

Company number 03568010 (England and Wales)

Microsaic Systems plc

Annual Report and Accounts

31 December 2021

CORPORATE INFORMATION AND ADVISORS

Directors:	Gerard Brandon (Executive Chairman) Nigel Burton (Non-executive Director) Robert Moore (Independent Non-executive Director)
Company Secretary:	Strategic Finance Director Limited
Company number:	03568010
Registered office:	GMS House Boundary Road Woking Surrey GU21 5BX
Auditors:	Saffery Champness LLP Chartered Accountants 71 Queen Victoria Street London EC4V 4BE
Bankers:	HSBC Bank plc 95 Gloucester Road London SW7 4SX
Solicitors:	Dorsey & Whitney Europe LLP 199 Bishopsgate London EC2M 3UT
Nominated Adviser and Joint Broker:	Singer Capital Markets 1 Bartholomew Lane London EC2N 2AX
Joint Broker:	Turner Pope Investment (TPI) Limited 8 Frederick's Place London EC2R 8AB
Registrars:	Neville Registrars Limited Neville House Steelpark Road Halesowen B62 8HD
Company website:	www.microsaic.com

CONTENTS

	Pages
Chairman's Statement	4
Strategic Report	7
Governance	
Directors' report	18
Directors' remuneration committee report	23
Directors' finance & audit committee report	27
Corporate governance report	29
Financial Statements	
Independent auditors' report	37
Statement of comprehensive income	42
Statement of financial position	43
Statement of changes in equity	44
Statement of cash flows	45
Notes to the financial statements	46

CHAIRMAN'S STATEMENT

For the year ended 31 December 2021

Dear Shareholders,

Following my appointment as Chairman on 5 February 2021, it is my pleasure to present the Company's annual report and accounts for the year ended 31 December 2021.

Our Business

Microsaic Systems plc ("Microsaic" or the "Company") was established in 2001 to develop and commercialise point-of-need, micro-engineering technologies to miniaturise mass spectrometry ("MS"), lower the footprint of equipment by up to 90 per cent. compared to standard MS, and to offer online solutions to bio-processing in pharmaceutical manufacturing. To date, more than 180 units have been supplied and installed with companies such as Merck, which has published scientific reviews of the micro-engineered technologies.

In the 19 years since the Company's inception, £30 million has been invested towards the development of state-of-the-art compact mass spectrometry. Following completion of the fundraising in February 2021, a further capital injection of £5.5 million (before expenses) was obtained. In connection with this fundraising, there were a number of changes to Microsaic's board of directors (the "Board" or the "Directors") which led to a review of the Company's business model. Throughout the year, transitioning the focus towards commercial delivery of services, in addition to mass spectrometer equipment sales, has opened additional avenues of income. Supported by a robust patent portfolio in cutting-edge technology, the team of experts in physics, micro-electronic engineering, software architecture and organic chemical laboratory support, we have seen a return to higher sales coming out of the pandemic period, as we head into 2022. Moving on from the disappointing performance in 2020, the transformation of the Company's business model is making a significant impact on the prospects of the business.

Results

2021 has seen a fundamental shift in the strategic business model which is already showing encouraging results and momentum. The new partnership, co-operation, collaboration and commercial development agreements signed during the year have transformed the business. Revenue increased by 357% over the prior year, and also surpassed 2019 levels by 5%, whilst employee headcount was lower in 2021 than 2020. The Company headed into 2022 with shared revenues from partners and increased service opportunities. Moving on from the disappointing performance in 2020, the transformation of the Company's business model is making a significant impact on the prospects of the business. This can be seen in the operational highlights in the Strategic Report on page 7.

Financial Highlights:

- Total revenues increased 357% on the previous year to £0.91m (2020: £0.20m);
- Orders exceeded £1m, the largest increase since 2013, with the backlog of £125k of orders at the year-end anticipated to be shipped during 2022 (2020: order backlog £nil);
- Other operating income of £67k (2020: £97k);
- Operating expenses reduced to £2.50m (2020: £2.73m);
- Adjusted EBITDA loss of £1.77m (2020: £2.17m) (EBITDA before share-based payments and professional fees relating to corporate activities)
- Loss before tax of £3.40m (2020: £2.59m) after providing for:
 - Share-based payments of £1.36m (2020: £52k)
 - Depreciation of £161k (2020: £167k) and amortisation of £38k (2020: £41k);
 - Professional fees of £66k (2020: £149k) relating to corporate activities;
- February 2021: oversubscribed fundraising with gross proceeds of £5.5 million raised; and
- Cash and cash equivalents at 31 December 2021 of £3.46m (2020: £0.40m).

Post-year end events:

- **March 2022:** Appointment of Robert Moore to the Board, Glenn Tracey stepped down from his role as CEO.
- **April 2022:** Multi-year Manufacturing Framework Services Agreement (“MFSA”) with DeepVerge plc (“DeepVerge”) was signed to provide the design, assembly, quality and project management functions for a range of Modern Water equipment, including the addition of a range of “Sentinel” sensors to make use of Artificial Intelligence (“AI”) and Internet of Things (“IoT”) in a further iteration of DeepVerge, Modern Water’s Microtox®PD device worth an initial £400,000. The MFSA provides for additional iterations and upgrades to other equipment with an estimated total contract value of the order of £1m, subject to agreement on additional Scope of Work statements, and anticipated delivery over the period until the end of 2023.

Corporate governance

I believe that good corporate governance is important to support our future growth. The Board has extensive experience in publicly listed companies as well as running businesses in the healthcare and environmental sectors and is committed to maintaining the highest standards where possible. An independent Non-Executive Director, Robert Moore, was appointed in March 2022 and we are exploring other candidates to bring additional balance to the Board.

Outlook

The fresh injection of funding and the new Board has quickly resulted in strategic changes which have presented multiple growth opportunities. The business model has moved on from equipment-only sales and transformed into a collaborative offering for new products and services with a focus on design, build and commission services with a revenue sharing commercial strategy being established, supported by AI data analysis services. Out-sourced production and in-licensing of AI technologies have helped reduce development costs, increased revenues and built on the expertise and experience of a highly skilled team of micro-engineering equipment technology specialists.

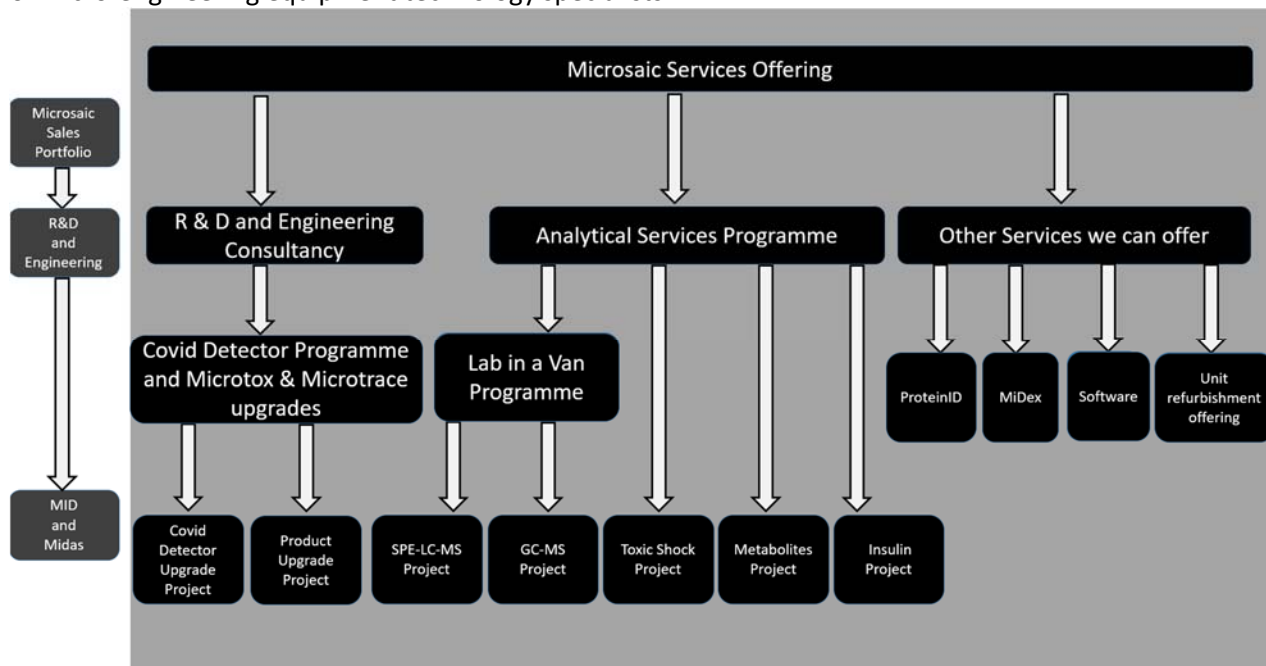


Table of abbreviations:

SPE	Solid Phase Extraction
LC	Liquid Chromatography
GC	Gas Chromatography
MS	Mass Spectrometry
MiDex	Point of need bioprocessing MS

The partnerships and alliances, derived from the new business model have increased the capacity of our micro-engineering MS equipment to provide surveillance against contaminants and threats for existing clients and our partners clients in the pharma, environmental and life science sectors.

The new services offered under the revised strategy gives the Microsaic team the ability to fully exploit the data generated from existing and adapted MS equipment, something that had not previously been utilised. AI-driven data analytics offers our distribution partners in the environmental and life science sectors additional ongoing shared revenue streams from our CE-marked equipment and consumables. Predictive services for quality control in real-time are already adding value for existing and new clients coming online to manage their production risk in active pharmaceutical ingredients, and to detect contaminants in the environment. We will soon add the capability to provide medical diagnosis at point of care. Microsaic has moved on from just selling equipment and consumables, to focusing on generating sustainable, recurring revenues. Notwithstanding the continuing global uncertainties in managing through the current and any future pandemic, we now have improved visibility, months ahead, and are more secure in our expectations of growth from a solid footing.



Gerard Brandon
Executive Chairman
27 May 2022

STRATEGIC REPORT

For the year ended 31 December 2021

Progress during 2021

2021 revenues were £0.9m, an increase of 357% on the prior year (2020: £0.2m), with orders for the year exceeding £1m, representing a significant milestone for the Company. Following the effects of COVID-19, sales in the first half (£0.5m) were predominantly a roll-over from delayed orders in 2020, but with stronger order intake in the second half indicating newly secured instrument and service business in Environmental and Human Health.

Gross margin was 44% (2020: 50%), falling due to a change in product mix. Product gross margins averaged 31% (2020: 37%) and consumables 63% (2020: 56%). Services to customers are provided by in house staff and their costs are included in operating expenses and are not included in the gross margin.

Operational Highlights

- **February:** Over-subscribed placing of £5.5m (gross proceeds), new board and structural change to commercially focused and collaboration-based business model.
- Five key commercial hires to focus on:
 - acceleration of revenues on environmental detection of water contamination and in human health markets,
 - delivering real-time on-site monitoring,
 - data analytics with connected Internet of Things ("IoT"), and
 - AI and support services.
- **March:** commercial agreement with DeepVerge. Microsaic products and services deployed internationally in applications such as water monitoring of chemicals and pathogens, and in support of DeepVerge's rapidly growing Labskin division.
- **May:** Collaboration with Swansea University to combine real-time monitoring of environmental water using AI in determining the link between environmental chemical pollution and human health.
- **July:** World first demonstration by Microsaic of real-time monitoring of on-line production of biotherapeutic drugs (vaccines and anti-cancer treatments) using Process Analytical Technology within a micro-engineered MS solution.
- **August:** launched a miniaturised mass spectrometer platform to achieve triple quadrupole limits of detection for real-time monitoring and identification of Chemicals of Emerging Concern ("CECs") in water and soil.
- **September:** signed an agreement with Jiangsu Henzhihe Technologies Co. Ltd. ("HZH"), acting as the manufacturer, integrator and service centre in support of distribution and prospective OEM partnerships in China.
- **October:** launch and immediate roll-out of compact MS technology integrated with autosampler and separation technology, wrapped in closed-loop (automated) control software, for use in the scale-up and operation of drug manufacturing.
- **November:** Microsaic's point of need platform to include Gas Chromatography ("GC") capability, extending the Companies existing liquid chromatography ("LC") capability to offer a platform for the automated detection of organic chemicals in both non-volatile and volatile compounds such as therapeutics, antibiotics, pesticides, petrochemicals, and personal care products.

Strategic Progress

Post the placing in February 2021, the Board repositioned the Company's business model and strategy, transitioning from selling capital-based scientific instrumentation to scientists, towards solving real world problems in the Environmental and Human Health sectors. The Board believes this transition will establish higher levels of end-user engagement, and the shift in the business model is already leading to a greater proportion of recurring revenue through workflows, software, and services.

Progress on this strategy has been made in 2021 contributing towards the Company's increased order book, particularly in H2 2021, and the Board believes this progress will yield significant sales growth in 2022 and beyond, despite the challenging business environment.

Transition from capital instrument sales to complete workflows in Human and Environmental Health

- The Company launched a complete workflow for the bioprocessing industry, targeted at contract research and manufacturing organisations ("CRMO"), integration partners and biopharmaceutical companies who manufacture biologic vaccines and therapeutics for major diseases such as chronic autoimmune diseases. Biopharmaceuticals is a well-established and rapidly growing sector (valued at circa \$200 billion in a 2020 report¹), which faces significant challenges around process robustness. This is particularly apparent within upstream processing, which relies on fundamental biology and carries inherent product variability. Continuous point-of-need MS would provide timely and critical safety and quality assurance, as adverse effects would be identified earlier in the process and mitigated upstream. The analytical instrumentation market in upstream bioprocessing alone was projected to be worth circa \$390 million in 2020². The Company believes that its compact, easy-to-use, MS technology is well-positioned to access a share of this market, working with bioprocessing instrument providers, CRMOs and end-users in biopharmaceutical manufacturing alike.
- Microsaic's platform now offers automated detection of organic chemicals in both non-volatile and volatile compounds such as therapeutics, antibiotics, pesticides, petrochemicals, and personal care products. The platform can be used in Human Diagnostics where measurements are increasingly being made in the doctor's clinic or during surgery, with applications including the real time monitoring of Therapeutic Drugs. Microsaic's technologies can also detect contaminants in soil and water in minutes and is well suited to front line environmental monitoring of CECs at the point of need. The latest addition to Microsaic's platform is the integration of the Company's compact MS technology with GC and extends Microsaic's existing applications in LC". This combination will provide an extensive range of analysis required by end-users for chemical detection, for use in a combined market estimated to be worth over \$1 billion³.

