
Indigo Pearl	15-Dec-20	26.27	-	20,125	-	529	-	-
Kantan	22-Dec-20	15.86	26,085	(26,085)	-	(414)	-	414
Acquisition related issuance of shares			**518,364**	**183,264**	**6**	**7,737**	**-**	**8,192**
Share placing	20-May-20	16.23	6,900,000	-	77	-	-	109,372
Issue of shares on exercise of share options		0.96	1,448,364	-	16	-	2,233	-
At 31 December 2020			**74,079,243**	**532,985**	**879**	**13,047**	**22,951**	**250,276**

Subject to applicable law, the Company's articles of association and any relevant authority of the Company passed by the shareholders in general meeting, there is no limit to the number of shares which the Company can issue, nor are there are any restrictions on dividends or distributions on such shares. In the context of the Company's general meeting authorities, at the AGM of 27 May 2020, shareholders gave the Directors the authority to allot shares (or grant rights to subscribe for, or convert any security into, shares) in the Company up to:

a) 3,283,791 shares in respect of the Company's Long Term Incentive Plan and Share Option Plan (5% of the Company's issued share capital as at 20 April 2020); and

b) otherwise, up to 21,870,054 shares (33.3% of the Company's issued share capital as at 20 April 2020).

This authority is considered prudent as it gives the Company flexibility to take advantage of possible opportunities which may arise from time to time. The authority granted at the 2020 AGM will expire on the earlier of (i) 15 months after 27 May 2020; and (ii) the conclusion of the 2021 AGM.

Shares to be issued are valued at the share price at the date of acquisition, and are recorded in accordance with IAS 32.16.

Shares held in the Employee Benefit Trust ("EBT")

	2020		2019	
	Shares	**€'000**	Shares	€'000
Ordinary shares held in the EBT	**335,425**	**1,997**	335,425	1,997

Reserves

The following describes the nature and purpose of each reserve within owners' equity:

Reserve	Description and purpose
Retained earnings	Cumulative net gains and losses recognised in the Consolidated Statement of Comprehensive Income.
Foreign exchange reserve	Gains or losses arising on retranslation of the net assets of the overseas operations into Euro.
Share premium	The share premium account is the amount received for shares issued in excess of their nominal value, net of share issuance costs.
Share option reserve	The share option reserve is the credit arising on share-based payment charges in relation to the Company's share option schemes.
Shares to be issued	For deferred consideration which is to be provided for by the issue of a fixed number of shares at a future defined date, where there is no obligation on Keywords to offer a variable number of shares, the deferred consideration is classified as an Equity Arrangement and the value of the shares is fixed at the date of the acquisition.
Merger reserve	The merger reserve was initially created following the Group reconstruction, when Keywords Studios PLC acquired the Keywords International Limited group of companies. When the Group uses Keywords Studios PLC shares as consideration for the acquisition of an entity, the value of the shares in excess of the nominal value (net of share issuance costs) is also recorded within this reserve, in line with S612 of the Companies Act 2006.

Prior Year Restatement of Share Premium to Merger Reserve

In May 2020, the Company completed a placing of 6,900,000 new ordinary shares issued at a price of €16.23 (£14.50) per share, representing approximately 10.5% of the issued share capital prior to the placing. Net of transaction costs, the placing raised proceeds of approximately €110m (£98m). The placing was made via a cash box structure, resulting in the Company acquiring the proceeds via a share for share exchange and hence the premium on the issuance of new shares of €109.5m has been credited to Merger reserve (in accordance with S610 of the Companies Act 2006). At the time of the placement, the proceeds were not allocated to a specific acquisition or specific purpose, and thus this reserve is considered distributable. The new shares rank pari passu in all respects with the existing ordinary shares of the Company, including the right to receive all future dividends and other distributions declared or paid after the date of placing.

Following completion of the share placement via the cash box structure in May 2020, a review of the Company's merger reserves was performed. It was identified that the premium on shares issued as part of the share placement in 2017 of €82.3m, was incorrectly recorded in non-distributable share premium. As the placing was also made via a cash box structure, resulting in the Company acquiring the proceeds via a share for share exchange, the premium on the issuance of new shares of €82.3m should have been credited to Merger reserve (in accordance with S610 of the Companies Act 2006). At the time of the placing the proceeds were identified as allocated to specific acquisitions. Hence the reserve is not considered distributable, but may become distributable in the future. The premium has been re-designated to Merger reserve and the prior period balances have been restated accordingly.

Prior period restatement	Share premium €'000	Merger reserve €'000
At 1 January 2019 - as reported	102,225	35,996
Reclassification of Share premium within Reserves	(82,261)	82,261
At 1 January 2019 - as restated	19,964	118,257

It was further identified that the share premium of €14.4m on the share placement in 2015, again via a cash box structure, that was posted to Merger reserve in 2015, is in fact distributable (as at the time of the placement the proceeds were not allocated to a specific purpose). For clarity, this transaction for €14.4m, together with the €109.5m from the share placement in 2020 (totalling €123.9m) that are included in the Merger reserve, are considered distributable.

17 Share Options

In July 2013, at the time of the IPO, the Company put in place a Share Option Scheme and a Long-Term Incentive Plan ("LTIP"). The charge in relation to these arrangements is as follows:

	2020	2019
	€'000	€'000
Share option scheme expense	**2,576**	1,520
LTIP option expense	**12,774**	8,255
	15,350	9,775

Of the total share option expense, €1,007k relates to Directors of the Company (2019: €754k).

Share Option Scheme

Share options are granted to Executive Directors and to permanent employees. The exercise price of the granted options is equal to the market price of the shares at the time of the award of the options. The Company has no legal or constructive obligation to repurchase or settle the options in cash.

Movements in the number of share options outstanding and their related weighted average exercise prices are as follows:

	2020		2019	
	Average exercise price in £ per share	**Number of options**	Average exercise price in £ per share	Number of options
Outstanding at the beginning of the period	**9.97**	**2,148,102**	7.11	1,832,701
Granted	**15.93**	**822,000**	15.88	729,000
Lapsed	**15.64**	**(179,151)**	14.74	(175,807)
Exercised	**4.55**	**(445,713)**	2.66	(237,792)
Outstanding at the end of the period	**12.66**	**2,345,238**	9.96	2,148,102
Exercisable at the end of the period	**4.39**	**638,238**	1.89	809,440
Weighted average share price at date of exercise	**17.91**		15.98	

Summary by year

Year of Option	**2013**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**Total**
Exercise price	£1.23	£1.58	£2.54	£7.76	£17.10	£15.88	£15.93	
Outstanding at the beginning of the period	178,559	544,481	91,229	205,833	469,500	658,500	-	2,148,102
Granted	-	-	-	-	-	-	822,000	822,000
Lapsed	-	(1,420)	(1,601)	(10,139)	(36,839)	(69,713)	(59,439)	(179,151)
Exercised	(178,559)	(84,448)	(55,332)	(68,660)	(57,679)	(787)	(248)	(445,713)
Outstanding at the end of the period	-	458,613	34,296	127,034	374,982	588,000	762,313	2,345,238
Exercisable at 31 December 2020	-	458,613	34,296	53,034	91,982	-	313	638,238
Exercisable 2021	-	-	-	74,000	141,500	196,000	-	411,500
Exercisable 2022	-	-	-	-	141,500	196,000	254,000	591,500
Exercisable 2023	-	-	-	-	-	196,000	254,000	450,000
Exercisable 2024	-	-	-	-	-	-	254,000	254,000

The inputs into the Black-Scholes model, used to value the options are as follows:

Year of Option	**2013**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**Total**
Weighted average share price (£)	£1.23	£1.64	£2.54	£7.75	£17.22	£16.09	£16.00	
Weighted average exercise price (£)	£1.23	£1.58	£2.54	£7.76	£17.10	£15.88	£15.93	
Fair value at measurement date (€)	€0.81	€0.56	€0.40	€1.13	€3.79	€5.72	€6.06	
Average expected life	4 Years	4 Years	4 Years	4 Years	4 Years	4 Years	4 Years	
Expected volatility	36.12%	28.03%	27.17%	24.79%	35.87%	45.23%	50.15%	
Risk free rates	0.50%	0.90%	0.58%	0.16%	0.89%	0.81%	0.07%	
Average expected dividend yield	1.00%	0.75%	0.55%	0.21%	0.10%	0.10%	0.10%	
Weighted average remaining life of options in months	-	-	-	5	17	29	41	24

Expected volatility was determined by reference to KWS volatility. The expected life used in the model has been adjusted based on management's best estimate, for the effects of non-transferability, exercise restrictions and behavioural considerations.

Long-term Incentive Plan Scheme

LTIP share awards are subject to KWS performance versus the designated share index over a three-year period.