Driving the value of data, through collaborations in software and AI in Environmental Health

- **Collaboration with DeepVerge.** Microsaic is participating in the front line water analysis portfolio of Modern Water (a division of DeepVerge) by adding a new portable real-time sewage monitoring capability, particularly for monitoring "organics" such as drugs of abuse and active pharmaceutical ingredients ("APIs"). Both companies are engaged in a collaboration to deliver complete solutions, with a backbone of analytics delivered to end users powered by powerful AI techniques.
- **Collaboration with Swansea Medical School.** The detection platform will combine environmental sample preparation and epigenetic approaches with Microsaic's miniaturised MS. Through partnership with stakeholders in the environmental sector, this collaboration is designed to better inform pollution remediation, improve management processes for reduced emission and promote safer handling of PFAS chemicals. The partnership will include the application of AI methodology to real-time water detection.

Increasing the proportion of recurring revenue through scientific services

In October 2021, Microsaic launched its services business, providing a suite of solutions, which provide knowledge, applications and services, including environmental, bioprocessing optimisation and analytics and workflow solutions, and emerging translational medicine. Markets span industries, including Pharmaceuticals/Biopharmaceuticals, Food Safety, Environmental and Clinical, and this business will further augment the Company's transition towards offering complete solutions to end-users in Human and Environmental Health.

Partnership progress with DeepVerge plc

In October 2021, Deepverge increased orders for pathogen monitoring equipment for shipment in 2021 to partners and customers based in the UK, India, and China, which included upgrades to DeepVerge Modern Water Microtox®PD⁴ units, and Microsaic mass spectrometer units. Configurations of the Microsaic equipment were included in these orders to DeepVerge for the integrated detection of PFAS (Per- and Polyfluoroalkyl Substances or 'forever chemicals'). This monitoring capability forms part of broader integrated solutions offered by DeepVerge for monitoring toxicity and heavy metal pollutants as well as the prevalence of SARS-CoV-2 as part of the ongoing pandemic response.

Operations

The Company received orders exceeding £1m in 2021, sales of £0.9m with the backlog of orders expected to ship during early 2022. The main reason for this backlog was due to global supply constraints, mainly resulting from COVID-19. The Company is working hard to mitigate any risks to its key supply chain such that any future impact will be minimal.

Strategic Focus

Microsaic serves Human Health, Environmental Health and Diversified markets with equipment and design services for mass detection technology, which can be used at the point of need to drive better informed, faster decisions in real time and to solve real-world problems.

Typical point of need markets and applications include process analytical technology for the manufacture of high value biologic drugs, food contamination screening as well as cannabinoid screening. The Company is also developing a longer-term capability in point of care diagnostics.

Microsaic's technology can also be used in standard laboratory settings, for example in the established pharmaceutical, academic and chemical industries.

Business Model

The Company has moved from revenues in 2021 derived from the sale of its MS instruments, consumables and spare parts to deliver solutions for end-users, and in 2022 now operates a revenue sharing, hardware, software and micro-engineering design services business model. Working with collaboration partners is reducing the Company's reliance on equipment sales (which depend on lengthy sales cycles) and in 2022 Microsaic has quickly moved towards a recurring revenue-based model, which is expected to increase the proportion of revenues from AI and analytical electronic sensor-based Internet of Things. These revenue streams are in addition to premium services relating to 24/7 operation and support and data analytics, in particular Industry 4.0 smart technology for the bioprocessing industry, which are also expected to form an increasing proportion of revenues. Other equipment developed in collaboration with partners, will shift towards the integration of sensors and analysers to solve specific problems for a range of industries, which our partners already operate in.

Product Overview

The Company's existing products use miniaturised chip-based technology and are designed to deliver application versatility, ease of deployment and provide users with real-time information to make decisions in a quicker and more cost-effective manner.

Throughout 2021, Microsaic introduced our In-Field Screening solution for real-time monitoring. This was largely focused on the environmental market and monitoring of PFAS (Perfluoroalkyl and Polyfluoroalkyl Substances) and other CECs (Chemicals of Emerging Concern). This real-time monitoring solution can be utilised in other markets as diverse as water, pharmaceuticals, chemicals, academia, and food and beverage.

Microsaic's technology development has pivoted towards more dedicated solutions to solve specific problems in Human and Environmental Health and Diversified Industries.

Stakeholder Engagement

Section 172 of the Companies Act 2006 ("S.172") recognises that companies are run for the benefit shareholders, but that the long-term success of a business is dependent on maintaining relationships with stakeholders and considering the external impact of the Company's activities.

Microsaic's key stakeholders are our employees, partners (including distributors, OEMs and collaborators on new products), and our key suppliers such as our manufacturing contractor and key R&D subcontractors. By working with all stakeholder groups, the Company can unlock the potential of the business and maximise the value created. The key principles and values adopted by the Company are detailed under Principle 8 of the QCA Corporate Governance Code.

For Microsaic, engagement with our key stakeholders is part of how we operate as a business. Actively seeking to understand the concerns and aspirations of our employees, how we can better engage with them, how we can work more closely with the partners who distribute our products and those that we collaborate with, plus the challenges faced by our manufacturing partner and other suppliers.

Compared to 2020, this year was less challenging and enabled the Company to focus on its growth. A key priority in 2021 was redefining the commercial focus, targeting solutions to meet the requirements of existing clients and investigating markets to capitalise on the value of the new business model. Microsaic is now sufficiently capitalised to take advantage of the opportunities available to a commercial focused business and face-to-face engagement restricted during the pandemic lock-down with shareholders and stakeholders was eased. The Directors continue to engage with shareholders and key stakeholders keeping them up to date on progress.

The key decisions made by the Board during the year are outlined below:

- In February 2021, new directors were appointed to the Board. The incumbent CEO and CFO remained and implemented the new business model. In contrast to the previous year, additional staff were hired to meet the demand for new services being offered after a successful fundraise was completed on 5 February 2021 raising £5.5 million before expenses.

Under S.172, a company's directors have a duty to discharge their responsibilities having regard to:

a) *the likely consequences of any decision in the long term* – the focus of the Board during 2021 was the reorganisation and adjustment to a more commercial focus with emphasis on delivery of solutions, beyond equipment sales.

b) *the interests of the company's employees* – following the fund raise in February 2021, all employees who had agreed to a temporary 20 per cent. reduction during the pandemic had their salaries restored.

c) *the need to foster the company's business relationships with suppliers, customers and others* – customers were treated fairly during the year. Suppliers continued to be paid on time.

d) *the impact of the company's operations on the community and the environment* – there was no adverse impact on the community or environment from the decisions made by the Board during the year.

e) *the desirability of the company maintaining a reputation for high standards of business conduct* – the Company acted in a professional manner during 2021 liaising with key stakeholders and followed the principles and values of the Company as outlined on pages 29 to 36 of the Corporate Governance Report.

f) *the need to act fairly as between members of the company* – the Board treated shareholders fairly and made sure it kept them up to date through regular press releases. Significant shareholders were given the opportunity, through a market soundings exercise to invest in the Company. The strategic review process was undertaken for the benefit of shareholders and other key stakeholders.

Performance Measurement

The ongoing performance of the Company is managed and monitored using several key financial and non-financial performance indicators as detailed below:

Revenue	Year to 31	Year to 31	Increase/ (Decrease)
	December 2021	December 2020	
	£	£	%
Products	617,613	83,397	641
Consumables and spare parts	230,832	105,135	120
Service and support income	58,431	9,726	501
Total	906,876	198,258	357

The Company's revenue performance strengthened in 2021 following the impact of the COVID-19 pandemic, and increased by 357% to £0.91m (2020: £0.20m). Restrictions on travel to support partners and customers have only recently been lifted. Revenue comprises the sale of products, consumables and spare parts, and service and support income. The Board reviews trading results and monitors cash on a regular basis.

Profit/(Loss) & Cash Metrics	Year to 31	Year to 31	Increase/ (Decrease)
	December 2021	December 2020	
	£	£	%
Loss from operations before share-based payments, interest, and tax	(2,034,235)	(2,531,746)	(15)
Net cash used in operating and investing activities	(1,937,263)	(2,126,275)	(9)
Cash and cash equivalents	3,464,876	397,069	773

The Company's profitability is monitored against budget on a monthly basis. The 15 per cent. reduction in the loss from operations before share-based payments was the result of growth in revenue whilst keeping operating costs consistent and a reduction in corporate transaction related costs following the restructuring. The Company monitors its cash position closely, and forecasts are updated on a regular basis. The year-end cash position was in line with the Board's expectations.

Non-financial key performance indicators measure a number of key areas, including commercial and operational targets, such as number of sales orders, unit production, new products transferred to manufacturing, number of collaborations, agreements signed with new customers and quality measures from the Company's ISO 9001:2015 system. Key points to note are:

- Sales orders for MS instruments were significantly above last year;
- Microsaic worked with its manufacturing partner to increase production levels;
- On the customer front, two new partner agreements were entered into during the year;
- The Company was able to continue with two important partner collaborations, albeit delayed, both in bioprocessing; and

- ProteinID was successfully transferred to manufacturing, although significantly later than originally planned while work on the launch of our LC-MS family of products was placed on hold. Progress on the latter has been delayed due to the worldwide supply chain shortages of electronic components. It is anticipated that it will be resumed towards the end of 2022, with sales commencing during Q2 2023.

Financial Results - 2021

Profit and Loss

Total revenue of £906,876 increased 357 per cent. compared to the prior year (2020: £198,258) which had been impacted by the COVID-19 pandemic, and ahead of 2019 revenues of £872,125. Product revenues of £617,613 (2020: £83,397) and service revenues of £58,431 (2020: £9,726) increased by 641 per cent. and 501 per cent. respectively. Consumables revenue of £230,832 (2020: £105,135) increased by 120 per cent.

Gross profit in 2021 of £395,984 (2020: £99,910) rose by 296 per cent. over last year following a significant increase in product revenues, as customer investment decisions were postponed due to the COVID-19 pandemic. The gross margin of 44 per cent (2020: 50 per cent.) is reduced on the last year predominantly due to an increased proportion of lower margin unit sales compared to higher margin consumables.

Other operating income of £67,283 (2020: £96,626) relates to a mix of Coronavirus Job Retention Scheme grant, co-development income and insurance claim income (2020: solely Coronavirus Job Retention Scheme grant).

Total operating expenses (excluding share-based payments) of £2,497,502 (2020: £2,728,282), fell by 8 per cent. chiefly due to the reduction of corporate transaction professional fees as the restructuring completed early in 2021, new Non-executive Directors fees and Brokers fees being settled in shares and a reduction in research and development expenses. Corporate transactions-related professional fees of £65,789 fell by £83,575 as the restructuring and fundraise completed early in the year during February 2021.

The main increase in expenditure compared to 2020 relates to payroll costs increased by £137,950 to £1,545,368. This reflected increasing staffing levels (after redundancies in 2020) and the restoration of staff salaries to pre-pandemic levels (reversing in full an agreed temporary 20 per cent. reduction during the pandemic in 2020).

The loss from operations for the year before share-based payments fell by 20 per cent. over last year to £2,034,235 (2020: £2,531,746).

Share based payments of £1,363,764 are £1,311,523 higher than the prior year (2020: £52,241). This follows the cancellation of options and the issue of new options as part of the restructuring in February 2021, together with Non-executive Directors fees and Brokers fees settled in shares

Finance costs of £4,604 were less than the prior year (2020: £10,775). The majority of this cost relates to interest on the lease liability.

Finance income of £6,237 increased compared with the prior year (2020: £4,393) due to higher cash balances offset by reduced interest rates.

The tax credit on ordinary activities in the year was £267,785 (2020: £217,711). In 2020, expenditure on R&D projects had been scaled back in line with the contingency plan to mitigate the impact of the COVID-19 pandemic. The R&D tax credit claim is £50,074 higher than in 2020 as there was a return to higher levels of staff time on eligible R&D.

The total comprehensive loss for the year of £3,128,581 is a 32 per cent. increase over the prior year (2020: £2,372,658). The increase in the total comprehensive loss by £755,923 was due chiefly to the share-based

payments increase of £1,311,523 over the prior year which was partially offset by a £296,074 improvement in gross profit and other operating costs reduced by £107,753. The basic loss per share fell by 89 per cent. from 0.52 pence in 2020 to 0.056 pence per share in 2021. The weighted average number of shares in issue increased by 1,013 per cent. (refer to note 10) as a result of the fund raise on 5 February 2021 (refer to note 18).

Balance Sheet

Total non-current assets increased £259,313 to £506,625 (2020: 247,312). The increase is due to a substantial increase in investment in plant and equipment and the renewal of the Woking lease.

Current assets at £4,648,511 are up £3,289,414 over last year (2020: £1,359,097). The increase is mainly due to a substantially higher cash balance of £3,464,876 (up £3,067,807) as well as higher trade and other receivables (up £458,077) and corporation tax receivable (up £49,217), partly off-set by lower inventories (down £285,687). The increase in cash reflects the fund-raise in February 2021, the increase in trade receivables and lower inventories reflects the increased sales in 2021 compared to 2020. The lower inventories also relate to supply chain issues arising from the COVID-19 pandemic.

Total assets at £5,155,136 are £3,548,727 higher than last year (2020: £1,606,409), mainly due to the higher level of current assets at the year-end given the increased cash balance.

Total equity at £4,573,220 is £3,330,240 above last year due to the share issue net of costs in February 2021 of £3,700,132 (adjusted for cash costs and the fair value of broker warrants) plus the movement on share-based payment reserve of £2,564,443 offset by the reduction in retained reserves of £2,934,335. The increase in the share-based payments reserve is due to fair value of broker warrants in relation to the February 2021 share issue and new options net charge amounting to £1,255,681 off-set by share-based option credits in respect of unvested cancelled options of £194,246.

Current liabilities comprise trade and other payables and lease liability due within 12 months of the year end. Trade and other payables at £354,611 (2020: £185,927) are £168,684 more than last year and mainly reflects an increase in trade payables (up £167,460), with lower level of accruals and deferred income (down £32,817) offset by higher other payables, taxes and social security (up £34,041). The lease liability of £71,187 mainly represents the Company's leasehold property in Woking which expires in September 2023.

Total non-current liabilities at £156,118 are £30,986 more than last year. This is mainly due to the increase in the lease liability by £55,061 reflecting the Company having renewed its Woking lease in September 2021 offset by a reduction in provisions of £24,075 reflecting lower estimated warranty claims.

Total liabilities of £581,916 are £218,487 more than in the prior year due to the increase in current and non-current liabilities as set out above.

Cash Flow

Net cash used in operating activities in 2021 of £1,609,283 is £440,327 lower than last year reflecting the reduction by £497,511 in the loss from operations before share-based payments for the year. The R&D tax credit receipts fell by £103,016 offset by improvements in working capital movements of £155,045.

Net cash used in investing activities of £327,980 compares with £76,665 in 2020. The main movements in the year were an increase in the purchases of property, plant and equipment of £235,882 and intangible assets of £1,564 and interest received lower by £13,869.

Net cash generated by financing activities amounted to £5,005,070 and relates to the net proceeds of the fund raise in February 2021 offset by payment of lease commitments (chiefly in relation to the Woking site) during the year.

The net increase in cash for the year of £3,067,807 resulted in a cash balance as at 31 December 2021 of £3,464,876.

Going Concern

The Company’s resilience has improved following the equity fundraise completed in February 2021 when the Company successfully raised £5.5 million (before expenses), with improved trading performance, a revised business strategy and the additional Manufacturing Framework Services Agreement (“MFSA”) signed with DeepVerge for an initial value worth £400,000 (with no capital costs for Microsaic). The MFSA provides for additional iterations and upgrades to other equipment which could generate further contracts and income for the Company in the first half of 2023. With the recent advent of new service revenue streams, the plans and prospects for the business are modest in projecting the pace and quantum of new revenue and the Company is expected to continue to be loss making in the short-term. Having taken this careful approach, the Board believes that the Company has sufficient cash to cover the anticipated working capital requirements for at least the next 12 months from the date of signing of the Annual Report and Accounts. Therefore, the Directors have adopted the going concern basis of reporting in preparing the financial statements. The Board’s assessment of the going concern basis is explained in more detail in note 3 to the financial statements, including sensitivities and contingency plans.

Risk Management

The Company manages risk from an operational perspective, where it assesses and weighs up the potential risks to the business and how it can mitigate these risks. The Board has identified the following risks and associated mitigating actions as follows:

Description	Risk	Risk rating pre-mitigation	Mitigating actions	Risk rating post-mitigation
Unable to grow sales required to achieve sustainable profitability	Sales growth is too slow to achieve targets	HIGH	Pursuing a new strategy involving services and investing in business development to promote these as well as developing new sales channels.	MEDIUM
COVID-19 pandemic has material impact on sales	Low or little demand from affected markets and less opportunity to visit potential customers	MEDIUM	Continue dialogue remotely with partners. Increase collaborations regarding the development of new products and expand sales channels. Ensure staff have a safe and protected work environment.	MEDIUM
Unable to raise additional funds if required in the future	Inability to continue as a going concern	MEDIUM	Communicate effectively with shareholders and potential investors. Ensure the business plan is implemented effectively with the focus on expanding sales channels and growing revenues, whilst adjusting variable costs in line with actual revenues.	MEDIUM
Reliance on third party manufacturing facilities	A replacement manufacturer is necessary	MEDIUM	Work closely with our manufacturing partner and hold regular review meetings. Ensure contingency plans are prepared and reviewed.	LOW

Description	Risk	Risk rating pre-mitigation	Mitigating actions	Risk rating post-mitigation
Retention and recruitment of key employees	Loss of key employees and subsequent difficulty in recruiting suitable replacements	LOW	Ensure the Company's remuneration package is competitive and aligned to performance. Retain key staff by investing in their development.	LOW
Loss of competitive advantage in miniaturised mass spectrometry	Competitors developing competing products	MEDIUM	The Company continues to innovate, invest in IP, and focus on its core strengths around point of care, ease of use and simplicity of maintenance. The Company believes the market is large enough for competitors to co-exist.	LOW

From the analysis above there are three main risks facing the business:

1. Although some countries have weathered the COVID-19 pandemic better than others, the global health crisis continues to slow the potential for improved revenues overseas, particularly in the APAC region. However, the new business model saw sales of units increase supported by services utilising in-house expertise and experience which do not require travel to support installations. Restrictions on international travel to and from partner countries has eased and we will continue to monitor the situation very closely. The Company will follow government guidelines in the UK and abroad to plan international visits to customers. Restrictions on working from home have eased and while we encourage staff to go into the premises, we remain open to a flexible approach to ensure the health and safety of our employees as a priority.
2. Failing to grow the sales required to achieve sustainable profitability is a clear risk. To mitigate this, soon after the funds raised in February 2021 the Company altered the business model to create a substantial uplift in revenues from multiple sales channels in products and services to provide solutions to clients, generating recurring revenues through design, prototype and preparation of blueprint for transfer to manufacture of third-party equipment. Investment in business development has already delivered positive results bringing in £400,000 in design and development contracts after year end and the additional iterations and upgrades to generate further contracts and income for the Company into 2023. Should these not materialise as estimated, the Directors have prepared mitigating actions which would be undertaken if necessary as set out in note 3.
3. The inability to continue as a going concern. This has been mitigated by the successful fundraise in February 2021 where the Company raised £5.5 million before expenses, the developing strategic relationship with DeepVerge plc and the introduction of new services during 2022. The Board's assessment of the going concern basis is summarised in more detail in note 3.

Key events and progress post year end

- Multi-year Manufacturing Framework Service Agreement with DeepVerge plc for a range of Modern Water equipment, including the addition of a range of “Sentinel” sensors to make use of Artificial Intelligence and Internet of Things is a further iteration of DeepVerge, Modern Water’s Microtox®PD device with a value to Microsaic of £400,000 with an estimated total contract value of the order of £1m, subject to agreement on additional Scope of Work statements, and anticipated delivery over the period until the end of 2023.

Signing of agreement with DeepVerge

On 24 March 2021, Microsaic signed a non-exclusive Framework Services Agreement with DeepVerge for the distribution of its products across the geographic markets addressed by DeepVerge. This agreement does not restrict Microsaic from developing and engaging with its existing or other new partners. DeepVerge offers Microsaic the opportunity of increasing volumes substantially, from an established global sales platform, and an extended reach into markets beyond that for standard laboratory use of MS.

Under the terms of the agreement, DeepVerge has committed to allocate resources up to a value of £150,000 to assemble a pilot facility for Microsaic’s systems at DeepVerge’s York laboratories, to provide access for potential customers and clients of DeepVerge to verify and validate the technology in numerous application settings beyond those historically targeted by Microsaic.

Additionally, this agreement opens the opportunity for collaboration in several areas:

- DeepVerge will incorporate AI software and services into Microsaic’s technology. This fits in with Microsaic’s strategy in bioprocessing, where AI enables faster decision making from complex data sets;
- DeepVerge will utilise and integrate Microsaic’s technology into Labskin products and services, in pursuit of human and environmental health applications. Microsaic’s technology is ideally suited for screening applications and especially for protein detection (e.g., with Microsaic’s MiD® ProteinID technology); this collaboration will also progress both companies’ respective strategies in point of care diagnostics, where the Directors believe that combining the technologies could have a synergistic effect;
- Certain Microsaic employees will be located at DeepVerge’s sites in the UK, to assist with particular collaborations (e.g., Labskin’s facility at York); and
- Microsaic will collaborate with Modern Water Group (part of DeepVerge) to develop solutions for point of need water quality and pathogen testing.

The Framework Services Agreement with DeepVerge constituted a related party transaction under Rule 13 of the AIM Rules for Companies, by virtue of Microsaic and DeepVerge having two directors in common. At the time of entering into the agreement, the Independent Directors, being Glenn Tracey and Bevan Metcalf, confirmed that they considered, having consulted with the Company’s nominated adviser, that the terms of the Framework Services Agreement were fair and reasonable insofar as the Company’s shareholders are concerned. Additional orders received under this agreement were similarly assessed as being consistent with the terms of the FSA and therefore also fair and reasonable. In 2022 the FSA was amended to include additional new products and provide for other new items to be added to the agreement, subject always to the review by the respective companies’ nominated advisers.

Outlook

The Board is targeting significant scale up of the business in 2022 which will be underpinned by:

- The roll-out of Microsaic’s scientific and micro-engineering design services business, in particular implementation of Framework Agreements for high-value design, prototype and blueprint preparation for mass production of sensor-based Internet of Things clients (via DeepVerge);
- The extension of Microsaic’s detection platform in both LC and GC applications in Human and Environmental Health real-time monitoring;
- The expansion of Microsaic’s revenues through its partners, particularly through its collaborations in water detection with DeepVerge; and
- Significant OEM partnership deals, and strategic interest in the Company

If 2021 was about turnaround, then 2022 is about significant business inflection. We have worked tirelessly in 2021, putting in place the necessary building blocks in and around our technology, extending our business model to cover services, workflows and software.

The COVID-19 era has demonstrated the resilience of humans and ingenuity of our scientists, and the ability for us to respond quickly with solutions for real-world problems. Real-time detection is a central facet of advancing this human endeavour. Microsaic is exceptionally well placed with its capabilities in real-time detection.

I am absolutely delighted with how Microsaic has emerged following the COVID-19 pandemic, stronger than how we entered it. I am very optimistic about our future.

The Strategic Report was approved by the Board of Directors on 27 May 2022 and signed on its behalf by:



Gerard Brandon
Executive Chairman

Notes

¹ 2020 Global Life Sciences Outlook, Deloitte

² Report on upstream bioprocessing analytical instrumentation, TDA consultants 2019

³ SDI Report

⁴ Microtox® PD has been designed to be retrofitted into existing Modern Water equipment to detect and identify a range of infectious viruses and bacteria including SARS-CoV-2, E. coli, Legionella and Cryptosporidium, on a single chip, using AI, in real-time

DIRECTORS' REPORT

The Directors present their report for the year ended 31 December 2021.

Principal activity, business review and business risks

The principal activity of the Company continued to be the commercialisation and development of miniaturised micro-engineering equipment, originally for mass spectrometry instruments but now to include integration of AI and Internet of Things analytical sensors for existing and new clients to generate recurring shared revenues for monitoring across biologic bio-processing, environmental and human health and likely to extend to aviation, the food industry and oil & gas sectors. A review of the business is contained within the Strategic Report.

Results and dividends

The results for the Company are given in the statement of comprehensive income set out on page 42. The Company is currently making losses and has retained losses which have to be recovered before it can pay a dividend. Therefore, the Directors do not recommend the payment of a dividend (2020: £nil).

Business Development & Sales

Revenues are made through OEM and distribution sales channels with direct and collaboration partners currently in place, covering North America, Europe, China, Southeast Asia and Japan.

Research and development ("R&D")

R&D is important for the Company's success and has led to the filing of over 80 patents to date. During the year, R&D projects and R&D expenses totalled £738,145 (2020: £777,597) or 28.3 per cent. (2020: 28.5 per cent.) of total operating expenses excluding share-based payments. Current plans are to invest in commercial development associated projects that are demanded from new and existing clients to optimise resources through collaborations and joint ventures.

Directors

Between the 1 January 2021 and 31 December 2021, the following Directors held office:

Gerard Brandon, Non-executive Chairman (Age 60)¹
Peter Grant, Non-executive Chairman (Age 65)²
Nigel Burton, Non-executive Director (Age 64)¹
Eric Yeatman, Non-executive Director (Age 58)²
Glenn Tracey, Chief Executive Officer (Age 50)³
Bevan Metcalf, Finance Director and Company Secretary (Age 64)⁴

¹Appointed as a Director on 5 February 2021.

²Resigned as a Director on 5 February 2021.

³Resigned as a Director on 31 March 2022.

⁴Resigned as a Director and Company Secretary on 17 December 2021 (upon his retirement).

On 5 February 2021, Gerard Brandon and Dr Nigel Burton were appointed to the Board as Non-executive Chairman and Non-executive Director respectively, replacing Peter Grant and Eric Yeatman who resigned as part of the reorganisation. Their biographies are detailed in the Corporate Governance Report.

On 22 October 2021, Bevan Metcalf's retirement was announced, and he resigned as a Director and Company Secretary on 17 December 2021.

Post year end on 28 January 2022, it was announced that Glenn Tracey was stepping down to pursue a non-competitive opportunity and he resigned as a Director on 31 March 2022. Also post year end on 15 March 2022, Robert Moore was appointed as Independent Non-executive Director.

Directors' interests

The Directors' interests in the shares of the Company are:

	Ordinary shares of 0.01p at 31 March 2022		Ordinary shares of 0.01p at 31 December 2021		Ordinary shares of 0.25p at 31 December 2020	
	Number	%	Number	%	Number	%
Gerard Brandon ¹	190,000,000	2.99	140,000,000	2.30	-	-
Dr Nigel Burton	300,500,000	4.72	65,500,000	1.08	-	-
Robert Moore	-	-	-	-	-	-
	490,500,000	7.71	205,500,000	3.38	-	-

¹ This figure includes 50,000,000 shares by a person closely associated with Gerard Brandon.

Significant shareholdings

Shareholders, excluding Directors, having a beneficial interest of 3% or more of the Company's shares:

Shareholder	Ordinary shares of 0.01p each at 31 March 2022	
	Number	%
Unicorn Asset Management	750,000,000	11.79
Hargreaves Lansdown Asset Management	711,327,347	11.18
Interactive Investor	520,095,997	8.18
Jarvis Investment Management	495,791,678	7.79
Premier Miton Investors	482,129,838	7.58
ISPartners Investment Solutions	362,125,000	5.69
Halifax Share Dealing	239,526,327	3.77
Barclays Wealth	193,693,535	3.04
Intuitive Investments Group	192,000,000	3.02

Employees

The Board regards the expertise and contributions of its employees as critical to its future success. Executive management regularly update employees on the progress of the business. The Board seeks to remunerate its employees fairly and has adopted a flexible working hours policy to cater for employee needs. Full and fair consideration is given to applications for employment received regardless of age, gender, colour, ethnicity, disability, nationality, religious beliefs or sexual orientation.