Movements in the number of share options outstanding and their related weighted average exercise prices are as follows:

	2020		2019	
	Average exercise price in £ per share	**Number of options**	Average exercise price in £ per share	Number of options
Outstanding at the beginning of the period	**0.01**	**3,445,868**	0.01	2,677,467
Granted	**0.01**	**1,428,000**	0.01	1,298,136
Lapsed	**0.01**	**(178,400)**	0.01	(200,367)
Exercised	**0.01**	**(1,002,651)**	0.01	(329,368)
Outstanding at the end of the period	**0.01**	**3,692,817**	0.01	3,445,868
Exercisable at the end of the period	**0.01**	**373,648**	0.01	732,299
Weighted average share price at date of exercise	**17.34**		16.17	

Summary by year

Year of Option	**2013**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**Total**
Exercise price	£0.01	£0.01	£0.01	£0.01	£0.01	£0.01	£0.01	
Outstanding at the beginning of the period	204,273	200,959	327,067	644,000	857,000	1,212,569	-	3,445,868
Granted	-	-	-	-	-	-	1,428,000	1,428,000
Lapsed	-	-	-	-	(58,000)	(76,600)	(43,800)	(178,400)
Exercised	(204,273)	(153,601)	(196,807)	(447,970)	-	-	-	(1,002,651)
Outstanding at the end of the period	-	47,358	130,260	196,030	799,000	1,135,969	1,384,200	3,692,817
Exercisable at 31 December 2020	-	47,358	130,260	196,030	-	-	-	373,648
Exercisable 2021	-	-	-	-	799,000	-	-	799,000
Exercisable 2022	-	-	-	-	-	1,135,969	-	1,135,969
Exercisable 2023	-	-	-	-	-	-	1,384,200	1,384,200

The inputs into the Monte Carlo binomial model, used to value the options are as follows:

Year of Option	**2013**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**Total**
Weighted average share price (£)	£1.23	£1.60	£2.56	£7.75	£17.24	£16.05	£16.00	
Weighted average exercise price (£)	£0.01	£0.01	£0.01	£0.01	£0.01	£0.01	£0.01	
Fair value at measurement date (€)	€0.62	€1.38	€1.74	€4.96	€11.83	€13.98	€13.28	
Average expected life	3 Years	3 Years	3 Years	3 Years	3 Years	3 Years	3 Years	
Expected volatility	36.12%	28.21%	27.11%	24.79%	35.87%	45.26%	50.15%	
Risk free rates	0.50%	0.88%	0.54%	0.16%	0.89%	0.81%	0.07%	
Weighted average remaining life of options in months	-	-	-	-	5	17	29	17

Expected volatility was determined by reference to KWS volatility. The expected life used in the model has been adjusted based on management's best estimate, for the effects of non-transferability, exercise restrictions and behavioural considerations. As any dividends earned are to be re-invested into the business the impact of dividends has been ignored in the calculation of the LTIP share option charge.

LTIP's vest on the third anniversary of the grant, if the market performance criteria are met. LTIPs must be exercised before the seventh anniversary of the grant.

18 Other Payables

	Group	
	2020	2019
	€'000	€'000
Current liabilities		
Accrued expenses	**31,086**	22,809
Payroll taxes	**2,563**	3,833
Other payables (ii)	**10,501**	6,104
Deferred and contingent consideration (i)	**18,808**	5,966
	62,958	38,712
Non-current liabilities		
Other payables (ii)	**-**	216
Deferred and contingent consideration (i)	**1,994**	69
	1,994	285

(i) The movement in deferred and contingent consideration during the financial year was as follows:

	Group	
	2020	2019
	€'000	€'000
Carrying amount at the beginning of the year	**6,035**	19,306
Consideration settled by cash	**(2,489)**	(14,711)
Consideration settled by shares	**(3,321)**	-
Unwinding of discount (note 6)	**132**	330
Additional liabilities from current year acquisitions (note 27)	**21,131**	238
Fair value adjustments	**(66)**	493
Exchange rate movement	**(620)**	379
Carrying amount at the end of the year	**20,802**	6,035

In general, in order for contingent consideration to become payable, pre-defined profit and / or revenue targets must be exceeded. The valuation of contingent consideration is derived using data from sources that are not widely available to the public and involves a degree of judgement (Level 3 input in the fair value hierarchy). On an undiscounted basis, the Group may be liable for deferred and contingent consideration ranging from €0.2m to a maximum of €26.4m. A 10% movement in expected performance results, has no impact on the fair value of the contingent consideration, and hence there are no reasonably probable changes to the assumptions and inputs (including the discount rate), that would lead to a material change to the fair value of the total amount payable.

(ii) Other payables includes deferred income from contracts with customers of €2,967k (2019: €2,609k), which mainly comprise items invoiced prior to services being delivered. The movement in the year is comprised of transfers in and out as items are deferred and subsequently recognised as revenue.

19 Employee Defined Benefit Plans

In line with statutory requirements in France, Italy and India, we are required to maintain employee defined benefit termination payment schemes.

In France, employees are entitled to a lump-sum on retirement or early termination, based on salary and length of service ('Indemnité de Fin de Carrière' or IFC), entitling the Group's French employees to benefits of up to 2 month's salary per year of service.

In Italy, on leaving employment, each employee is entitled to 1/13.5 of their final salary for each year of service ('Trattamento di Fine Rapporto' or TFR).

In India, in compliance with statutory requirements, employees with over 5 years service are entitled a termination benefit of 15/26 of monthly salary for each year of service ('Gratuity' benefits).

The Group commissions an actuarial valuation of the related liabilities in each jurisdiction annually.

The liabilities at year end are recorded as long term. The actuarial gain or loss is recorded separately within Other comprehensive income. The movements through the year are as follows:

	2020	2019
	€'000	€'000
Opening liabilities at 1 January	**2,049**	1,378
Liabilities in France recognised at 1 January 2019	**-**	210
Service cost	**354**	307
Interest cost	**30**	35
Benefits paid	**(110)**	(48)
Actuarial (gain) / loss recorded	**421**	167
Exchange rate movement	**(51)**	-
Closing liabilities at 31 December	**2,693**	2,049

The Directors have considered the key specific risk factors which the Group faces due to the employee defined benefit plans which are in place. Having fully considered all specific elements of these plans the Directors believe that the key issues faced are as follows:

- The plan is currently 100% unfunded, there are no specific assets to meet the future liabilities as they fall due, as such there will be a cash flow impact as the liabilities must be met with current working capital as they fall due.

The Group has taken no specific actions to mitigate against these factors as due to the long-term nature of the plans it is expected that there will be no sudden financial impact on the Group's results caused by any of these factors. A maturity profile of the obligation is not presented as the liability is not significant in the context of the Group, and due to the age profile of employees a significant outlay is not anticipated for the foreseeable future.

In 2021, the Group expects the costs of the employee benefit plan to be in line with current year levels, as staff levels are anticipated to not change significantly in the period.

The actuarial valuation is based on the Projected Unit Credit Method, in line with IAS 19.

Cost for year	**2020 €'000**	2019 €'000
Service cost	**354**	307
Interest cost	**30**	35
Liabilities in France recognised at 1 January 2019	**-**	210
Actuarial (gain) / loss	**421**	167
	805	719

Actuarial (gain) / loss	**2020 €'000**	2019 €'000
Change due to experience	**98**	28
Change due to demographical assumptions	**(93)**	(24)
Change due to financial assumptions	**416**	163
	421	167

Assumptions Underlying the Actuarial Valuations and Sensitivities of the Assumptions

For the actuarial valuations the following demographic and economic and financial assumptions were applied:

- Mortality probabilities were derived from the population demographics, as recorded by the Government Statistics Offices in each jurisdiction.
- Disability, retirement age and other relevant demographic assumptions were taken from relevant life assurance statistics.
- Certain inputs were estimated by management including
  - Employee attrition rates, estimated based on company experience in each jurisdiction.
  - In Italy, TFR rules allow for early drawdown of benefits in certain circumstances. Such advances were estimated on the basis of company experience.

Economic and Financial Assumptions	**2020**	2019
Staff salary increase rate	**3.63%**	3.38%
Inflation rate	**2.93%**	2.06%
Discount rate	**1.23%**	1.64%

Key Statistics	**2020**	2019
Staff (number)	**782**	749
Average age (years)	**31**	31
Average service (years)	**4**	4

Interest Rate Sensitivities	**2020 €'000**	2019 €'000
(0.25)%	**2,842**	2,179
0.25%	**2,568**	1,964

Mortality Rate Sensitivities	**2020 €'000**	2019 €'000
(0.025)%	**2,696**	2,056
0.025%	**2,693**	2,054

Staff Turn Over Rate Sensitivities	**2020 €'000**	2019 €'000
(0.50)%	**2,726**	2,090
0.50%	**2,664**	2,046

Staff Salary Increase Rate Sensitivities	**2020 €'000**	2019 €'000
(0.50)%	**2,703**	2,033
0.50%	**2,745**	2,103

20 Loans and Borrowings

Maturity analysis of Loans and borrowings	Group 2020 €'000	2019 €'000
Current		
Expiry within 1 year	**-**	80
Non-current		
Expiry between 1 and 2 years	**-**	-
Expiry over 2 years	**195**	59,671
	195	59,671
	195	59,751
Currency denomination		
Euro	**-**	59,500
Canadian Dollars	**195**	251
	195	59,751

In 2019 the Company amended and extended it's existing Syndicated Bank revolving credit facility ('RCF'). The RCF allows financing of up to €100m, with an option to increase this by up to €40m to a total of €140m, at a rate based on a margin over EURIBOR, plus a separate margin charged for the unutilised facility. The RCF extends to October 2022, with an option to extend this maturity date by up to a further 2 years. While technically any borrowings are repaid and re-borrowed multiple times during the term of the RCF, so long as the Group remains compliant with the financial covenants and certain other terms of the RCF, the debt is rolled from one period to another, with the legal and commercial substance of a multi-year committed facility. Hence the Group presents liabilities under the RCF as non-current. In the prior period, the original RCF arrangement which was presented as a current liability during the process of being re-negotiated, was re-designated to non-current following re-negotiation.

In connection with the RCF, security has been granted over the major subsidiaries of the Group and the lenders also require the Group to comply with and report interest cover and leverage ratios in connection with its financial covenants. Non-compliance with terms of the RCF could result in lenders refusing to advance more funds, or in the worst case, calling in outstanding loans. Throughout the period, the Group operated well within the interest cover and leverage ratio terms of the RCF agreement.