The Board would like to thank all its employees for their continued contribution.

Company share ownership plans

The Company operates two Employee Share Option Schemes ("ESOS"), an approved scheme and an unapproved scheme.

The ESOS were formed to enable the incentivisation of employees to be aligned to the performance of the Company. Under the ESOS the Company grants employees options to acquire the Company's ordinary shares subject to:

- Vesting periods (normally three years for new grants) and an exercise period of up to ten years from the date of grant;

Company share ownership plans (continued)

- The exercise price is normally the market price of the ordinary shares at the close of business the day before the date of grant unless the award is linked to an equity fundraise; and
- Performance and time-based vesting conditions as appropriate.

Options are granted up to the maximum amount allowed under the limits of the Enterprise Management Incentive (“EMI”) Scheme - these options are called ‘Approved Options’. The EMI Scheme is subject to the provisions of Schedule 5 of the Income Tax (Earnings and Pensions) Act 2003 and have tax advantages for the employee and employer. There is an unapproved scheme, which has no tax advantages, for those awards which do not qualify under the Approved Option scheme.

On 4 and 5 February 2021, the Company cancelled all existing options which were all out-of-the-money. Options held by Peter Grant, former Chairman (3,500,000), Glenn Tracey, CEO (4,800,000) and Bevan Metcalf, FD (4,620,000) on 31 December 2020 were cancelled in February 2021. Options held by staff amounting to 3,690,000, were also cancelled in February 2021.

These cancelled options were replaced with options over 1,125 billion ordinary shares of 0.1p each following the share capital restructuring and fund raise. This included options and warrants over 675 million ordinary shares of 0.1p each for the directors. No options were awarded in 2020. Options awarded to staff and Directors are detailed in note 25.

Management of risk

The management of operational risk is covered in the Strategic Report while financial risk is detailed under note 28 Financial Instruments.

Health and safety and the environment

The Company is committed to providing a safe environment for its staff and other parties for whom it has a responsibility. It has set up systems and processes to ensure compliance with health and safety legislation and the Board reviews an update on health and safety matters at each main Board meeting.

The Company is also mindful of its corporate responsibilities concerning the impact of its activities on the environment and seeks to minimise this impact where practicable.

Quality management system

The Company’s mission is to deliver miniaturised micro-electronic equipment and Internet of Things designed to analyse data, using AI analytical services, demanded by clients that include, but are not exclusively related to miniaturised mass spectrometry instruments that provide innovative compact detection with high quality and reliability.

The Company’s quality policy applies to the development, marketing and support of our products. In all its activities the Company is strongly focused on commitment to the requirements of its customers including:

- Management of risks to prevent operational and product problems that may adversely impact customer satisfaction and the interests of other parties; and
- Management of any externally provided products and services to ensure that they meet specified requirements including changing needs.

To help management achieve its policy, the business management system has been developed using a process approach including a Plan-Do-Check cycle, risk-based thinking, and a fundamental commitment to the continual improvement of the system and its effectiveness and integration into the Company’s activities.

Quality management system (continued)

The Company's Quality Management System is based on ISO 9001:2015. This standard puts considerable emphasis on risk management and management involvement within the quality management system.

Directors' indemnity and insurance

The Company has granted an indemnity to its Directors and Officers under which the Company indemnifies them, subject to the terms of the deed of indemnity, against costs, charges, losses, damages and liabilities incurred by them in the performance of their duties. The Company also maintains Directors and Officers liability insurance against the consequences of actions brought against them in relation to their duties for the Company.

Related party transactions

The interests of the Directors are shown in the Directors' Report while their remuneration is detailed in the Directors' Remuneration Report. Other related party transactions involving the Directors during the 2021 financial year are included in note 28.

Directors' responsibilities

The Directors are responsible for preparing the Annual Report and Accounts in accordance with applicable law and regulations.

Company law requires the Directors to prepare financial statements for each financial year. Under that law the Directors have prepared the Company financial statements in accordance with international accounting standards in conformity with the requirements of the Companies Act 2006. Under company law the Directors must not approve the financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the Company and the profit or loss of the Company for that period.

In preparing the financial statements the Directors are required to:

- Select suitable accounting policies and then apply them consistently;
- Make judgements and accounting estimates that are reasonable and prudent; and
- State whether international accounting standards in conformity with the requirements of the Companies Act 2006 have been followed, subject to any material departures disclosed and explained in the financial statements.

The Directors are responsible for keeping adequate accounting records that are sufficient to show and explain the Company's transactions and disclose with reasonable accuracy at any time the financial position of the Company and enable them to ensure that the financial statements comply with the Companies Act 2006. They are responsible for safeguarding the assets of the Company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

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

Statement of disclosure to auditors

So far as each Director is aware, there is no relevant audit information of which the Company's auditors are unaware. Additionally, the Directors have taken all the steps that they should have taken to make themselves aware of any relevant audit information and to establish that the Company's auditors are aware of that information.

Auditors

Saffery Champness LLP has expressed its willingness to remain in office as auditors of the Company, and a resolution for its re-appointment will be proposed at the forthcoming Annual General Meeting.

Future developments

An indication of likely future developments in the business of the Company are included in the Strategic Report.

This Directors' Report was approved by the Board of Directors on 27 May 2022 and signed on its behalf:

A handwritten signature in black ink, appearing to be 'GB', with a long horizontal flourish extending to the right.**Gerard Brandon**

Executive Chairman

Company number 03568010

DIRECTORS' REMUNERATION COMMITTEE REPORT

For the year ended 31 December 2021

Dear Shareholders

2021, much like 2020, was a challenging year for the Company because of the many impacts of the COVID-19 pandemic. Directors and staff took a temporary 20 per cent. reduction in their remuneration, effective from 1 April 2020 to 31 January 2021, with full payment restored with effect from 1 February 2021 following the successful placing in February 2021.

As part of the placing process, Gerard Brandon and Dr Nigel Burton were appointed to the Board with Peter Grant and Eric Yeatman stepping down from the Board. Both Mr Brandon and Dr Burton sit on the Remuneration Committee and Dr Burton chairs the Committee. Robert Moore joined the Committee on 15 March 2022 at the time of his appointment to the Board.

This report has been prepared with reference to the Quoted Companies Alliance guide "Remuneration Committee Guide for Small and Mid-Size Quoted Companies." The Company has sought to comply with the overarching principles of the guidance, although not all recommended disclosures have been included on the basis that they are not relevant to the current circumstances of the Company.

This report sets out the Company's policy on the remuneration of Executive and Non-executive Directors, together with details of Directors' remuneration packages and service contracts.

Remuneration policy

The remuneration policy for Executive Directors, determination of their individual remuneration packages and their performance appraisals have been delegated to the Board's Remuneration Committee.

Remuneration of the Executive Directors

In setting the remuneration for the Executive Directors, the Remuneration Committee considers several factors including:

- Basic salaries and benefits available to Executive Directors of comparable companies;
- Need to pay Executive Directors a competitive salary in line with the nature and complexity of their work;
- Need to attract and retain Executive Directors of an appropriate calibre;
- Need to ensure Executive Directors' commitment to the continued success of the Company by means of incentive schemes; and
- Need for the remuneration awarded to reflect performance.

The remuneration of the Executive Directors consists of basic salary, share options, life assurance and a contributory personal pension of 7.5 per cent. of basic salary.

Given the challenging circumstances, a discretionary bonus scheme based on performance against individual and business objectives did not operate during the year (2020 bonus: Nil).

As mentioned above the Executive Directors agreed to a temporary 20 per cent. reduction in their salary and benefits from 1 April 2020 to 31 January 2021, with full remuneration reinstated and new options packages introduced in tandem with the placing.

Remuneration of the Non-executive Chairman and Non-executive Directors

The Chairman of the Remuneration Committee discusses the remuneration of the Non-executive Directors with the Executive Directors. The remuneration is then discussed and agreed by the Board (excluding Directors with a conflict of interest) following recommendation by the Remuneration Committee, having a view to rates paid in comparable organisations. The Non-executive Directors do not receive any pension, bonus or other Company benefits.

Share options and shares

Options held by Peter Grant, former Chairman (3,500,000), Glenn Tracey, CEO (4,800,000) and Bevan Metcalf, former Finance Director (4,620,000) on 31 December 2020, were cancelled in February 2021. All cancelled options were significantly out-of-the-money and were cancelled prior to the issue of new options to Glenn Tracey and Bevan Metcalf. As outlined below, new share options were awarded to the Executive Directors to fully re-incentivise them and align their interests with shareholders.

Details of the shares held by Directors are listed in the Directors' Report.

Implementation of the remuneration policy in 2021

The following long term option and warrant awards were part of the reorganisation of the Company to incentivise the new Board appropriately. These options and warrants will be exercisable at the placing price of 0.1 pence per ordinary share for 5 years from 5 February 2021, provided that the ordinary shares have traded at a Volume Weighted Average Price (VWAP) at or above a 50 per cent. premium to the placing price for 20 consecutive business days, at any time since their issue, or on a change of control of the Company. The vesting conditions were met in March 2021 and these options and warrants became exercisable in full at that point.

Director	Number of Options	Number of Warrants
Glenn Tracey	150,000,000	
Bevan Metcalf	75,000,000	
Gerard Brandon		250,000,000
Dr Nigel Burton		200,000,000

In line with their service agreements, Gerard Brandon and Dr Nigel Burton have taken their annual fees of £50,000 and £35,000 respectively, for the first two years of their appointment, in shares at the price of 0.1 pence per share being the placing price of the equity fundraising completed in February 2021, subject to payment of all necessary employee taxes and national insurance contributions. Thereafter, fees will be paid in cash monthly in arrears.

It was agreed by the Committee that the Executive Director's remuneration would be increased to their March 2020 levels on 1 February 2021.

Directors' notice periods

Details of the Director's notice periods as per their service contract are as follows:

	Contract date	Term	Notice period
Nigel Burton	5 February 2021	Three years ¹	3 months
Gerard Brandon	5 February 2021	Three years ¹	3 months
Robert Moore	15 March 2022	Twelve months ²	3 months

¹Notice cannot be given by the Directors during the first two years of their appointment except to the end of the period to which their fees have been paid in advance.

²The initial term is the earlier of 12 months or the first AGM. Subject to re-elections at AGM the appointment is anticipated to last at least 3 years.

Directors' emoluments

Directors' remuneration in 2021 is detailed below. Non-cash payments represent life assurance premiums.

	Salaries & fees	Non-cash payments	Pension contributions	Share-based payments	Year to 31 December 2021	Year to 31 December 2020
	£	£	£	£	£	£
Gerard Brandon ¹	-	-	-	420,129	420,129	-
Nigel Burton ¹	-	-	-	331,599	331,599	-
Glenn Tracey ³	131,570	575	9,292	182,255	323,692	135,168
Bevan Metcalf ⁴	115,777	1,427	18,033	80,245	215,482	131,634
Peter Grant ²	15,000	-	-	(54,983)	(39,983)	64,201
Eric Yeatman ²	2,450	-	-	112,528	114,978	23,800
Other ⁵	-	-	-	-	-	12,699
TOTAL	264,797	2,002	27,325	1,071,773	1,365,897	367,322

¹Appointed as a Director on 5 February 2021.

²Resigned as a Director on 5 February 2021.

³Resigned as a Director on 31 March 2022.

⁴Resigned as a Director and Company Secretary on 17 December 2021.

⁵Relates to a director who resigned in 2020.

The share-based payments charge in the year relates to options awarded in February 2021 to Messrs Brandon, Burton, Tracey, Metcalf and Yeatman less credits for cancellation of all previous options of all directors (including Mr Grant).

The 750 million options and warrants (replacing all previous options) granted to Directors vested during the year as the performance criterion that the Company's ordinary shares traded at a Volume Weighted Average Price at or above a 50 per cent. premium to the placing price for 20 consecutive business days, was achieved.

Directors' share options

Share options and warrants over the Company's ordinary shares held by the Directors at the year-end were as follows:

	At 31 December 2020	At 31 December 2021	At 31 December 2021	Performance Conditions	Exercise price	Exercise period
	0.25p ordinary shares Number	0.01p ordinary shares Number	Vested		Pence	
Glenn Tracey	100,000	-	-	Yes	47.75p	17 April 2015 - 17 April 2025. Cancelled February 2021.
	200,000	-	-	No	23.5p	13 January 2016 - 13 January 2026. Cancelled February 2021.
	1,000,000	-	-	Yes	5p	14 September 2016 - 14 September 2026. Cancelled February 2021.
	2,500,000	-	-	Yes	1.55p	12 June 2019 - 12 June 2029. Cancelled February 2021.
	-	150,000,000	150,000,000	Yes	0.1p	5 February 2021 – 4 February 2026.
Gerard Brandon	-	250,000,000	250,000,000	Yes	0.1p	5 February 2021 – 4 February 2026.
Nigel Burton	-	200,000,000	200,000,000	Yes	0.1p	5 February 2021 – 4 February 2026.
	4,800,000	600,000,000	600,000,000			

The Company's share price started the year at 0.20 pence and ended the year at 0.15 pence, with a close high and low over the year of 0.39 pence and 0.14 pence respectively (with an intra-day high and low over the year of 0.44 pence and 0.13 pence respectively).

The share-based payment charge in relation to the share option grants to Directors and lapsed options during the year was £995,214 (2020: £51,753).

The Directors' Remuneration Report was approved by the Board of Directors on 27 May 2022 and signed on its behalf by:



Dr Nigel Burton

Chairman of the Remuneration Committee

DIRECTORS' FINANCE & AUDIT COMMITTEE REPORT

For the year ended 31 December 2021

Introduction

This report details how the Finance & Audit Committee (“the Committee”) has met its responsibilities under its terms of reference. The Committee is a sub-committee of the Board. As Non-executive Directors, the members of the Committee are, together with the Board as a whole, responsible for the integrity and probity of the Company. The work of the Committee is aimed at supporting the creation of long-term value for shareholders.