The movements in loans and borrowings is as follows:

	Group Current €'000	Non-current €'000	Total €'000
At 1 January 2019	40,071	230	40,301
Cash flows:			
Drawdowns		27,000	27,000
Repayments	(71)	(7,902)	(7,973)
Non-cash flows:			
Recognition on acquisition of subsidiaries	-	402	402
Current re-designated to non-current	(39,920)	39,920	-
Exchange rate movement	-	21	21
At 31 December 2019	**80**	**59,671**	**59,751**
Cash flows:			
Drawdowns	**-**	**4,500**	**4,500**
Repayments	**-**	**(64,030)**	**(64,030)**
Non-cash flows:			
Exchange rate movement	**(7)**	**(19)**	**(26)**
At 31 December 2020	**73**	**122**	**195**

Following the share placing in May 2020, the balance of the RCF was repaid in June 2020, with the residual balance being loans owed by Keywords Studios QC-Interactive Inc.

Loans and borrowings (classified as financial liabilities under IFRS 9), are held at amortised cost. Interest expenses which are calculated using the effective interest method, are disclosed in note 6.

21 Lease Liabilities

The Group has entered into leases, across the business, principally relating to property. These property leases have varying terms and renewal rights. Management applies judgement in determining whether it is reasonably certain that a renewal or termination option will be exercised.

The movement in lease liabilities during the financial year was as follows:

	Group	
	2020	2019
	€'000	€'000
Carrying amount at the beginning of the year	**21,907**	-
Recognition on acquisition of subsidiaries (note 27)	**2,376**	990
Adjustments from adoption of IFRS 16		23,138
Liabilities recognised on new leases in the period	**15,035**	4,315
Unwinding of discounted liabilities - lease liabilities	**843**	694
Payment of principal and interest on lease liabilities	**(9,013)**	(8,049)
Exchange rate movement	**(2,284)**	819
Carrying amount at the end of the year	**28,864**	21,907

The value of leases not yet commenced to which the lessee is committed, which are not included in lease liabilities at 31 December 2020, were €10.3m (2019: €nil).

Group

Maturity analysis of lease liabilities	**2020 €'000 Lease payments**	**2020 €'000 Finance charges**	**2020 €'000 Lease liabilities**	2019 €'000 Lease payments	2019 €'000 Finance charges	2019 €'000 Lease liabilities
Current						
Not later than one year	**8,291**	**930**	**7,361**	8,281	582	7,741
Non-current						
Later than one year and not later than five years	**18,715**	**1,013**	**17,702**	12,321	216	12,152
Later than five years	**5,307**	**1,506**	**3,801**	2,718	703	2,014
	24,022	**2,519**	**21,503**	15,039	919	14,166
At 31 December	**32,313**	**3,449**	**28,864**	23,320	1,501	21,907

The Group has elected not to recognise a lease liability for short term leases (leases with an expected term of 12 months or less) or for leases of low value assets. Payments made under such leases are expensed on a straight-line basis. The expenses in the period relating to payments not included in the measurement of the lease liability were as follows:

	Group	
Lease payments not recognised as a liability	**2020 €'000**	2019 €'000
Short-term leases	**1,747**	1,616
Leases of low value assets	**-**	-
	1,747	1,616
The future minimum lease payments related to these leases		
Not later than one year	**991**	651
Later than one year and not later than five years	**-**	-
Later than five years	**-**	-
	991	651

The effect of variable lease payments and re-instatement costs on future cash outflows arising from leases, is not material for the Group.

22 Deferred Tax

Details of the deferred tax assets and liabilities, and amounts recognised in the Income statement are as follows:

	2020 €'000 Assets	**2020 €'000 Liabilities**	**2020 €'000 Net**	**2020 €'000 (Credited) / charged to income statement**
Defined benefit termination payments	**69**	**-**	**69**	**(19)**
Available losses	**1,157**	**-**	**1,157**	**293**
Rent free period provisions	**75**	**-**	**75**	**(64)**
Fixed asset tax base versus accounting book value	**603**	**704**	**(101)**	**104**
Deferred tax related to tax credits	**38**	**2,144**	**(2,106)**	**(1,057)**
Deferred tax arising on items deductible on a paid basis	**3,344**	**1,405**	**1,939**	**(949)**
Recognition on acquisition of subsidiaries	**9,363**	**3,970**	**5,393**	**-**
Deferred tax arising on intangibles	**-**	**2,352**	**(2,352)**	**(1,451)**
Net tax assets / liabilities	**14,649**	**10,575**	**4,074**	**(3,143)**
Impact of change in tax rates				**289**
Prior year (over) / under provision				**(18)**
Total (credited) / charged to income statement				**(2,872)**

	2019 €'000 Assets	2019 €'000 Liabilities	2019 €'000 Net	2019 €'000 (Credited) / charged to income statement
Accelerated capital allowances	-	-	-	(1)
Defined benefit termination payments	50	-	50	16
Available losses	1,450	-	1,450	(575)
Rent free period provisions	11	-	11	19
Fixed asset tax base versus accounting book value	578	575	3	484
Deferred tax related to tax credits	474	3,637	(3,163)	695
Deferred tax arising on items deductible on a paid basis	2,497	1,507	990	469
Deferred tax arising on intangibles	-	3,803	(3,803)	(1,990)
Net tax assets / (liabilities)	5,060	9,522	(4,462)	(883)
Impact of change in tax rates				(80)
Prior year (over) / under provision				(95)
Total (credited) / charged to income statement				(1,058)

The deferred tax asset not recognised on available losses at the period end is €3.2m (2019: €3.1m).

23 Financial Instruments and Risk Management

Interest Rate Risk

Interest rate risk is the risk that the value of financial instruments will fluctuate due to changes in market interest rates. The Group's income and operating cash flows are substantially independent of changes in market interest rates. The management monitors interest rate fluctuations on a continuous basis and acts accordingly.

Where the Group has a significant amount of surplus cash, it invests in higher earning interest deposit accounts.

Due to interest rate conditions, the interest rates for short-term deposits are at similar levels to those achieved for longer-terms.

The effect of a strengthening or a weakening of 1% in interest rates charged during the reporting period on the interest expense would have resulted in the following pre-tax profit / (loss) impact for the year:

	1% Strengthening 2020 €'000	**1% Weakening 2020 €'000**	1% Strengthening 2019 €'000	1% Weakening 2019 €'000
Interest expense	**(290)**	**257**	(503)	503

Credit Risk

The Group's main financial assets are cash and cash equivalents, as well as trade and other receivables which represent the Group's maximum exposure to credit risk in connection with its financial assets.

Credit risk arises when a failure by counterparties to discharge their obligations could reduce the amount of future cash inflows from financial assets on hand at the reporting date. Credit risk arising in the context of the Group's operations is not significant with the total bad debt provision at the balance sheet date amounting to 4% of net trade receivables (2019: 3.0%). Customer credit risk is managed at appropriate Group locations according to established policies, procedures and controls. Customer credit quality is assessed and credit limits are established where appropriate. Outstanding customer balances are regularly monitored and a review for indicators of impairment (evidence of financial difficulty of the customer, payment default, breach of contract etc.) is carried out at each reporting date. Significant balances are reviewed individually while smaller balances are grouped and assessed collectively. Receivables balances are unsecured and non-interest-bearing. The trade receivables balances disclosed comprise a large number of customers spread across the Group's activities and geographies with balances classified as "Not past due" representing 79% of the total trade receivables balance at the balance sheet date (2019: 84%). Trade and other receivables are carried on the Consolidated statement of financial position net of bad debt provisions.

The ageing of trade receivables can be analysed as follows:

Group

	Total €'000	Not past due €'000	1-2 months past due €'000	More than 2 months past due €'000
At 31 December 2020	**47,832**	**37,936**	**7,678**	**2,218**
At 31 December 2019	43,243	36,208	6,136	899

A provision for doubtful debtors is included within trade receivables and can be reconciled as follows:

	2020 €'000	2019 €'000
Provision at the beginning of the year	**1,283**	1,717
Impairment of financial assets (trade receivables) charged to administration expenses	**1,293**	500
Foreign exchange movement in the year	**(284)**	54
Utilised	**(310)**	(988)
Provision at end of the year	**1,982**	1,283

Trade receivables loss allowance is estimated using a practical expedient to arrive at lifetime expected credit losses. Overdue receivables are evaluated to calculate an expected credit loss using a historical credit loss experience of 0.5% (2019: 0.5%). Taking into account internal and external information, the historical credit loss experience may be adjusted where it is determined that there has been a significant increase in credit risk. Where a receivable is credit impaired, the impairment is recognised immediately, and impaired balances are removed from the expected credit loss calculation. Due to the pandemic, Credit impaired receivables provisions were increased to €1.7m at 31 December 2020.

	Total	**Not past due**	**1-2 months past due**	**More than 2 months past due**
	€'000	**€'000**	**€'000**	**€'000**
Trade receivables gross	**49,814**	**38,150**	**7,887**	**3,777**
Credit impaired	**(1,733)**	**(23)**	**(170)**	**(1,540)**
Expected credit losses	**(249)**	**(191)**	**(39)**	**(19)**
At 31 December 2020	**47,832**	**37,936**	**7,678**	**2,218**

	Total	Not past due	1-2 months past due	More than 2 months past due
	€'000	€'000	€'000	€'000
Trade receivables gross	44,526	36,386	6,166	1,974
Credit impaired	(1,071)	-	-	(1,071)
Expected credit losses	(212)	(178)	(30)	(4)
At 31 December 2019	43,243	36,208	6,136	899

Related party receivables of €nil were past due at 31 December 2020 (2019: €nil).

Currency Risk

Currency risk is the risk that the value of financial instruments will fluctuate due to changes in foreign exchange rates. The foreign exchange risk arises for the Group where assets and liabilities arise in a currency other than the functional currency of the entity.

The Group's policy, where possible, is for Group entities to manage foreign exchange risk at a local level by matching the currency in which revenue is generated with the expenses incurred and by settling liabilities denominated in their functional currency with cash generated from their own operations in that currency. Where Group entities have liabilities denominated in a currency other than their functional currency (and have insufficient reserves of that currency to settle them), cash already denominated in that currency will, where possible, be transferred from elsewhere within the Group.

The Group is predominantly exposed to currency risk on the balances held within working capital across the Group and the exposure is concentrated in the movement of the Canadian Dollar, US Dollar and Sterling against the Euro. The effect of a strengthening or weakening of 10% in those currencies against the Euro at the reporting date on the working capital balances would, all other variables held constant, have resulted in the following pre-tax profit / (loss) impact for the year:

	2020	**2020**	2019	2019
	€'000	**€'000**	€'000	€'000
	10% Strengthening	**10% Weakening**	10% Strengthening	10% Weakening
US Dollar to Euro	**4,712**	**(3,855)**	3,052	(2,497)
Canadian Dollar to Euro	**594**	**(486)**	1,779	(1,455)
Sterling to Euro	**835**	**(683)**	1,535	(1,256)

Total Financial Assets and Liabilities

The carrying amount of the financial assets and liabilities shown in the Consolidated Statements of financial position are stated at amortised costs, with the exception of contingent consideration held at fair value.

Liquidity Risk

Liquidity risk arises from the Group's management of working capital and the financial charges on its debt instruments.

The Group's policy is to ensure that it will have sufficient cash to allow it to meet its liabilities when they become due. The Directors consider liquidity risk is mitigated by the strong working capital position, with €190m of current assets, including cash of €103m available to settle liabilities as they fall due.

The following are the contractual maturities (representing undiscounted contractual cash flows) of the Group's financial liabilities:

Group

At 31 December 2020	**Carrying value Total €'000**	**Contractual cash flows Total €'000**	**Within 1 year €'000**	**1-2 years €'000**	**2-5 years €'000**	**Over 5 years €'000**
Trade payables	**8,170**	**8,170**	**8,170**	**-**	**-**	**-**
Deferred and contingent consideration (i)	**20,802**	**26,442**	**20,699**	**5,743**	**-**	**-**
Other payables	**44,150**	**44,150**	**44,150**	**-**	**-**	**-**
Loans and borrowings	**195**	**195**	**73**	**122**	**-**	**-**
Loan interest	**10**	**10**	**5**	**5**	**-**	**-**
Lease liabilities	**28,864**	**32,313**	**8,291**	**7,153**	**11,562**	**5,307**
Total	**102,191**	**111,280**	**81,388**	**13,023**	**11,562**	**5,307**

At 31 December 2019	Carrying value Total €'000	Contractual cash flows* Total €'000	Within 1 year €'000	1-2 years €'000	2-5 years €'000	Over 5 years €'000
Trade payables	8,027	8,027	8,027	-	-	-
Deferred and contingent consideration (i)	6,035	6,035	5,966	69	-	-
Other payables	32,962	32,962	32,746	216	-	-
Loans and borrowings	59,751	59,751	80	-	59,671	-
Loan interest	102	102	102	-	-	-
Lease liabilities	21,907	23,320	8,240	5,078	7,858	2,144
Total	128,784	130,197	55,161	5,363	67,529	2,144

* Please note the prior year comparative has been re-designated to reflect the current year presentation as the Directors consider this to be more appropriate.

(i) Deferred and contingent consideration at 31 December 2020 has arisen on business combinations, and is based on set amounts to be paid in the future to sellers under share purchase agreements. In general, in order for contingent consideration to become payable, pre-defined profit and / or revenue targets must be exceeded. On an undiscounted basis, the Group may be liable for deferred and contingent consideration up to a maximum of €26.4m.

24 Capital Management

Group	2020 €'000	2019 €'000
Loans and borrowings (note 20)	**195**	59,751
Less: cash and cash equivalents	**(103,070)**	(41,827)
Net debt / (net cash) position	**(102,875)**	17,924
Total equity	**371,235**	222,958
Net debt / (net cash) to capital ratio (%)	**(27.7)%**	8.0%

The Group manages capital by monitoring debt to capital and net debt ratios. This debt to capital ratio is calculated as net debt to total equity. Net debt is calculated as loans and borrowings (as shown in the Consolidated statement of financial position) less cash and cash equivalents. The liquidity risk and cash management for the Group is managed centrally by the Group Treasury function. Group Treasury manage bank balances centrally, and monitors the credit rating and stability of the institutions the Group banks with. The Board receives projections on a monthly basis as well as information regarding cash balances. The Group's strategy is to preserve a strong cash base and secure access to finance at reasonable cost by maintaining a good credit rating.

25 Investment in Subsidiaries

The results and financial position of all the subsidiaries are included in the consolidated financial statements.

Details of the Group as at 31 December 2020 are set out below:

Name	Country of incorporation	Date of incorporation / acquisition	Ownership ^	Registered office
Keywords International Ltd	Ireland	13-May-98	100%	Whelan House, South County Business Park, Dublin 18, Ireland.
Keywords International Co., Ltd.	Japan	30-Nov-10	100%	2-3-1 Kudanminami, Chiyoda-ku, Tokyo 102-0074, Japan
Keywords International, Inc.	USA	26-Sep-12	100%	251 Little Falls Drive, Wilmington, New Castle, DE 19808, USA
Liquid Violet Ltd *	UK	15-Jan-14	100%	201 Temple Chambers, 3-7 Temple Avenue, London, England, EC4Y 0DT
Keywords Studios QC-Games Inc.	Canada (Quebec)	17-Feb-14	100%	1751 Richardson, suite 8400, Montréal, Québec, Canada H3K1G6
Babel Media USA, Inc.	USA	17-Feb-14	100%	251 Little Falls Drive, Wilmington, New Castle, DE 19808, USA
Babel Media India Private Limited	India	17-Feb-14	100%	3rd floor, Vardhman Orchard Plaza, Plot No 4, LSC, West Enclave, Pitampura, New Delhi, 110034, India
Babel Media Ltd *	UK	17-Feb-14	100%	201 Temple Chambers, 3-7 Temple Avenue, London, England, EC4Y 0DT
Keywords International Pte. Limited	Singapore	24-Apr-14	100%	20 Kallang Avenue, #06-6A, Lobby B, Pico Creative Centre, Singapore 339411
Keywords Studios Italy S.R.L.	Italy	08-May-14	100%	Via Egadi 2, Milano, MI, 20144, Italy
Keywords Studios Los Angeles, Inc.	USA	08-May-14	100%	350 N. Glenoaks Blvd., Suite 305, Burbank, CA 91502, USA
Lakshya Digital Private Limited *	India	09-Oct-14	100%	3rd floor, Vardhman Orchard Plaza, Plot No 4, LSC, West Enclave, Pitampura, New Delhi, 110034, India
Edugame Solutions Private Limited	India	09-Oct-14	100%	D – 3/C, Munirka Flats, New Delhi – 110067
Lakshya Digital Singapore Pte. Ltd	Singapore	09-Oct-14	100%	20 Kallang Avenue, #06-6A, Lobby B, Pico Creative Centre, Singapore 339411
Keywords Studios QC-Tech Inc.	Canada (Quebec)	06-Jan-15	100%	1751 Richardson, suite 8400, Montréal, Québec, Canada H3K1G6
Keywords International Barcelona SL	Spain	09-Jan-15	100%	Passeig de Gràcia 49, 1er2a, 08007 Barcelona, Catalonia, Spain
Keywords do Brasil Localizacao e Traducao Ltda	Brazil	18-Jan-15	100%	Av. Churchill, 109 – Sala 204 – Centro, Rio de Janeiro-RJ, Brazil CEP: 20020-050
Keywords (Shanghai) Information Technology Ltd	China	02-Apr-15	100%	7TH Floor, Building A, Dong Ti YuHui Road, Hongkou District, Shanghai, China
Keywords Studios Spain SLU	Spain	16-Jul-15	100%	Julián Camarillo 6A, 3B, 28037 Madrid, Spain
Keywords Studios México, S. de R.L. de C.V.	Mexico	16-Jul-15	100%	Torrente #75, Colonia Ampliación Alpes, Del. Álvaro Obregón, CP. 01710, Ciudad de México, México
Liquid Development, LLC	USA	19-Aug-15	100%	411 SW 2nd Ave Ste 300, Portland, OR 97204, USA.
Keywords Asia Private Ltd	Singapore	15-Mar-16	100%	20 Kallang Avenue, #06-6A, Lobby B, Pico Creative Centre, Singapore 339411
Synthesis Deutschland GmbH *	Germany	12-Apr-16	100%	Holstenkamp 46 A, Bahrenfeld, 22525 Hamburg, Germany
Synthesis Global Solutions SA *	Switzerland	12-Apr-16	100%	Corso Elvezia 16, 6900 Lugano, Ticino, Switzerland
Keywords Studios France SAS	France	08-Jun-16	100%	59 Boulevard Exelmans, 75016 Paris, France
Player Research Ltd	UK	26-Oct-16	100%	201 Temple Chambers, 3-7 Temple Avenue, London, England, EC4Y 0DT
Keywords Studios QC-Interactive Inc.	Canada (Quebec)	16-Nov-16	100%	2031 boul. du Curé-Labelle, Saint-Jérôme (Québec) J7Y1S5, Canada
SPOV Ltd	UK	16-Feb-17	100%	201 Temple Chambers, 3-7 Temple Avenue, London, England, EC4Y 0DT
Xloc, Inc.	USA	08-May-17	100%	8801 Fast Park Drive, Suite 301, Raleigh, NC 27617, USA
GameSim Inc.	USA	16-May-17	100%	13501 Ingenuity Drive, Suite 310, Orlando, FL 32826, USA.
Strongbox Ltd	Seychelles	19-May-17	100%	Suites 103, 106 and 107 Premier Building, Victoria, Mahe, Seychelles
Red Hot Software (Shanghai) Ltd	China	19-May-17	100%	7TH Floor, Building A, Dong Ti YuHui Road, Hongkou District, Shanghai, China
Red Hot Software (Zhengzhou) Ltd	China	19-May-17	100%	Room 207, 11th Floor, Building No. 3, No. 57 Ke Xue Da Dao, Zheng Zhou, He Nan, China
Eastern New Media Limited	Hong Kong	19-May-17	100%	Flat/Rm 4304, 43F, China Resources Building, 26 Harbour Road, Wanchai, Hong Kong
PT Limitless Indonesia	Indonesia	19-May-17	100%	Jl. Timoho II, No. 32, Yogyakarta, Indonesia
Around the Word GmbH	Germany	03-Aug-17	100%	Rosenstrasse 2, D-10178 Berlin
d3t Ltd	UK	19-Oct-17	100%	201 Temple Chambers, 3-7 Temple Avenue, London, England, EC4Y 0DT
Keywords US Holdings Inc.	USA	23-Oct-17	100%	251 Little Falls Drive, Wilmington, New Castle, DE 19808, USA