The Committee continues to act as an oversight sub-committee of the Board, considering and challenging but not itself performing the relevant processes. The ultimate responsibility for reviewing and approving the Annual Report and Accounts and interim financial statements remains with the Board.

The Committee does not believe there is a requirement for an internal audit function due to the Company’s size and level of complexity.

Role and Responsibilities

The Board has established a Finance & Audit Committee to monitor the integrity of the Company’s financial statements and the effectiveness of the Company’s internal financial controls. The Committee’s role and responsibilities are set out in the terms of reference which are available from the Company’s website. The terms of reference are reviewed regularly and amended where appropriate. During the year, the Committee worked with management and the external auditors in fulfilling these responsibilities.

The Committee report deals with the key areas in which it plays an active role and has responsibility. These areas are as follows:

- i. Financial reporting and related primary areas of judgement;
- ii. The external audit process;
- iii. Risk management and internal controls; and
- iv. Whistleblowing procedures.

The members of the Finance & Audit Committee are Dr Nigel Burton and Gerard Brandon with Robert Moore joining on 15 March 2022 at the time of his appointment to the Board. Dr Burton became Chairman of the Committee, following the resignation of Peter Grant and has appropriate relevant financial experience. The Board considers that the Committee has an appropriate and experienced blend of commercial, financial and industry expertise to enable it to fulfil its duties.

Financial Reporting and External Audit Process

The Chairman of the Committee participated in the Audit Planning meeting held in December 2021 with the external auditors to plan the financial audit, discussed potential key audit matter(s) and along with the Committee reviewed the Audit Strategy Document.

The Board as a whole, reviewed the going concern paper prepared by management including detailed financial forecasts for the period 2022 to 2023, related assumptions, risks and opportunities, sensitivities, and areas for mitigation. The outcome of the Board’s discussions on going concern is explained in more detail in note 3.

The Committee has satisfied itself that the 2021 Annual Report and Accounts have been prepared in accordance with international accounting standards in conformity with the requirements of the Companies Act 2006, are fair, balanced and provide the information necessary for shareholders to assess the Company’s performance, business model and strategy.

Risk Management and Internal Controls

The Board considered as part of its review of risks those risks detailed in the Strategic Report including mitigating actions. Following the successful fundraise in February 2021 the Company continues to be a going concern. The key risk still facing the Company is the ongoing impact of the COVID-19 pandemic on the results of the business.

Another key responsibility of the Committee is to review the Company's internal control systems, including internal financial controls. The Finance Director reviewed and updated the Company's Financial Procedures Manual to ensure it was in line with current practice. There were no reported instances of fraud during the year.

The Company's auditors are encouraged to raise comments on internal control in their management letter following the annual audit. The points raised and actions arising are monitored through to completion by the Finance & Audit Committee.

Whistleblowing

The Committee had no whistleblowing incidents reported during 2021. Dr Nigel Burton has been appointed Primary Designated Officer during the year and Gerard Brandon as Alternative Designated Officer.

Committee Meetings

The Committee met twice in the year. Both meetings related to the Annual Report and Accounts which the external auditors attended.

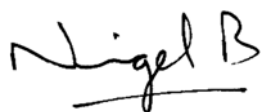
Auditors Fees and Non-Audit Services

The Committee reviewed and agreed to the proposed audit fee of £22,150 (2020: £20,750). Fees for other audit related services during the year amounted to £1,575 (2020: £2,070). These fees included the review of 2021 interims and the provision of information around accounting standards.

Auditor Independence

The Committee satisfied itself on the auditors' independence. Mr Roger Weston is undertaking his fourth audit of the Company, in the capacity of partner in charge and no non-audit services have been provided in the current financial year.

The Report of the Finance & Audit Committee was approved by the Board of Directors on 27 May 2022 and signed on its behalf by:



Dr Nigel Burton

Chairman of the Finance & Audit Committee

CORPORATE GOVERNANCE REPORT

For the year ended 31 December 2021

Restructuring of the Company

On 4 February 2021, shareholders passed resolutions at a General Meeting appointing Gerard Brandon and Dr Nigel Burton to the Board of the Company as Non-executive Chairman and Non-executive Director respectively, with effect from 5 February 2021. Their biographies are detailed under Principle 6 in this Report.

The Finance & Audit and Remuneration Committees are chaired by Dr Nigel Burton, and Gerard Brandon and Robert Moore are members of both committees. Dr Nigel Burton will assume the responsibilities of Senior Non-executive Director.

As anticipated in the Circular published on 19 January 2021, Peter Grant, Non-executive Chairman and Eric Yeatman, Non-executive Director, stepped down from the Board with effect from 5 February 2021.

Chairman's Corporate Governance Statement

The full corporate governance statement is published and maintained up to date on the Company's website at (<http://www.microsaic.com/investors/governance-new>). This extract from that statement is included in the Annual Report & Accounts as required by the Quoted Companies Alliance's ("QCA") Corporate Governance Code for small and mid-size quoted companies (the "Code").

The Board is committed to maintaining high standards of corporate governance and, with effect from 26 September 2018, the Board adopted the Code.

The Code sets out ten broad principles of corporate governance. It states what are considered to be appropriate corporate governance arrangements for growing companies and requires companies to provide an explanation about how they are meeting the principles through certain prescribed disclosures.

The Chairman leads the Board and is responsible for its overall effectiveness in directing the Company. He manages the Board agenda and ensures that all Directors receive accurate, timely and clear information and effectively contribute their various talents and experience in the development and implementation of the Company's strategy. He ensures that the nature and extent of the significant risks which the Company is willing to embrace in the implementation of its strategy are challenged and determined by the Board. The Chairman is responsible for ensuring that the Board implements, maintains and communicates effective corporate governance processes and for promoting a culture of openness and debate designed to foster a positive governance culture throughout the Company.

The Board has considered how each principle is applied and provides below an explanation of the approach taken in relation to each principle and how they support the Company's medium to long-term success.

The Board agenda is regularly reviewed to ensure that all matters which the Board should consider are addressed. This allows for presentations from the Management Team so that the Board benefits from their input.

The Company includes a Remuneration Committee Report and a Finance & Audit Committee Report in its Annual Report and Accounts.

The evaluation of the Board's effectiveness due to have been carried out in January 2021 was postponed until January 2022 considering the restructuring of the Board carried out in February 2021. Although the process was started in early 2022, it was agreed that it was appropriate to suspend the process until the Board is further strengthened with the expected appointment of an additional Non-executive Director and both a new CEO and a new Finance Director.

Save in respect of Principle 5 in consideration of the independence of the Non-executive Directors, which is considered in more detail below, the Board considers that it does not depart from any of the principles of the Code.

PRINCIPLES TO DELIVER GROWTH

PRINCIPLE 1: Establish a strategy and business model which promote long-term value for shareholders.

Strategy:

Microsaic's strategic aim is to capitalise on its strengths in point of need MS detection, and access high-growth and emerging Life Science and Environmental applications, as well as niches in traditional small molecule markets. The Company intends to achieve its strategy with a business model built on customer focus, collaborations, and technology innovation.

Business Model:

The Company's business model is described on page 7 of the Strategic Report.

Challenges:

Staying relevant to future customer needs

Customer needs evolve rapidly. Future product specifications are driven by end-user requirements. This will inform Microsaic's product strategy as its MS detectors move from the customer's laboratory into production, and front-line operating environments. Microsaic will ensure that its strategic product development will remain focused on meeting demanding biopharmaceutical applications.

Remaining innovative in an advancing technological landscape

Microsaic has successfully developed and implemented advanced technology at the core of its design with over 80 patents to date. This has led to a solid foundation serving scientists in the laboratory in small molecule drug discovery, and increasingly in support of its endeavours in life and environmental science markets.

The Company continues to invest in product development projects, which the Board believes will be attractive to the growing market for laboratory-based applications with larger biological molecules, such as peptides and small proteins.

The Company has extended its product capabilities further into Life Science applications, such as bioprocessing, potentially significantly reducing the cost of analysis and the cost of poor quality.

PRINCIPLE 2: Seek to understand and meet shareholder needs and expectations. See the website for further disclosures concerning how the Company seeks to engage with shareholders and how successful this has been.

PRINCIPLE 3: Consider wider stakeholder and social responsibilities and their implications for long-term success. See the website for further disclosures.

PRINCIPLE 4: Embed effective risk management, considering both opportunities and threats, throughout the organisation.

The Board aims to ensure that the Company's risk management framework identifies and addresses all relevant risks in order to execute and deliver the strategy.

The Directors recognise their responsibility for the Company's systems of internal control and have established systems to ensure that an appropriate and reasonable level of oversight and control

is provided. The Company's systems of internal controls are designed to help the Company meet its business objectives by appropriately managing and wherever possible mitigating risks faced by the Company. The controls can only provide reasonable, not absolute, assurance against material misstatement or loss.

The Company's Management Team, which reports into the Executive, meets regularly to review commercial, technical, operational, and financial risks facing the business. These risks are assessed according to their nature and magnitude based on the seriousness of the risk and the likelihood of the risk occurring. The effectiveness of the controls implemented to minimise the risks are also reviewed. The aim of these reviews is to provide reasonable assurance that material risks are identified, and appropriate action is taken at an early stage. From this review the Company maintains its internal risk register which is reviewed annually by the Board.

The annual budget is reviewed and approved by the Board. Financial results, with comparisons to budget, and latest forecasts are reported monthly to the Board together with a report on operational achievements, objectives and issues encountered. Significant variances from plan are discussed at Board meetings and actions set in place to address them.

Measures continue to be taken to review and improve internal controls and risk management procedures. The Company has a Financial Procedures Manual which includes approval levels for authorisation of expenditure, potential fraud scenarios, payment approval process, expenses guidelines etc. This is updated as necessary.

The Company's auditors are encouraged to raise comments on internal control in their management letter following the annual audit. The points raised and actions arising are monitored through to completion by the Finance & Audit Committee.

PRINCIPLES TO MAINTAIN A DYNAMIC MANAGEMENT FRAMEWORK

PRINCIPLE 5: Maintain the Board as a well-functioning, balanced team led by the Chairman.

The Board currently consists of one Executive Chairman, and two Non-executive Directors. Bevan Metcalf, the previous Financial Director retired on 17 December 2021. To help with a smooth transition, the Company has appointed Mr Anthony Clayden, as Interim Head of Finance (non-board level), until a permanent successor is appointed. Glenn Tracey, CEO, resigned on 31 March 2022 and the Chairman has stepped into an executive role temporarily until a suitable replacement is appointed. A formal search process to identify an additional independent Non-executive Director is well advanced.

The Company held 19 Board meetings during 2021. (In 2020 the Company faced several challenges including the COVID-19 pandemic, and ensuring that the Company remained a going concern, holding 39 meetings during the year.)

The Company has an equal opportunity policy to recruitment at Board level and within the Company at large and seeks diversity as opportunities arise, within the framework of selecting the most suitable person, based on relevant skills, abilities, experience and location, as required for the role.

The principal role of the Chairman of the Board is to manage and provide leadership to the Board of Directors of the Company. The Chairman is accountable to the Board and acts as a direct liaison between the Board and the management of the Company, ordinarily through the Chief Executive Officer. The Chairman acts as the communicator for Board decisions where appropriate.

Given the Chairman's current capacity as an Executive Chairman until the CEO successor is appointed, the other NEDs including the recently appointed independent NED provide the appropriate level of challenge

to both the Chairman and management. The Chairman has elevated the role of the senior management team within the Company who now report to him and together developed the new services strategy in consultation with and being rolled out by this team.

The Chairman is responsible for the effective leadership, operation and governance of the Board and its Committees. He ensures that all Directors contribute effectively to the development and implementation of the Company’s strategy, while ensuring that the nature and extent of the significant risks the Company is willing to embrace in the implementation of its strategy are determined and challenged.

The Chief Executive Officer is responsible for the management of the Company, providing executive leadership and for implementing the Company’s strategy.

The Board believes that the advice, behaviour and character of its Chairman and Non-executive Director are always in the best interests of the Company and its shareholders. In addition, the skills and business judgement which they possess and regularly exercise contributes to the efficient and effective running of the Company.

The Company appreciates that circumstances which might or might appear to affect a Director’s judgement may well include financial dependence on the Company and whether the Director is, or represents, a major shareholder. The Chairman and Non-executive Director are financially independent of the Company as they have other sources of income. Mr Brandon and Dr Burton do not represent significant shareholders; however, they do have a material interest in share warrants of the Company as detailed below. They are also Directors of DeepVerge plc which, although not a shareholder of the Company, is strategically important to the future success of Microsaic. Under the QCA Guidelines the independence of the Chairman and Non-executive Director could be challenged under the following areas, but in all cases the Board believes that the Chairman and Non-executive Director always act in an independent manner and where a conflict of interest could arise or be perceived to arise, they abstain from voting:

Name and position	Potential issue	Comments
Gerard Brandon Chairman	Holds a material interest of 250 million share warrants in the Company.	This award was required to attract a Chairman of the appropriate calibre to the Company. The award was passed by shareholders at a General Meeting. The performance condition, prior to vesting, was based on the Company’s shares trading at a VWAP at or above a 50 per cent. premium to the placing price for 20 consecutive business days at any time since their issue.
	Director of DeepVerge plc	DeepVerge plc is strategically important to the future success of the Company.
	Temporary Executive Director capacity	Involving the elevated senior management to develop and implement strategy and consulting with the Non-executive Directors who have oversight during this period.

Name and position	Potential issue	Comments
Dr Nigel Burton Non-executive Director	Held a material interest of 200 million share warrants in the Company. These were exercised on 13 February 2022	This was required to attract a Non-executive Director of the appropriate calibre to the Company. The award was passed by shareholders at a General Meeting. The performance condition, prior to vesting, was based on the Company's shares trading at a VWAP at or above a 50 per cent. premium to the placing price for 20 consecutive business days at any time since their issue.
	Director of DeepVerge plc	DeepVerge plc is strategically important to the future success of the Company.

The Board recognises the importance of good governance arrangements. Currently, the Board does not include two independent Non-executive Directors. A process is underway to appoint a second independent Non-executive Director with relevant experience.

The Board has an established Finance & Audit Committee and Remuneration Committee. The Company believes it is currently too small to have a separate Nominations Committee, so this role is taken on by the Board of Directors as a whole.