Keywords Canada Holdings Inc.	Canada (Quebec)	27-Oct-17	100%	1751 Richardson Street Suite 8400 Montreal QC H3K 1G6 Canada
Keywords Studios B.C., Inc.	Canada (BC)	27-Oct-17	100%	1700-1075 West Georgia Street, Vancouver, BC, Canada V6E 3C9
VMC Consulting Corporation	USA	24-Oct-17	100%	251 Little Falls Drive, Wilmington, New Castle, DE 19808, USA
Sperasoft Poland Spólka z.o.o.	Poland	13-Dec-17	100%	Ul. Na Kozłówce 27, 30-664 Kraków, Poland
Sperasoft Studios LLC	Russia	13-Dec-17	100%	196084, Russia, Saint-Petersburg, Kievskaya street, 5 – building
Sperasoft, Inc.	USA	13-Dec-17	100%	251 Little Falls Drive, Wilmington, New Castle, DE 19808, USA
SperaSystems LLC	USA	13-Dec-17	100%	2033 Gateway Pl Ste 500 San Jose, CA 95110-3712, USA
Keywords Studios Ltd *	Ireland	27-Mar-18	100%	Whelan House, South County Business Park, Dublin 18, Ireland.
Keywords UK Holdings Limited	UK	28-Mar-18	100%	201 Temple Chambers, 3-7 Temple Avenue, London, England, EC4Y 0DT
Keywords Ventures Limited	UK	06-Apr-18	100%	201 Temple Chambers, 3-7 Temple Avenue, London, England, EC4Y 0DT
Laced Music Ltd	UK	07-Apr-18	100%	201 Temple Chambers, 3-7 Temple Avenue, London, England, EC4Y 0DT
Cord Worldwide Ltd	UK	07-Apr-18	100%	201 Temple Chambers, 3-7 Temple Avenue, London, England, EC4Y 0DT
Paleblue Limited	UK	07-Apr-18	100%	201 Temple Chambers, 3-7 Temple Avenue, London, England, EC4Y 0DT
Fire Without Smoke Ltd	UK	29-May-18	100%	201 Temple Chambers, 3-7 Temple Avenue, London, England, EC4Y 0DT
Fire Without Smoke Inc	USA	29-May-18	100%	251 Little Falls Drive, Wilmington, New Castle, DE 19808, USA
Blindlight, LLC	USA	08-Jun-18	100%	8335 Sunset Blvd, West Hollywood, CA 90069, USA.
Snowed In Studios, Inc	Canada	19-Jul-18	100%	400-981 Wellington Street West, Ottawa, Ontario, K1Y 2Y1
Studio Gobo Limited	UK	17-Aug-18	100%	201 Temple Chambers, 3-7 Temple Avenue, London, England, EC4Y 0DT
Bitsy SG Limited	UK	17-Aug-18	100%	201 Temple Chambers, 3-7 Temple Avenue, London, England, EC4Y 0DT
Electric Square Limited	UK	17-Aug-18	100%	201 Temple Chambers, 3-7 Temple Avenue, London, England, EC4Y 0DT
Alset Ltd	UK	17-Aug-18	100%	201 Temple Chambers, 3-7 Temple Avenue, London, England, EC4Y 0DT
Itsy SGD Limited	UK	17-Aug-18	100%	201 Temple Chambers, 3-7 Temple Avenue, London, England, EC4Y 0DT
d3t Development Ltd	UK	30-Aug-18	100%	201 Temple Chambers, 3-7 Temple Avenue, London, England, EC4Y 0DT
The Trailerfarm Limited	UK	13-Sep-18	100%	201 Temple Chambers, 3-7 Temple Avenue, London, England, EC4Y 0DT
Sunny Side Up Creative Inc.	Canada	03-Jan-19	100%	410 Boulevard Charest Est, Suite 410, Québec, Québec, Canada, G1K 8G3.
Appsectest Ltd	UK	22-Jan-19	48%	Unit 13 Orton Enterprise Centre, Bakewell Road, Peterborough, Cambridgeshire, United Kingdom, PE2 6XU
Keywords Studios Netherlands B.V.	Netherlands	05-Feb-19	100%	Wilhelmina van Pruisenweg 35, 2595AN The Hague, the Netherlands
Wizcorp Inc.	Japan	18-Apr-19	100%	3-10-14, Higashi-Nihonbashi 3-chome, Sunrise Tachibana 6F, Chuo-ku, Tokyo ZIP 103-0004
Descriptive Video Works Inc.	Canada	11-Jun-19	100%	400-725 Granville Street, PO Box 10325, Vancouver BC V7Y 1G5, Canada
Keywords Germany Holdings GmbH	Germany	06-Sep-19	100%	Moriz-Seeler-Strasse 5-7, Franz Ehrlich Haus,12489 Berlin, Germany
TV+SYNCHRON Berlin GmbH	Germany	01-Oct-19	100%	Moriz-Seeler-Strasse 5-7, Franz Ehrlich Haus,12489 Berlin, Germany
Ichi Holdings Limited (in liquidation)	UK	26-Nov-19	100%	201 Temple Chambers, 3-7 Temple Avenue, London, England, EC4Y 0DT
Ichi Limited	UK	26-Nov-19	100%	201 Temple Chambers, 3-7 Temple Avenue, London, England, EC4Y 0DT
Ichi Creative Ltd	USA	26-Nov-19	100%	251 Little Falls Drive, Wilmington, New Castle, DE 19808, USA
9409-2954 Québec Inc.	Canada	04-Dec-19	100%	1751 Richardson Street, Suite 8400, Montreal, Quebec, H3K 1G6, Canada
Xcelerator Machine Translations Limited	Ireland	12-Dec-19	100%	Invent, Dublin City University, Glasnevin, Dublin 9, Ireland
Marching Cube, LLC	USA	22-Jan-20	100%	815A Brazos #334 Austin, TX 78701-2502, USA
Coconut Lizard Limited	UK	25-Jun-20	100%	201 Temple Chambers, 3-7 Temple Avenue, London, England, EC4Y 0DT
Maverick Media Limited	UK	27-Aug-20	100%	201 Temple Chambers, 3-7 Temple Avenue, London, England, EC4Y 0DT
g-Net Media, Inc.	USA	24-Nov-20	100%	251 Little Falls Drive, Wilmington, New Castle, DE 19808, USA
3455 Productions, LLC	USA	24-Nov-20	100%	251 Little Falls Drive, Wilmington, New Castle, DE 19808, USA
Jinglebell S.r.l.	Italy	10-Dec-20	100%	Via Marco d'Oggiono 12, Milan, Italy
High Voltage Software, Inc.	USA	14-Dec-20	100%	2345 Pembroke Ave., Hoffman Estates, IL 60169, USA
HVS Nola LLC	USA	14-Dec-20	100%	201 St. Charles Ave., Suite 2220, New Orleans, LA 70170, USA
Indigo Pearl Limited	UK	15-Dec-20	100%	201 Temple Chambers, 3-7 Temple Avenue, London, England, EC4Y 0DT
Lonsdale Miller Limited	UK	15-Dec-20	100%	201 Temple Chambers, 3-7 Temple Avenue, London, England, EC4Y 0DT

* indicates a direct subsidiary (all other holdings are indirect, being subsidiaries of various intermediate group holding companies).

^ Proportion of voting rights and ordinary share capital held

Post-acquisition, the Group reviews entities to streamline activities and close any dormant entities acquired or restructured entities. Re-structuring details are set out below:

Name	**Country of incorporation**	**Date of incorporation / acquisition**	**Ownership ^**	**Date of re-structuring**	**Re-structuring details**
Project Titanium Funding Limited	Jersey	06-May-20	100%	22-May-20	Liquidated
Binari Sonori Audio Productions LLC	USA	08-May-14	100%	06-Sep-20	Dissolved
Descriptive Video Works USA Inc.	USA	11-Jun-19	100%	07-Oct-20	Dissolved
KW Studios Limited *	UK	29-May-13	100%	24-Nov-20	Struck off
Cord Artists Management Limited	UK	07-Apr-18	100%	24-Nov-20	Struck off

26 Related Parties and Shareholders

Italicatessen Limited, a company registered in Ireland, is related by virtue of a common significant shareholder. P.E.Q. Holdings Limited is 100% owner of Italicatessen Limited. At 31 December 2020, P.E.Q. Holdings Limited owned 4.73% (2019: 5.37%) of the Company. In addition, Mr. Giorgio Guastalla is a Director of Italicatessen Limited, P.E.Q. Holdings Limited and the Company, and owns, or controls, 90% of the share capital of P.E.Q. Holdings Limited.

The following transactions arose with Italicatessen Limited, which provides canteen services to Keywords International Limited, on an arm's length basis:

	2020	2019
	€'000	€'000
Operating expenses		
Canteen charges	**13**	73
	13	73

The following are year-end balances owing by the Group:

	2020	2019
	€'000	€'000
Italicatessen Limited	**-**	13
	-	13

The Group paid the following amounts, on an arm's length basis, to Mr. Giorgio Guastalla, Director of the Company, and shareholder of P.E.Q. Holdings Limited, in respect of rent on premises occupied by employees of the Group in Dublin.

	2020	2019
	€'000	€'000
Operating expenses		
Rental payments	**22**	25
	22	25

The details of key management compensation (being the remuneration of the Directors) are set out in note 10.

27 Business Combinations

	2020 €'000	2019 €'000
Details of goodwill and the fair value of net assets acquired		
Book value:		
Property, plant and equipment	**872**	722
Right of use assets	**2,376**	990
Intangible assets	**-**	125
Trade and other receivables - gross	**4,069**	1,559
Bad debt provision	**-**	-
Cash and cash equivalents	**9,477**	2,112
Trade and other payables	**(4,904)**	(3,295)
Lease liabilities	**(2,376)**	(990)
Loan	**-**	(402)
Book value of identifiable assets and liabilities acquired	**9,514**	821
Fair value adjustments:		
Identifiable intangible assets	**17,673**	1,490
Identifiable tangible assets	**(27)**	41
Deferred tax assets	**9,363**	-
Trade and other payables	**1,003**	432
Deferred tax liabilities	**(3,970)**	-
Total fair value adjustments	**24,042**	1,963
Net assets acquired	**33,556**	2,784
Non-controlling interest	**-**	(148)
Goodwill from current year acquisitions	**47,112**	16,950
Total purchase consideration	**80,668**	19,586
Details of purchase consideration and cash outflows from current acquisitions		
Cash	**46,924**	15,323
Deferred cash	**41**	238
Deferred consideration contingent on performance	**21,090**	-
Shares to be issued	**12,613**	4,025
Total purchase consideration	**80,668**	19,586
Fixed number of shares to be issued	**503,052**	275,975
Cash paid in the period	**46,924**	15,163
Less: cash and cash equivalent balances transferred	**(9,477)**	(2,112)
Net cash outflow arising on acquisition	**37,447**	13,051
Related acquisition costs charged through to the Consolidated statement of comprehensive income	**307**	535
Details of pro forma revenues and profitability of current acquisitions		
Pre-acquisition revenue	**35,729**	7,167
Pre-acquisition revenue with Keywords Group	**-**	(68)
Post-acquisition revenue	**7,208**	6,066
Pro forma revenue	**42,937**	13,165
Pre-acquisition profit before tax	**9,399**	151
Post-acquisition profit before tax	**2,561**	(170)
Pro forma profit before tax	**11,960**	(19)

The acquisitions made in the year are in line with the Group's strategy to grow organically and by acquisition, as it selectively consolidates the highly fragmented market for video game services. The companies will bring additional talent, expertise and industry experience to Keywords' client base. Being able to offer the additional services to our clients will further enhance our reputation as the leading provider of services to the global video games industry.

The amounts recognised in respect of the identifiable assets acquired and liabilities assumed of acquisitions in the year are set out in the table above.

The main factors leading to the recognition of goodwill on the acquisitions are the presence of certain intangible assets in the acquired entities, which are not valued for separate recognition. These include expertise in the acquired entities, enhancing and growing our services capabilities, broadening our service offering, and extending our geographical footprint, further building out our global platform.

The total amount of goodwill arising on business combinations completed in 2020, that is expected to be deductible for tax purposes was €21.6m.

28 Significant Events and Transactions

The COVID-19 pandemic resulted in restrictions being put in place requiring most of the Group's studios to be temporarily closed from March onwards. The Group has been able to move most employees to work from home arrangements and whilst this has resulted in some short term disruption, particularly in the Audio and Testing service lines, it has allowed production to continue across most of the Group's operations. Since June, most of the Group's Audio studios have reopened and from July some activities started to operate from Testing studios, however at the year end the majority of employees were still working from home.

The Group has demonstrated a strong financial resilience during the period, with continued demand for most of the Group's services albeit certain service lines have been held back by COVID-19 operational and market disruption particularly in Testing, Audio and Localization. The significant events and transactions (together with relevant judgements, estimates and assumptions) that have occurred in the period relating to the effects of the COVID-19 pandemic are summarised below:

Impairment review:
As presented in note 11, the Group performs a full assessment of the carrying value of goodwill on an annual basis. Through the year interim assessments were made using updated forecasts and projections taking into account the impact of COVID-19. The result of these assessments was that no impairment was required.

In addition specific impairment reviews were performed for other intangible asset classes where it was considered COVID-19 had the potential to trigger an impairment. As outlined in note 11, due to the uncertainty caused by COVID-19 an impairment charge of €2,060k was recognised in the period, related to intangible assets in certain early technology pre-revenue businesses.

Credit risk:
The Group's exposure to credit risk is limited to the carrying amount of financial assets (Trade receivables) recognised at the balance sheet date. The Group has not seen a significant increase in credit risk during the pandemic, largely due to the resilience of the broader video games industry. However as outlined in note 23, due to the uncertainty caused by the pandemic, the Group has taken a conservative view on the recoverability of overdue receivables, when calculating Credit impaired receivables, and thus impaired receivables have increased to €1.7m at 31 December 2020. Credit risk continues to be monitored and managed closely by the Group, with a heightened awareness due to the pandemic.

Government subsidies claimed:
The Group applied for COVID-19 government subsidies in various jurisdictions, introduced in response to the global pandemic. Judgement has been applied in determining both the eligibility for these programs, and the presentation of the subsidies in the financial statements. In certain jurisdictions COVID-19 supports displaced ongoing government incentives and reliefs, principally MMTC. In these instances, the Group has elected to present the ongoing incentives as if they have been received, reducing the amounts recognised as COVID-19 government subsidies accordingly. Included in the Consolidated statement of comprehensive income are government subsidies recognised of €9.2m (net of amounts recognised as other government incentives). The supports relate to wage subsidies designed to help prevent job losses and better position companies to resume normal operations following the crisis.

29 Events after the Reporting Date

Acquisition of Heavy Iron
On 17 September 2020, the Group announced that it had entered into a conditional agreement to acquire the entire issued share capital of Heavy Iron Studios, Inc. ("Heavy Iron"), a provider of specialised game development services, for total consideration of up to US$13.3m. Under the terms of the acquisition, subject to certain closing conditions, Keywords agreed to pay initial consideration of US$4m in cash and the equivalent of US$0.5m in new ordinary shares to the seller on the first anniversary of the acquisition. In addition, deferred consideration of up to US$8.8m is payable to the seller, in a mix of cash and shares, based on performance targets being met by the first and second year anniversaries of the acquisition. Following on the resolution of the closing conditions, on 13 January 2021 Keywords announced that it completed the acquisition of Heavy Iron for the terms envisaged under the conditional agreement.

Acquisition of Tantalus
On 18 March 2021, the Group announced the acquisition of Tantalus Media Pty Ltd ("Tantalus"), for a total consideration of up to US$46.8m. Tantalus is a leading and prolific developer of high quality, multi-platform titles. The acquisition marks Keywords Studios' entry into the Australian video games market. Under the terms of the 85% investment, Keywords Studios will pay a maximum amount of US$46.8m, comprising initial consideration of US$30.6m (US$18.4m in cash from existing resources and the equivalent of US$12.2m in new ordinary shares) and deferred consideration of up to US$16.2m, in a mix of cash and new ordinary shares, based on performance targets for Tantalus over two years. The new ordinary shares to be issued as part of the initial consideration and the deferred consideration will be subject to a one-year lock-in period and orderly market provisions for a further one year period. Keywords has acquired 85% of the issued share capital of Tantalus' parent company, Keywords Australia Pty Ltd ("Keywords Australia"), a new company set up for this transaction. Put and call options are in place that would allow the Group to buy the 15% shareholding in Keywords Australia in 3 years from the vendor's wholly owned investment company.

Alternative performance measures

The Group reports a number of alternative performance measures ('APMs') to present the financial performance of the business, that are not GAAP measures as defined under IFRS. The Directors believe that these measures, in conjunction with the IFRS financial information, provide the users of the financial statements with additional information to provide a more meaningful understanding of the underlying financial and operating performance of the Group. The measures are also used in the Group's internal strategic planning and budgeting processes and for setting internal management targets. These measures can have limitations as analytical tools and therefore should not be considered in isolation, or as a substitute for IFRS measures.