Details and links to the terms of reference of the Finance & Audit Committee and Remuneration Committee are set out under Principle 9 on the website.

Details of Directors and their time commitment are set out under Principle 6 below. The attendance of the Directors at the regular Board and Committee Meetings during the year ended 31 December 2021 were as follows.

Name	Position	Regular Board Meetings	Finance & Audit Committee	Remuneration Committee
Peter Grant ¹	Non-executive Chairman	5 (5)	-	-
Gerard Brandon ²	Non-executive Chairman	11 (13)	2(2)	1(1)
Glenn Tracey	Chief Executive Officer	19 (19)	n/a	n/a
Bevan Metcalf ³	Finance Director	19 (19)	n/a	n/a
Eric Yeatman ¹	Non-executive Director	5 (5)	-	-
Nigel Burton ²	Non-executive Director	11 (13)	2(2)	1(1)

¹Peter Grant and Eric Yeatman resigned as Directors on 5 February 2021.

²Gerard Brandon and Nigel Burton were appointed Directors on 5 February 2021.

³Bevan Metcalf resigned as a Director upon his retirement on 17 December 2021

Numbers in brackets denote the total number of meetings that each Director was eligible to attend during the year.

PRINCIPLE 6: Ensure that between them the Directors have the necessary up-to-date experience, skills and capabilities.

Biographical details of the Board of Directors, their skills, suitability and availability are set out below.

Gerard Brandon, Executive Chairman

Term of office: Appointed a Director on 5 February 2021. Gerard is also a member of the Finance & Audit Committee and the Remuneration Committee.

Background and suitability for the role: Gerard Brandon is Chief Executive Officer of both DeepVerge plc and Cellulac plc. In 1996 he became founder and CEO of Alltracel Pharmaceuticals plc ("Alltracel"), where he built a team which oversaw numerous patents granted on refined cellulose. Alltracel was admitted to trading on AIM in 2001. In 2004, he was appointed as a Managing Partner for Farmabrand Private Equity. In March 2020, he was appointed as a Non-executive Chairman to Modern Water plc, which was subsequently acquired by DeepVerge plc (formerly Integumen plc) in November 2020. Gerard is a Fellow of the Ryan Academy of Entrepreneurs in Dublin.

Dr Nigel Burton, Non-executive Director

Term of office: Appointed a Director on 5 February 2021 at a General Meeting of the Company. Dr Burton is also Chairman of the Finance & Audit Committee and the Remuneration Committee.

Background and suitability for the role: Nigel spent over 14 years as an investment banker at leading City institutions including UBS Warburg and Deutsche Bank, including as the Managing Director responsible for the energy and utilities industries. Nigel also spent 15 years as Chief Financial Officer or Chief Executive Officer of a number of private and public companies.

Mr Robert Moore, Non-executive Director

Term of office: Appointed a Director on 15 March 2022 by the Board of directors of the Company. Mr Moore is also a member of the Finance & Audit Committee and the Remuneration Committee.

Background and suitability for the role: Robert is a UK qualified lawyer and brings over 35 years' commercial and legal experience to the Board. Robert has acted as Head of International Legal Affairs at Enterprise Oil plc (a UK FTSE 100 company prior to its acquisition by Shell in 2002) and as co-founder and Commercial Director of Granby Oil & Gas plc, which was listed on AIM from 2005 until its sale in 2008. Robert subsequently co-founded, and is Managing Director of, private oil and gas exploration company Ardent Oil Ltd (operating in the UK, Denmark and Luxembourg). Robert also acts as Non-executive Chairman of Mobile Streams plc, an AIM listed company, having been appointed to the role in July 2021.

The Company uses external advisers.

The Board has retained the services of the following advisers:

- Singer Capital Markets as Nominated Adviser and Joint Broker;
- Turner Pope Investments as Joint Broker;
- Saffery Champness LLP for annual audit;
- Dorsey and Whitney Europe LLP as solicitors for the Company;
- Neville Registrars Ltd as the Company's registrar; and
- Menzies LLP for ongoing advice on, Corporation tax, VAT and PAYE.

PRINCIPLE 7: Evaluate Board performance based on clear and relevant objectives, seeking continuous improvement.

Board Evaluation Process

The Board believes that, in addition to dealing with any matters as they arise, it is appropriate to carry out a formal evaluation of the performance of the Board each year. This is intended to ensure that the Board remains effective, well-informed and able to make high quality and timely decisions for the benefit of all stakeholders in the Company.

The usual evaluation involves each Director completing an evaluation questionnaire which covers effectiveness from multiple angles including: Board structure and committees; Board arrangements, frequency and time; content of Board meetings; Board culture; Board evaluation and succession; and individual contributions. The completed questionnaires are anonymised and collated independently into a summary, and comments and any areas of concern are highlighted for discussion with the Board.

The last evaluation was carried out in January 2020. This process has been suspended during the current period and in the absence of a replacement CEO and Finance Director and will be resumed following their appointment.

The evaluation of the Board's effectiveness due to have been carried out in January 2021 was postponed until January 2022 in light of the restructuring of the Board carried out in February 2021. Although the process was started in early 2022, it was agreed that it was appropriate to suspend the process until the Board is further strengthened with the expected appointment of an additional Non-executive Director and both a new CEO and a new Finance Director.

Succession Planning

As is common with many small AIM quoted companies, the Company does not have internal candidates to succeed the existing Executive Directors. This will be kept under review, especially when recruiting for senior roles as vacancies arise. However, the Board does not believe it is appropriate to recruit additional Directors or senior personnel solely for the purpose of Board succession planning.

Training of Directors

It is recognised that there continues to be more regulation of which Directors need to be aware. The Board will continue to ensure that Directors receive appropriate support to keep up to date.

PRINCIPLE 8: Promote a culture that is based on ethical values and behaviours.

The Company is committed to achieving the highest possible ethical standards in conducting its business. The Company expects all employees and Directors to maintain the same high standards. To achieve these ends, Microsaic encourages freedom of expression and speech whilst not accepting prejudice of any kind.

Ethics is based on a set of principles and clear moral and ethical values. The Company takes its principles and values very seriously and expects staff at all levels to look to these principles and values for guidance.

Principles:

The Board has adopted the following four principles:

1. Management must lead by example. Good ethics should be most noticeable at the top. Every employee must be accountable to the same rules.
2. Corporate values must be implemented throughout the Company. Every forum and medium should be used to spread the message and, most of all, the Company must practice what it preaches.

3. Meetings with staff (both one on one and group) to discuss the values and what they mean to each employee must be undertaken when implementing a value system. This will help to get everyone in the Company on the same page and committed.
4. The values of the Company must endure changes in leadership. The longer ethical values last, the more ingrained they will become.

Values

The Company conducts its business around seven core values:

1. *Integrity – applying high ethical standards and being honest.* The Company will conduct its business with honesty to all stakeholders and will uphold high moral principles.
2. *Mutual respect, empathy and trust in dealing with others.* An environment of mutual respect, empathy and trust is necessary to promote integrity. Trust in the workplace is critical to organisational success.
3. *Innovation – a passion to experiment and deliver new solutions.* A focus on research and development is very important to the future success of the Company. The Company is continually looking to deliver innovative solutions and has a collaborative approach to meeting customer needs.
4. *Teamwork – drives high performance.* Microsaic relies heavily on teamwork. A team approach is more efficient, faster, benefits from multi-skills especially in problem solving, increases learning opportunities and encourages a sense of belonging, which often translates to a greater sense of ownership and accountability for the work.
5. *Quality – we take pride in everything we do.* The Company is strongly focused on quality from the products it produces to the processes it operates. The Company is ISO 9001:2015 compliant.
6. *Customer focus – go the extra mile for our customers.* The Company assigns the highest priority to customer satisfaction. We listen to our customers and create solutions for unmet customer needs.
7. *Shareholder value – striving to deliver value to shareholders.* The key objective of the Company is achieving sustainable profitability. Every employee understands how they fit into the profitability picture. Everyone's common goal is to build a strong, profitable Company that will endure and provide a reasonable return to shareholders.

PRINCIPLE 9: Maintain governance structures and processes that are fit for purpose and support good decision-making by the Board.

See the website for further disclosures at <https://www.microsaic.com/investors/governance-new/>

PRINCIPLE 10: Communicate how the Company is governed and is performing by maintaining a dialogue with shareholders and other relevant stakeholders.

The following committee reports are included in these Annual Report & Accounts as shown below. They include details of the work of those committees:

- The Directors' Remuneration Committee Report - pages 23 to 26; and
- The Directors' Finance & Audit Committee Report - pages 27 to 28.

The Corporate Governance Report was approved by the Board of Directors on 27 May 2022 and signed on its behalf by:



Gerard Brandon
Executive Chairman

INDEPENDENT AUDITORS' REPORT TO THE MEMBERS OF MICROSAIC SYSTEMS PLC
For the year ended 31 December 2021

Opinion

We have audited the financial statements of Microsaic Systems plc for the year ended 31 December 2021 which comprise Statement of Comprehensive Income, the Statement of Financial Position, the Statement of Changes in Equity, the Statement of Cash Flows and notes to the financial statements, including significant accounting policies. The financial reporting framework that has been applied in their preparation is applicable law and UK-adopted international accounting standards.

In our opinion, the financial statements:

- give a true and fair view of the state of the Company's affairs as at 31 December 2021 and its loss for the year then ended;
- have been properly prepared in accordance with UK-adopted international accounting standards; and
- have been prepared in accordance with the requirements of the Companies Act 2006.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report. We are independent of the Company in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the FRC's Ethical Standard, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Our approach to the audit

We tailored the scope of our audit to ensure that we obtained sufficient evidence to support our opinion on the financial statements as a whole, taking into account the structure of the Company, the accounting processes and controls, and the industry in which it operates.

As part of designing our audit, we determined materiality and assessed the risks of material misstatement in the financial statements. In particular, we looked at areas where the Directors made subjective judgements, for example in respect of significant accounting estimates that involved making assumptions and considering future events that are inherently uncertain.

Key audit matters

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

Key Audit Matter	How our scope addressed this matter
<p>Going concern</p> <p>The going concern assumption is a fundamental principle in the preparation of financial statements.</p> <p>Given the historic operating losses and the inherent uncertainty of sale forecasts, it was concluded at the planning stage that there was a risk of material uncertainty in the going concern assessment. As such, significant audit time was devoted to testing of the going concern assessment, and the going concern assumption is considered to be a key audit matter.</p>	<p>Our audit procedures included the following:</p> <ul style="list-style-type: none"> • reviewing projected cashflows and other available evidence to assess the ability of the Company to continue in operation for at least 12 months from the date of signing this report; • reconciled projections to the audited financial statements, management accounts and bank statements; • performed a sensitivity analysis on key assumptions underlying the directors' going concern assessment, including the forecast revenue streams and levels of sales, gross margin achieved and cost base required to service sales; • considered the impact of the agreements signed with DeepVerge plc both in the year and post year end on potential cashflows and operations. <p>Additional procedures considered are set out below in the section Conclusions relating to going concern</p> <p>Based on our procedures, we concluded that there is no material uncertainty in relation to going concern and that the continued adoption of the going concern basis of accounting in these financial statements remains appropriate.</p>

Our application of materiality

The scope of our audit was influenced by our application of materiality. An audit is designed to obtain reasonable assurance whether the financial statements are free from material misstatement. Misstatements may arise due to fraud or error. They are considered material if individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the consolidated financial statements.

Based on our professional judgement, we determined certain quantitative thresholds for materiality, as set out below. These, together with qualitative considerations, helped us to determine the scope of our audit and the nature, timing and extent of our audit procedures and to evaluate the effect of misstatements, if any, both individually and in aggregate on the financial statements as a whole.

We have applied a materiality of £50,000 (2020: £50,000). This is based on 2% of operating expenditure for the year ended 31 December 2021. Performance materiality was set at 80% of materiality.

Our triviality level was set at £2,500 which is 5% of planning materiality, and any uncorrected audit differences below this level were not reported to management, unless warranted under qualitative grounds.

Conclusions relating to going concern

In auditing the financial statements, we have concluded that the directors' use of the going concern basis of accounting in the preparation of the financial statements is appropriate. Our evaluation of the directors' assessment of the Company's ability to continue to adopt the going concern basis of accounting included:

- obtaining, critically appraising and assessing for arithmetical accuracy the directors' formal going concern assessment;
- reviewing projected cashflows and other available evidence, including bank statements and the Company's framework agreement and scheme of works with Deepverge plc, to assess the ability of the Company to continue in operation for at least 12 months from the date of signing this report;
- performing a sensitivity analysis on key assumptions underlying the directors' going concern assessment;
- discussion of events after the reporting date with the directors to assess their impact on the going concern assumption, including comparison of the post year end cash balances and financial performance to forecast positions.

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the Company's ability to continue as a going concern for a period of at least twelve months from when the financial statements are authorised for issue.

Our responsibilities and the responsibilities of the directors with respect to going concern are described in the relevant sections of this report.

Other information

The directors are responsible for the other information. The other information comprises the information included in the annual report, other than the financial statements and our auditor's report thereon. Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion thereon.

Our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the course of the audit or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether this gives rise to a material misstatement in the financial statements themselves. If, based on the work we have performed, we conclude that there is a material misstatement of this other information we are required to report that fact.

We have nothing to report in this regard.

Opinions on other matters prescribed by the Companies Act 2006

In our opinion, based on the work undertaken in the course of the audit:

- the information given in the Strategic Report and the Directors' Report for the financial year for which the financial statements are prepared is consistent with the financial statements; and
- the Strategic Report and the Directors' Report have been prepared in accordance with applicable legal requirements.

Matters on which we are required to report by exception

In the light of the knowledge and understanding of the Company and its environment obtained in the course of the audit, we have not identified material misstatements in the Strategic Report or the Directors' Report.

We have nothing to report in respect of the following matters in relation to which the Companies Act 2006 requires us to report to you if, in our opinion:

- adequate accounting records have not been kept, or returns adequate for our audit have not been received from branches not visited by us; or
- the financial statements are not in agreement with the accounting records and returns; or
- certain disclosures of directors' remuneration specified by law are not made; or
- we have not received all the information and explanations we require for our audit.

Responsibilities of directors

As explained more fully in the Directors' Responsibilities Statement set out on page 21, the directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the directors determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the directors are responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Company or to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities for the audit of the financial statements

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

Irregularities, including fraud, are instances of non-compliance with laws and regulations. We design procedures in line with our responsibilities, outlined above, to detect material misstatements in respect of irregularities, including fraud. The specific procedures for this engagement and the extent to which these are capable of detecting irregularities, including fraud are detailed below.

Identifying and assessing risks related to irregularities:

We assessed the susceptibility of the Company's financial statements to material misstatement and how fraud might occur, including through discussions with the directors, discussions within our audit team planning meeting, updating our record of internal controls and ensuring these controls operated as intended. We evaluated possible incentives and opportunities for fraudulent manipulation of the financial statements. We identified laws and regulations that are of significance in the context of the Company by discussions with directors and updating our understanding of the sector in which the Company operates.

Laws and regulations of direct significance in the context of the Company include The Companies Act 2006, the AIM Rules for Companies and UK Tax legislation, particularly with reference to Research Development Expenditure Credits.

Audit response to risks identified:

We considered the extent of compliance with these laws and regulations as part of our audit procedures on the related financial statement items including a review of financial statement disclosures. We reviewed the company's records of breaches of laws and regulations, minutes of meetings and correspondence with

relevant authorities to identify potential material misstatements arising. We discussed the company's policies and procedures for compliance with laws and regulations with members of management responsible for compliance.

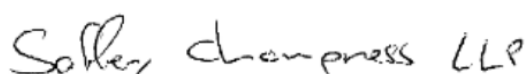
During the planning meeting with the audit team, the engagement partner drew attention to the key areas which might involve non-compliance with laws and regulations or fraud. We enquired of management whether they were aware of any instances of non-compliance with laws and regulations or knowledge of any actual, suspected or alleged fraud. We addressed the risk of fraud through management override of controls by testing the appropriateness of journal entries and identifying any significant transactions that were unusual or outside the normal course of business. We assessed whether judgements made in making accounting estimates gave rise to a possible indication of management bias. At the completion stage of the audit, the engagement partner's review included ensuring that the team had approached their work with appropriate professional scepticism and thus the capacity to identify non-compliance with laws and regulations and fraud.

There are inherent limitations in the audit procedures described above and the further removed non-compliance with laws and regulations is from the events and transactions reflected in the financial statements, the less likely we would become aware of it. Also, the risk of not detecting a material misstatement due to fraud is higher than the risk of not detecting one resulting from error, as fraud may involve deliberate concealment by, for example, forgery or intentional misrepresentations, or through collusion.

A further description of our responsibilities is available on the Financial Reporting Council's website at: www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditor's report.

Use of our report

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



.....

Roger Weston (Senior Statutory Auditor)
for and on behalf of Saffery Champness LLP

Chartered Accountants
Statutory Auditors

71 Queen Victoria Street
London
EC4V 4BE
27 May 2022

STATEMENT OF COMPREHENSIVE INCOME
For the year ended 31 December 2021

	Notes	Year to 31 December 2021 £	Year to 31 December 2020 £
Revenue	5	906,876	198,258
Cost of sales		(510,892)	(98,348)
Gross profit		395,984	99,910
Other operating income	6	67,283	96,626
Research and development expenses		(738,145)	(777,597)
Professional fees – Corporate transactions		(65,789)	(149,364)
Other operating expenses		(1,693,568)	(1,801,321)
Total operating expenses	7	(2,497,502)	(2,728,282)
Loss from operations before share-based payments		(2,034,235)	(2,531,746)
Share-based payments	25	(1,363,764)	(52,241)
Loss from operations after share-based payments	7	(3,397,999)	(2,583,987)
Financial cost	8	(4,604)	(10,775)
Finance income	8	6,237	4,393
Loss before tax		(3,396,366)	(2,590,369)
Tax on loss on ordinary activities	9	267,785	217,711
Total comprehensive loss for the year		(3,128,581)	(2,372,658)
Loss per share attributable to the equity holders of the Company			
Basic and diluted loss per ordinary share (pence)	10	(0.056)p	(0.52)p

The notes on pages 46 to 70 form part of these financial statements.

STATEMENT OF FINANCIAL POSITION
As at 31 December 2021

	Notes	31 December 2021 £	31 December 2020 £
ASSETS			
Non-current assets			
Intangible assets	11	74,405	83,763
Property, plant and equipment	12	305,687	114,145
Right of use assets	13	126,533	49,404
Total non-current assets		506,625	247,312
Current assets			
Inventories	14	283,902	569,589
Trade and other receivables	15	631,948	173,871
Corporation tax receivable	9	267,785	218,568
Cash and cash equivalents		3,464,876	397,069
Total current assets		4,648,511	1,359,097
TOTAL ASSETS		5,155,136	1,606,409
EQUITY AND LIABILITIES			
Equity			
Share capital	19	1,702,913	1,140,913
Share premium	21	28,006,018	24,867,886
Share-based payment reserve		2,888,707	324,264
Retained losses		(28,024,418)	(25,090,083)
Total equity		4,573,220	1,242,980
Current liabilities			
Trade and other payables	16	354,611	185,927
Lease liability	13	71,187	52,370
Total current liabilities		425,798	238,297
Non-current liabilities			
Provisions	17	99,960	124,035
Lease liability	13	56,158	1,097
Total non-current liabilities		156,118	125,132
Total liabilities		581,916	363,429
TOTAL EQUITY AND LIABILITIES		5,155,136	1,606,409

The financial statements were approved for issue by the Board of Directors on 27 May 2022 and signed on its behalf by:



Gerard Brandon
 Executive Chairman
 Company number 03568010

The notes on pages 46 to 70 form part of these financial statements.

STATEMENT OF CHANGES IN EQUITY
For the year ended 31 December 2021

	Notes	Share capital £	Share premium £	Share-based payment reserve £	Retained Losses £	Total equity £
At 1 January 2020		1,140,913	24,867,886	412,539	(22,857,941)	3,563,397
Total comprehensive loss for the year		-	-	-	(2,372,658)	(2,372,658)
Transaction with owners:						
Shares issued		-	-	-	-	-
Share issue costs		-	-	-	-	-
Transfer in respect of lapsed share options		-	-	(140,516)	140,516	-
Share-based payments-share options	25	-	-	52,241	-	52,241
At 31 December 2020		1,140,913	24,867,886	324,264	(25,090,083)	1,242,980
Total comprehensive loss for the year		-	-	-	(3,128,581)	(3,128,581)
Transaction with owners:						
Shares issued - placing	19	562,000	5,058,000	-	-	5,620,000
Share issue costs	21	-	(1,919,868)	1,503,008	-	(416,860)
Transfer in respect of lapsed share options		-	-	(194,246)	194,246	-
Share-based payments options	25	-	-	1,255,681	-	1,255,681
At 31 December 2021		1,702,913	28,006,018	2,888,707	(28,024,418)	4,573,220

The notes on pages 46 to 70 form part of these financial statements.

STATEMENT OF CASH FLOWS
For the year ended 31 December 2021

		Year to 31 December 2021 £	Year to 31 December 2020 £
Cash flows from operating activities			
Cash absorbed by operations	31	(1,827,851)	(2,371,194)
Corporation tax received		218,568	321,584
Net cash used in operating activities		(1,609,283)	(2,049,610)
Cash flows from investing activities			
Purchases of intangible assets	11	(28,883)	(27,319)
Purchases of property, plant and equipment	12	(305,334)	(69,452)
Interest received		6,237	20,106
Net cash used in investing activities		(327,980)	(76,665)
Cash flows from financing activities			
Proceeds from share issues		5,500,000	-
Share issue costs		(416,860)	-
Repayment of lease liabilities	13	(78,070)	(97,414)
Net cash generated by / (used in) financing activities		5,005,070	(97,414)
Net decrease in cash and cash equivalents		3,067,807	(2,223,689)
Cash and cash equivalents at the beginning of the year		397,069	2,620,758
Cash and cash equivalents at the end of the year		3,464,876	397,069

The notes on pages 46 to 70 form part of these financial statements.

NOTES TO THE FINANCIAL STATEMENTS

For the year ended 31 December 2021

The principal activity of the public limited company continues to be the research, development and commercialisation of miniaturised mass spectrometry instruments that are designed to improve the efficiency of pharmaceutical R&D. The Company is incorporated in England and its registered address is GMS House, Boundary Road, Woking, Surrey, GU21 5BX. The Company has no subsidiaries, so the financial information relates to the Company only.

1. Accounting policies

The following principal accounting policies have been used consistently in the preparation of these financial statements.

Basis of preparation

These financial statements have been prepared in accordance with UK-adopted international accounting standards in conformity with the requirements of the Companies Act 2006.

These financial statements have been prepared under the historical cost basis except where financial instruments are required to be carried at fair value under IFRS.

Revenue recognition

IFRS 15 provides a single, principles based five-step model to be applied to all contracts with customers. The five-step framework includes:

- 1) Identify the contract(s) with a customer;
- 2) Identify the performance obligations in the contract;
- 3) Determine the transaction price;
- 4) Allocate the transaction price to the performance obligations in the contract; and
- 5) Recognise revenue when the entity satisfies a performance obligation.

The Company recognises revenue from the following three sources:

- 1) Sale of products;
- 2) Sale of consumables and spare parts; and
- 3) Service and support income.

All revenues and trade receivables arise from contracts with customers. Revenue is measured based on the consideration which the Company expects to be entitled in a contract with a customer and excludes amounts collected on behalf of third parties. The sale of products, consumables and spare parts is recognised when the sole performance obligation is met which is usually on delivery to the customer. For service and support income revenue, the performance obligation is satisfied over the duration of the service period and revenue is recognised in line with the satisfaction of the performance obligation.

Sale of products

The Company sells compact mass spectrometers (Microsaic 4500 MiD®) mainly through OEMs and Distributors. A small proportion of its sales are direct to the customer. Discounts are offered and agreed as part of the contractual terms. Terms are generally Ex Works so control passes when the customer collects the goods. Payment terms are generally 30 days from the date of invoice.

Sales of consumables and spare parts

The Company sells consumables and spare parts mainly through OEMs and Distributors. Terms are generally Ex Works so control passes when the customer collects the goods. Discounts are offered and agreed as part of the contractual terms. Payment terms are generally 30 days from the date of invoice.

1. Accounting policies (continued)

Service and support income

Service and support to our OEMs and Distributors includes training their sales and service teams and servicing the products from time to time. Discounts are offered and agreed as part of the contractual terms. Terms are Ex Works so control passes when the customer receives the service. Payment terms are generally 30 days from the date of invoice.

Generally, there is no obligation on the Company for returns, refunds or similar arrangements. Also, the Company does not manufacture specific items to a customer's specification and no financing component is included in the terms with customers.

The Company provides assurance warranties which are 15 months from the date of shipment for OEMs and Distributors. These warranties confirm that the product complies with agreed-upon specifications. The Company is looking to provide service warranties in the future to direct Europe customers, where the revenue from such warranties will be recognised over the period of the service agreement.

Other operating income

Other operating income includes grant income, insurance income arising from a claim and income from development contracts. The Company's management assesses the contracts at each balance sheet date, including the costs to completion, which are subject to estimation uncertainty. Grant income is recognised when there is reasonable assurance that the grant will be received, and the Company will comply with any attached conditions. Grants are recognised in the profit or loss in line with the expenditure they are intended to compensate and are shown gross of the underlying expense. The Company received CJRS grants during the year, which has been recognised in line with the corresponding payroll expenditure. There are no unfulfilled conditions attached to the grant that the Company is aware of.

Segmental reporting

The Company currently has one business segment, being the research, development and commercialisation of scientific instruments. This is undertaken wholly within the United Kingdom. Revenue by geographical market is analysed in note 5.

Intangible assets

Trademarks and patents are stated at historic cost of registration less accumulated amortisation and any accumulated impairment losses. Amortisation is charged to operating expenses and calculated to write off the cost in equal annual instalments over five years, which is a prudent estimate of their useful economic lives.

Certain software is stated at historic cost less accumulated amortisation and any accumulated impairment losses. Amortisation is charged to operating expenses and calculated to write off the cost in equal annual instalments over three years, which is considered to be a prudent estimate of its useful economic life.

Property, plant and equipment

Items of property, plant and equipment are stated at cost of acquisition or production costs less accumulated depreciation and impairment losses. Depreciation is charged to the statement of comprehensive income on a straight-line basis to write-off the carrying value of each asset to residual value over its estimated useful economic life as follows:

Plant and equipment	- 33.3% on a straight line basis
Fixtures and fittings	- 33.3% on a straight line basis
Software	- 33.3% on a straight line basis

1. Accounting policies (continued)

Pensions

The Company has an auto-enrolment pension scheme for employees. Contributions are charged to the statement of comprehensive income in the period they are payable.

Inventories

Inventories are stated at the lower of cost and net realisable value. Cost is based on the first-in first-out principle and includes expenditure incurred in acquiring the inventories and bringing them to their present location and condition. The cost of finished goods and work in progress comprises raw materials, direct labour and other direct costs. Net realisable value is the estimated selling price in the ordinary course of business less applicable selling expenses. The inventory provision is based on identifying slow moving stock items from recent historic and anticipated future sales and providing where appropriate for those items which may be surplus to anticipated or identifiable demand.

Provisions

Provisions are established where the Directors have identified an obligation which is probable and where the amount can be estimated reliably.

Taxation

Current taxes are based on the results of the Company and are calculated according to local tax rules using the tax rates that have been enacted by the balance sheet date.

The Company recognises research and development tax credits receivable in cash as a current asset under the heading corporation tax receivable. Any difference to amounts received are dealt with as adjustments to prior period tax.

Deferred tax is provided in full using the balance sheet liability method for all taxable temporary differences arising between the tax bases of assets and liabilities and their carrying values for financial reporting purposes. Deferred tax is measured using currently enacted or substantially enacted tax rates. Deferred tax assets are recognised to the extent the temporary difference will reverse in the foreseeable future and that it is probable that future taxable profit will be available against which the asset can be utilised.