The principal measures used by the Group are set out below:

Organic revenue growth – Acquisitions are a core part of the Group's growth strategy. Organic revenue growth measures are used to help understand the underlying trading performance of the Group excluding the impact of acquisitions. Organic revenue growth is calculated by adjusting the prior year revenues, adding pre-acquisition revenues for the corresponding period of ownership to provide a like for like comparison with the current year, and applying the prior year's foreign exchange rates to both years.

Constant exchange rates ('CER') – Given the international nature of the Group's operations, foreign exchange movements can have an impact on the reported results of the Group when they are translated into the Group's reporting currency of Euros. In order to understand the underlying trading performance of the business, revenue is also presented using rates consistent with the prior year in order to provide year over year comparability.

Adjusted profit and earnings per share measures – Adjusted profit and earnings per share measures are used to provide management and other users of the financial statements with a clear understanding of the underlying profitability of the business over time. Adjusted profit measures are calculated by adding the following items back to the equivalent GAAP profit measures:

- **Amortisation of intangible assets** – Customer relationships and music licence amortisation commences on acquisition, whereas intellectual property / development costs amortisation commences when the product is launched. These costs, by their nature, can vary by size and amount each year. As a result, amortisation of intangibles is added back to assist with the understanding of the underlying trading performance of the business and to allow comparability across regions and categories.
- **Costs of acquisition and integration** – The level of acquisition activity can vary each year and therefore the costs associated with acquiring and integrating businesses are added back to assist with the understanding of the underlying trading performance of the Group.
- **Share-based payments** – The Group uses share-based payments as part of remuneration to align the interests of senior management and employees with shareholders. These are non-cash charges and the charge is based on the Group's share price which can change. The costs are therefore added back to assist with the understanding of the underlying trading performance.
- **Foreign exchange gains and losses** – The Group does not hedge foreign currency translation exposures. The effect on the Group's results of movements in exchange rates can vary each year and are therefore added back to assist with understanding the underlying trading performance of the business.
- **COVID-19 government subsidies claimed** – The Group applied for COVID-19 government subsidies in various jurisdictions, introduced in response to the global pandemic. These subsidies have been added back in order to present adjusted profit and cash flow measures consistently year-on-year.
- **Investment income** – The Group acquired a minor holding in Hutch Games Limited, when Keywords purchased Liquid Development studio in 2015. In 2020 Hutch Games Limited was acquired and the Group received €1.4m proceeds in December. As the gain has arisen outside the normal trading activities of the Group, the income has been added back to assist with the understanding of the underlying trading performance.

Free cash flow measures – The Group aims to generate sustainable cash flow (Free cash flow) in order to support its acquisition program and to fund dividend payments to shareholders. Free cash flow is measured as Net cash generated by / (used in) operating activities after capital expenditure, payments of principal on lease liabilities, interest and tax payments, but before acquisition and integration cash outlay, investment income and dividend payments. Adjusted free cash flow is a measure of cash flow adjusting for capital expenditure that is supporting growth in future periods (represented by capital expenditure in excess of depreciation). In the current year the measure has also been adjusted for COVID-19 subsidies claimed given the one-time nature of the income.

The remainder of this section provides a reconciliation of the APMs with the relevant IFRS GAAP equivalent.

Service line analysis

The following table presents revenue growth by service line at both actual exchange rates ('AER') and constant exchange rates ('CER'). Constant exchange rates are calculated by retranslating current year reported numbers at the corresponding 2019 foreign exchange rates, in order to give management and other users of the financial statements better visibility of underlying trading performance against the prior year.

	2020 Revenue AER €m	**2020 Revenue CER €m**	2019 Revenue AER €m	**FY 2020 Growth AER %**	**FY 2020 Growth CER %**
Art Creation & Marketing	**57.3**	**58.5**	43.6	**31.4%**	**34.2%**
Game Development	**80.0**	**81.0**	66.3	**20.7%**	**22.2%**
Audio*	**47.2**	**47.8**	41.9	**12.6%**	**14.1%**
Functional Testing	**78.5**	**80.0**	68.9	**13.9%**	**16.1%**
Localization*	**45.4**	**45.9**	47.1	**(3.6)%**	**(2.5)%**
Localization Testing	**23.3**	**23.6**	22.6	**3.1%**	**4.4%**
Player Support	**41.8**	**42.4**	36.1	**15.8%**	**17.5%**
	373.5	**379.2**	326.5	**14.4%**	**16.1%**

*The prior year comparative has been re-classified to reflect the current year presentation as the Directors consider this to be more meaningful.

Pro forma revenue

Pro forma revenue is calculated by adding pre-acquisition revenues of current year acquisitions to the current year revenue numbers, to illustrate the size of the Group had the acquisitions been included for a full financial year.

	2020 Revenue AER €m	**2020 Pre-acquisition revenue AER €m**	**2020 Pro forma revenue AER €m**
Art Creation & Marketing	**57.3**	**15.9**	**73.2**
Game Development	**80.0**	**18.0**	**98.0**
Audio	**47.2**	**1.4**	**48.6**
Functional Testing	**78.5**	-	**78.5**
Localization	**45.4**	**0.4**	**45.8**
Localization Testing	**23.3**	-	**23.3**
Player Support	**41.8**	-	**41.8**
	373.5	**35.7**	**409.2**

Organic revenue at constant exchange rates

Organic revenue at constant exchange rates is calculated by adjusting the prior year revenues, adding pre-acquisition revenues for the corresponding period of ownership, and applying the 2019 foreign exchange rates to both years.

	2019 Revenue AER €m	2019 Pre-acquisition revenue AER €m	2019 Like for like revenue AER €m	**2020 Revenue growth CER €m**	**2020 Revenue CER €m**	**2020 Organic revenue growth CER %**
Art Creation & Marketing	43.6	6.0	49.6	**8.9**	**58.5**	**17.9%**
Game Development	66.3	2.9	69.2	**11.8**	**81.0**	**17.1%**
Audio*	41.9	3.3	45.2	**2.6**	**47.8**	**5.8%**
Functional Testing	68.9	-	68.9	**11.1**	**80.0**	**16.1%**
Localization*	47.1	0.7	47.8	**(1.9)**	**45.9**	**(4.0)%**
Localization Testing	22.6	-	22.6	**1.0**	**23.6**	**4.4%**
Player Support	36.1	-	36.1	**6.3**	**42.4**	**17.5%**
	326.5	12.9	339.4	**39.8**	**379.2**	**11.7%**

*The prior year comparative has been re-classified to reflect the current year presentation as the Directors consider this to be more meaningful.

Adjusted operating costs

This comprises Administrative expenses as reported in the Consolidated statement of comprehensive income, adding back share option expense, costs of acquisition and integration, amortisation and impairment of intangible assets, depreciation, non-controlling interest and deducting bank charges. In order to present the measure consistently year-on-year, the impact of COVID-19 government subsidies claimed is also excluded.

Calculation		**2020 €'000**	2019 €'000
Administrative expenses	Consolidated statement of comprehensive income	**(102,090)**	(98,687)
Share option expense	Consolidated statement of comprehensive income	**15,350**	9,775
Costs of acquisition and integration	Consolidated statement of comprehensive income	**2,650**	4,348
Amortisation and impairment of intangible assets	Consolidated statement of comprehensive income	**8,808**	7,318
Depreciation - property, plant and equipment	Note 13	**8,983**	7,295
Depreciation - right of use assets	Note 12	**8,402**	7,849
Non-controlling interest	Consolidated statement of comprehensive income	**85**	113
Bank charges	Note 6	**(552)**	(629)
COVID-19 government subsidies claimed	Consolidated statement of comprehensive income	**(9,231)**	-
Adjusted operating costs		**(67,595)**	(62,618)
Revenue from contracts with customers	Consolidated statement of comprehensive income	**373,538**	326,463
Adjusted operating costs as a % of revenue		**18.1%**	19.2%

Adjusted operating profit

The Adjusted operating profit consists of the Operating profit as reported in the Consolidated statement of comprehensive income, adjusted for share option expense, costs of acquisition and integration and amortisation and impairment of intangible assets. In order to present the measure consistently year-on-year, the impact of investment income and COVID-19 government subsidies claimed are also excluded.

Calculation		**2020 €'000**	2019 €'000
Operating profit	Consolidated statement of comprehensive income	**41,119**	21,542
Share option expense	Consolidated statement of comprehensive income	**15,350**	9,775
Costs of acquisition and integration	Consolidated statement of comprehensive income	**2,650**	4,348
Amortisation and impairment of intangible assets	Consolidated statement of comprehensive income	**8,808**	7,318
Investment income	Consolidated statement of comprehensive income	**(1,437)**	-
COVID-19 government subsidies claimed	Consolidated statement of comprehensive income	**(9,231)**	-
Adjusted operating profit		**57,259**	42,983
Revenue from contracts with customers	Consolidated statement of comprehensive income	**373,538**	326,463
Adjusted operating profit as a % of revenue		**15.3%**	13.2%

EBITDA

EBITDA comprises Operating profit as reported in the Consolidated statement of comprehensive income, adjusted for amortisation and impairment of intangible assets, depreciation, and deducting bank charges.

Calculation		**2020 €'000**	2019 €'000
Operating profit	Consolidated statement of comprehensive income	**41,119**	21,542
Amortisation and impairment of intangible assets	Consolidated statement of comprehensive income	**8,808**	7,318
Depreciation on property plant and equipment	Note 13	**8,983**	7,295
Depreciation on right of use assets	Note 12	**8,402**	7,849
Bank charges	Note 6	**(552)**	(629)
EBITDA		**66,760**	43,375

Adjusted EBITDA

Adjusted EBITDA comprises EBITDA, adjusted for share option expense, costs of acquisition and integration and non-controlling interest. In order to present the measure consistently year-on-year, the impact of investment income and COVID-19 government subsidies claimed are also excluded.

Calculation		**2020 €'000**	2019 €'000
EBITDA	As above	**66,760**	43,375
Share option expense	Consolidated statement of comprehensive income	**15,350**	9,775
Costs of acquisition and integration	Consolidated statement of comprehensive income	**2,650**	4,348
Non-controlling interest	Consolidated statement of comprehensive income	**85**	113
Investment income	Consolidated statement of comprehensive income	**(1,437)**	-
COVID-19 government subsidies claimed	Consolidated statement of comprehensive income	**(9,231)**	-
Adjusted EBITDA		**74,177**	57,611
Revenue from contracts with customers	Consolidated statement of comprehensive income	**373,538**	326,463
Adjusted EBITDA as a % of revenue		**19.9%**	17.6%

Adjusted profit before tax

Adjusted profit before tax comprises Profit before taxation as reported in the Consolidated statement of comprehensive income, adjusted for share option expense, costs of acquisition and integration, amortisation and impairment of intangible assets, non-controlling interest, foreign exchange gains and losses, and unwinding of discounted liabilities. In order to present the measure consistently year-on-year, the impact of investment income and COVID-19 government subsidies claimed are also excluded.

Calculation		**2020 €'000**	2019 €'000
Profit before tax	Consolidated statement of comprehensive income	**32,494**	17,371
Share option expense	Consolidated statement of comprehensive income	**15,350**	9,775
Costs of acquisition and integration	Consolidated statement of comprehensive income	**2,650**	4,348
Amortisation and impairment of intangible assets	Consolidated statement of comprehensive income	**8,808**	7,318
Non-controlling interest	Consolidated statement of comprehensive income	**85**	113
Foreign exchange (gain) / loss	Note 6	**6,103**	1,658
Unwinding of discounted liabilities - deferred consideration	Note 6	**132**	330
Investment income	Consolidated statement of comprehensive income	**(1,437)**	-
COVID-19 government subsidies claimed	Consolidated statement of comprehensive income	**(9,231)**	-
Adjusted profit before tax		**54,954**	40,913
Revenue from contracts with customers	Consolidated statement of comprehensive income	**373,538**	326,463
Adjusted profit before tax as a % of revenue		**14.7%**	12.5%

Adjusted effective tax rate

The Adjusted effective tax rate is the Taxation expense as reported in the Consolidated statement of comprehensive income, adjusted for the tax impact of the adjusting items in arriving at Adjusted profit before tax, as a percentage of the Adjusted profit before tax.

Calculation		**2020 €'000**	2019 €'000
Adjusted profit before tax	As above	**54,954**	40,913
Taxation	Consolidated statement of comprehensive income	**11,027**	7,462
Effective tax rate before tax on adjusting items	Taxation / Adjusted profit before tax	**20.1%**	18.2%
Tax arising on bridging items to Adjusted profit before tax^		**785**	1,703
Adjusted taxation		**11,812**	9,165
Adjusted effective tax rate	Adjusted taxation / Adjusted profit before tax	**21.5%**	22.4%

^Being mainly the tax impact of amortisation of intangible assets €1.8m, foreign exchange €1.2m, share option expense €0.7m, less COVID-19 government subsidies claimed €2.6m and investment income €0.3m, while in the prior year the tax impact was mainly due to amortisation of intangible assets €1.7m.

Adjusted earnings per share

The Adjusted profit after tax comprises the Adjusted profit before tax, less the Taxation expense as reported in the Consolidated statement of comprehensive income, adjusted for the tax impact of the adjusting items in arriving at Adjusted profit before tax.

The Adjusted earnings per share comprises the Adjusted profit after tax divided by the non-diluted weighted average number of shares as reported in note 8.

Calculation		**2020 €'000**	2019 €'000
Adjusted profit before tax	As above	**54,954**	40,913
Taxation	Consolidated statement of comprehensive income	**(11,027)**	(7,462)
Tax arising on bridging items to Adjusted profit before tax^		**(785)**	(1,703)
Adjusted profit after tax		**43,142**	31,748
Denominator (weighted average number of equity shares)	Note 8	**70,800,455**	65,081,403
		€ c	€ c
Adjusted earnings per share		**60.93**	48.78
Adjusted earnings per share % growth		**24.9%**	7.2%

^Being mainly the tax impact of amortisation of intangible assets €1.8m, foreign exchange €1.2m, share option expense €0.7m, less COVID-19 government subsidies claimed €2.6m and investment income €0.3m, while in the prior year the tax impact was mainly due to amortisation of intangible assets €1.7m.

Return on capital employed (ROCE)

ROCE represents the Adjusted profit before tax (excluding net interest costs, unwinding of discounted lease liabilities and bank charges, and also adjusted to include pre-acquisition profits of current year acquisitions), expressed as a percentage of the capital employed. As the Group continues to make multiple acquisitions each year, the calculation further adjusts the Adjusted profit before tax and the capital employed as if all the acquisitions made during each year were made at the start of that year.

Capital employed represents Total equity as reported on the Consolidated statement of financial position adding back employee defined benefit plan liabilities, cumulative amortisation of intangible assets (customer relationships), acquisition related liabilities (deferred and contingent consideration), together with loans and borrowings, while deducting cash and cash equivalents.

Calculation		**2020 €'000**	2019 €'000
Adjusted profit before tax	As above	**54,954**	40,913
Interest received	Note 6	**(76)**	(74)
Bank charges	Note 6	**552**	629
Interest expense	Note 6	**1,071**	934
Unwinding of discounted liabilities - lease liabilities	Note 6	**843**	694
Pre-acquisition profits of current year acquisitions	Note 27	**9,399**	151
Adjusted profit before tax including pre-acquisition profit and excluding net interest		**66,743**	43,247
Total equity	Consolidated statement of financial position	**371,235**	222,958
Employee defined benefit plans	Consolidated statement of financial position	**2,693**	2,049
Cumulative amortisation of intangibles assets (customer relationships)	Note 11	**25,178**	20,017
Deferred and contingent consideration	Note 18	**20,802**	6,035
Loans and borrowings	Note 20	**195**	59,751
Cash and cash equivalents	Consolidated statement of financial position	**(103,070)**	(41,827)
Capital employed		**317,033**	268,983
Return on capital employed	Adjusted profit before tax including pre acquisition profit and excluding net interest expense / capital employed	**21.1%**	16.1%

Free cash flow*

Free cash flow represents Net cash generated by / (used in) operating activities as reported in the Consolidated statement of cash flows, adjusted for acquisition and integration cash outlay, capital expenditure, net interest paid, payments of principal on lease liabilities and is presented both before and after taxation paid. In order to present the measure consistently year-on-year, the impact of investment income is also excluded.

Calculation		**2020 €'000**	2019 €'000
Net cash generated by / (used in) operating activities	Consolidated statement of cash flows	**76,420**	32,781
Acquisition and integration cash outlay:			
Costs of acquisition and integration	Consolidated statement of comprehensive income	**2,650**	4,348
Fair value adjustments to contingent consideration	Consolidated statement of cash flows	**66**	(493)
Fair value adjustments to right of use assets	Consolidated statement of cash flows	**(434)**	-
Acquisition of property, plant and equipment	Consolidated statement of cash flows	**(13,908)**	(13,145)
Investment in intangible assets	Consolidated statement of cash flows	**(259)**	(391)
Investment income	Consolidated statement of comprehensive income	**(1,437)**	-
Interest received	Consolidated statement of cash flows	**76**	74
Interest paid	Consolidated statement of cash flows	**(1,722)**	(2,130)
Payments of principal on lease liabilities	Consolidated statement of cash flows	**(8,170)**	(7,355)
Free cash flow after tax		**53,282**	13,689
Taxation paid	Consolidated statement of cash flows	**4,459**	13,288
Free cash flow before tax		**57,741**	26,977

**Please note Free cash flow is presented on a pre IFRS 16 basis as the Directors consider this to be more meaningful.*

Adjusted free cash flow*

Adjusted free cash flow is a measure of cash flow adjusting for capital expenditure that is supporting growth in future periods (as measured by capital expenditure in excess of maintenance capital expenditure). In order to present the measure consistently year-on-year, the impact of COVID-19 government subsidies claimed is also excluded.

Calculation		**2020 €'000**	2019 €'000
Free cash flow before tax	As above	**57,741**	26,977
Capital expenditure in excess of depreciation:			
Acquisition of property, plant and equipment	Consolidated statement of cash flows	**13,908**	13,145
Depreciation - property, plant and equipment	Consolidated statement of cash flows	**(8,983)**	(7,295)
Capital expenditure in excess of depreciation		**4,925**	5,850
COVID-19 government subsidies claimed	Consolidated statement of comprehensive income	**(9,231)**	-
Adjusted free cash flow		**53,435**	32,827

**Please note Adjusted free cash flow is presented on a pre IFRS 16 basis as the Directors consider this to be more meaningful.*

Adjusted cash conversion rate*

The Adjusted cash conversion rate is the Adjusted free cash flow as a percentage of the Adjusted profit before tax:

Calculation		**2020 €'000**	2019 €'000
Adjusted free cash flow	As above	**53,435**	32,827
Adjusted profit before tax	As above	**54,954**	40,913
Adjusted cash conversion ratio	Free cash flow before tax and capital expenditure in excess of depreciation, as a % of Adjusted profit before tax	**97.2%**	80.2%

**Please note the prior year has been adjusted to the current year presentation as the Directors consider this to be more meaningful.*