Foreign currency translation

Monetary assets and liabilities denominated in foreign currencies are translated into sterling at the rates of exchange ruling at the balance sheet date. Transactions in foreign currencies are recorded at the rate ruling at the date of transaction, or forward contract rate, if applicable. All differences are taken to the statement of comprehensive income.

Financial instruments

Financial assets and financial liabilities are recognised in the Company's statement of financial position when the Company becomes a party to the contractual provisions of the instrument. Examples of the Company's financial instruments include:

Cash and cash equivalents

The fair value of cash and cash equivalents is considered to be their carrying amount due to their short-term maturity.

Trade receivables

The Company's trade receivables do not carry a significant financing element as defined by IFRS 15. Therefore, trade receivables are recorded at transaction price (e.g., invoice amount excluding costs collected on behalf of third parties) and throughout the life of the receivable at an amount equal to lifetime

1. Accounting policies (continued)

expected credit losses (“ECL”). The Company has applied a simplified “provision matrix” for calculating expected credit losses as a practical expedient. The percentage ranges are applied to the receivable balance.

Current	1-30 days past due	31-60 days past due	61-90 days past due	91-120 days past due	121-150 days past due	151-180 days past due	181 days + past due
0%-1%	1%-2%	1%-2%	1%-2%	2%-5%	5%-10%	10%-20%	10%-50%

Other points:

- The Company determines whether trade receivables are impaired through regular meetings between finance and business development.
- The credit situation of new customers is reviewed before the first shipment. If possible, a credit report is obtained. If there is any concern over the credit worthiness of the customer, the Company may ask the customer to pay an amount in advance or enter into a confirmed letter of credit (Non-UK/Europe) etc.
- Trade receivables are considered low risk at initial recognition but this changes if they have an overdue invoice(s). Depending on the value of the shipment, the customer may be placed on hold until the overdue amount is paid. Discussions as to why an invoice is overdue are held promptly between finance and business development and the customer.
- The provision is monitored at customer level by business development and finance.
- If the Company is having ongoing dialogue with the customer regarding their overdue balance the debt will not be written off. It may be that a payment plan can be agreed or more time is given to the customer to sell the product. If the customer is not actively engaging with the Company legal action may be taken.
- Forward looking information from business development is taken into account when preparing the provision matrix including geographical risk, changes in customer circumstances and macro-economic factors.

Under IFRS 9 impairment for receivables including trade receivables is assessed using an expected loss model. For trade receivables this focuses on the risk that, and an extent to which, a receivable will default. Accordingly, the Company calculates the allowance for credit losses by considering the cash shortfalls it would incur in various default scenarios and multiplying the shortfalls by the probability of each scenario occurring. The Company only has short-term receivables and has adopted a “simplified approach” in assessing impairment.

The Company has applied a simplified “provision matrix” for calculating expected losses as a practical expedient (e.g., for trade receivables), as the Directors believe that this is consistent with the general principles for measuring expected losses. The provision matrix is based on an entity’s historical default rates over the expected life of the trade receivables and is adjusted for forward-looking estimates.

In preparing the provision matrix the Company looks at the geographic base of its trade receivables and whether they are existing or new customers. Finally, management considered forward looking information that may affect the default rates applied in the matrix.

Financial liability and equity

Financial liabilities and equity instruments are classified according to the substance of the contractual arrangements entered into. An equity instrument is any contract that evidences a residual interest in the assets of the Company after deducting all its liabilities.

1. Accounting policies (continued)

Bank borrowings

The Company had no bank borrowings at 31 December 2021 and 2020.

Trade payables

Trade payables are not interest bearing and are stated at their nominal value.

Equity instruments

Equity instruments issued by the Company are recorded at the value of the proceeds received net of direct issue costs including the fair value of any warrants issued in lieu of issue costs. The Company has no derivative financial assets or investments in equity instruments.

Leases

For all leases, the Company recognises a right of use asset and corresponding lease liability on the balance sheet, which are depreciated and amortised respectively over the lease term. However, where leases are low value or of less than 12 months old, the Company has taken advantage of the practical expedient allowing the expense to be recognised on a straight line basis over the lease term.

Research and development

Expenditure on research is recognised as an expense in the period in which it is incurred.

Development costs incurred on specific projects are capitalised when all the following conditions are satisfied:

- Completion of the intangible asset is technically feasible so that it will be available for use or sale;
- The Company intends to complete the intangible asset and use or sell it;
- The Company has the ability to use or sell the intangible asset;
- The intangible asset will generate probable future economic benefits. Among other things, this requires that there is a market for the output from the intangible asset or for the intangible asset itself, or, if it is to be used internally, the asset will be used in generating such benefits;
- There are adequate technical, financial and other resources to complete the development and to use or sell the intangible asset; and
- The expenditure attributable to the intangible asset during its development can be measured reliably.

Costs incurred which do not meet all of the above criteria are expensed as incurred. No development costs have been capitalised to date.

Share-based payments

In accordance with IFRS 2 "Share-based payments", the Company reflects the economic cost of awarding shares and share options to Directors, employees and advisors by recording an expense in the statement of comprehensive income equal to the fair value of the benefit awarded; fair value being determined by reference to option pricing models. The expense is recognised in the statement of comprehensive income over the vesting period of the award.

The fair value of warrants issued to advisors as remuneration for their services in a fundraising will be charged to share premium over the vesting period of the award.

2. Adoption of new and revised standards

During the financial year, the Company has adopted the following new IFRSs (including amendments thereto) and IFRIC interpretations, that became effective for the first time.

Standard	Effective date, annual period beginning on or after
Interest Rate Benchmark Reform – Phase 2 (Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16)	1 January 2021
Covid 19-Related Rent Concessions (Amendment to IFRS 16 <i>Leases</i>)	1 April 2021

Their adoption has not had any material impact on the disclosures or amounts reported in the financial statements.

Standards issued but not yet effective

At the date of authorisation of these financial statements, the following standards and interpretations relevant to the Company and which have not been applied in these financial statements, were in issue but were not yet effective. In some cases, these standards and guidance have not been endorsed for use in the UK and will not be adopted until such time as endorsement is confirmed.

Standard	Effective date, annual period beginning on or after
Reference to the Conceptual Framework (Amendments to IFRS 3 <i>Business Combinations</i>)	1 January 2022
Property, Plant and Equipment: Proceeds before Intended Use (Amendments to IAS 16)	1 January 2022
Onerous Contracts – Cost of Fulfilling a Contract (Amendments to IAS 37 <i>Provisions, Contingent Liabilities and Contingent Assets</i>)	1 January 2022
Annual improvements 2018-2020 cycle	1 January 2022
IFRS 17 – <i>Insurance Contracts</i>	1 January 2023
Amendments to IFRS 17 – <i>Insurance Contracts</i> ; and Extension of the Temporary Exemption from Applying IFRS 9 (Amendments to IFRS 4 <i>Insurance Contracts</i>)	1 January 2023
Disclosure of Accounting Policies (Amendments to IAS 1 <i>Presentation of Financial Statements</i> and IFRS Practice Statement 2 <i>Making Materiality Judgements</i>)	1 January 2023
Definition of Accounting Estimates (Amendments to IAS 8 <i>Accounting Policies, Changes in Accounting Estimates and Errors</i>)	1 January 2023
Deferred Tax related to Assets and Liabilities arising from a Single Transaction (Amendments to IAS 12 <i>Income Taxes</i>)	1 January 2023
Classification of Liabilities as Current or Non-Current: <i>amendments to IAS 1</i>	1 January 2024 ¹

¹ In November 2021 it was proposed that the amendment be deferred until not earlier than 1 January 2024.

The Directors are evaluating the impact that these standards will have on the financial statements of Company, but at this stage the impact is not expected to be material.

3. Going concern

The Company is loss making and has raised funds in the past by issuing equity in discrete tranches. The most recent fundraising was completed on 5 February 2021 where the Company raised £5.2 million after expenses from new and existing shareholders. As of 31 December 2021, the Company had £3.5 million in cash and bank balances.

During 2022, the Company has introduced new services taking advantage of its depth of expertise in mass spectrometry, analytical techniques and related technologies to serve existing and new markets alongside its historic product and service offerings. Accordingly, the cash and financial projections of the business incorporate this expansion of revenue sources and the Directors have reviewed them under various scenarios to assess the sensitivity of the Company's going concern position.

With the recent advent of new service revenue streams, the plans and prospects for the business are modest in projecting new revenue and do not yet forecast break even. The key sensitivities considered include changes to the projected sales of the various product or service lines and corresponding adjustments to costs which could be delayed, reduced or not incurred at all if the related projected sales were not to materialise. Accordingly, the Company monitors actual versus expected performance and retains a contingency plan, if required, to preserve cash and bank balances.

Having taken this careful approach, the Board believes that the Company has enough cash to cover its anticipated working capital requirements for at least the next 12 months from the date of signing of the Annual Report and Accounts. On this basis, the Directors have concluded that it is appropriate to prepare the financial statements on a going concern basis.

4. Critical accounting estimates and judgements

Accounting estimates and judgements are continually evaluated and are based on past experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

The Company makes estimates and assumptions concerning the future. The resulting accounting estimates could, by definition, differ from the actual outcome.

The estimates and assumptions that have a risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are summarised below:

Share-based payments

The calculation of the share-based payment expense utilises assumptions and estimates (for example volatility, future exercise rates etc) which may differ from actual results. Details of the assumptions are set out in note 25. The Company uses the Black Scholes Option pricing model to determine a theoretical option call price. If there are market related conditions (e.g., realising certain share price targets before vesting) then the Company uses external advisers to apply more advanced modelling techniques. In terms of inputs volatility is the most difficult input to estimate and is probably the key input where management has had to use its discretion.

Carrying value of inventories

It is the intention of the directors that the Company will move away from the sale of goods as its primary revenue stream, instead developing new lines of service revenue. As such, there is a risk that the inventory holding may not recover its full carrying value.

The directors believe that all inventories held at 31 December 2021 will ultimately be sold above their purchase price. However, in light of the uncertainty in these forecasts, and the potential for stock turnover

4. Critical accounting estimates and judgements (continued)

days to significantly increase, a provision of £90,139 has been made for stock obsolescence. There is significant uncertainty in this estimate, but the directors believe it is an appropriate estimate for potential future write off of inventories.

The detailed breakdown of inventories can be seen in note 14.

These assumptions are reviewed at each balance sheet date and amended if required.

5. Revenue

Throughout 2021, the Company operated in one business segment, that of research, development and commercialisation of mass spectrometry instruments. Products are sold ex-works: The attribution of revenue is based on the country or group of countries to where the goods are shipped. In 2021 our largest customers had the following revenues as a percentage of total revenues:

Customer number 1 – 42.5 per cent.

Customer number 2 – 10.6 per cent.

Customer number 3 – 9.0 per cent.

Customer number 4 – 8.5 per cent.

The geographical analysis of revenue (by shipment destination) was as follows:

	Year to 31 December 2021 £	Year to 31 December 2020 £
UK	532,364	2,225
USA	187,673	41,346
China	106,076	126
EU	71,887	57,280
ROW	4,214	5,128
South Korea	3,662	83,397
Japan	1,000	8,756
	906,876	198,258

6. Other operating income

	Year to 31 December 2021 £	Year to 31 December 2020 £
Coronavirus Job Retention Scheme Grant	20,829	96,626
Co-development income	26,204	-
Insurance claims	20,250	-
	67,283	96,626

7. Expenses by nature

	Year to 31 December 2021	Year to 31 December 2020
	£	£
Loss from operations after share-based payments is stated after charging/(crediting):		
Amortisation of intangible assets	38,241	40,767
Depreciation of right of use assets	70,499	87,237
Expected credit losses	(46,746)	64,281
Movement in inventory provision	32,535	17,650
Inventory items expensed	2,249	(3,318)
Staff benefit expense	2,807,699	1,466,342
Depreciation of property, plant and equipment	90,628	80,034
Provision for warranty	(24,075)	(12,713)
Material costs including R&D	50,293	58,071
Professional fees (including audit fees detailed below)	161,791	182,069
Pension costs	173,051	153,476
Exchange loss/(gain)	1,216	2,897
Directors' emoluments (before pensions and share based payments)	266,799	292,140
	Year to 31 December 2021	Year to 31 December 2020
	£	£
Services provided by the Company's auditors		
Fees payable to the Company's auditors for the audit of the financial statements	22,150	20,750
Fees payable to the Company's auditors for other services		
- Audit related services	1,575	2,070
	23,725	22,820

8. Finance income and Finance cost

	Year to 31 December 2021	Year to 31 December 2020
	£	£
Bank interest receivable	6,237	4,393
Interest cost under IFRS 16	(4,433)	(9,041)
Other interest	(171)	(1,734)
	(4,604)	(10,775)

9. Tax on loss on ordinary activities

	Year to 31 December 2021 £	Year to 31 December 2020 £
Domestic current period tax		
UK corporation tax receivable	(267,785)	(218,568)
Adjustment for prior periods	-	857
Current tax credit	(267,785)	(217,711)
Tax on loss on ordinary activities	(267,785)	(217,711)
Factors affecting the current tax credit for the period:		
	Year to 31 December 2021 £	Year to 31 December 2020 £
Loss before tax	(3,396,366)	(2,590,369)
Loss before tax multiplied by standard rate of UK corporation tax of 19% (2020: 19%)	(645,310)	(492,170)
Effects of:		
Non-deductible expenses	251,679	6,774
Depreciation	17,219	15,206
Capital allowances	(54,317)	(13,363)
Profit on disposal of property, plant and equipment	(2,130)	(16)
Research and development expenditure	(116,399)	(94,045)
RDEC	484	-
Tax losses carried forward	279,259	359,046
Previous period research and development adjustment	-	857
Chargeable gain	1,730	-
Current tax credit	(267,785)	(217,711)

The Company has estimated tax losses of £25,056,703 (2020: £23,587,006) available for carry forward against future trading profits. Deferred tax is detailed in note 17.

10. Basic and diluted loss per ordinary share

	Year to 31 December 2021	Year to 31 December 2020
Loss after tax attributable to equity shareholders £	(3,128,581)	(2,372,658)
Weighted average number of ordinary 0.25p shares for the purpose of basic and diluted loss per share	-	456,365,146
Weighted average number of ordinary 0.01p shares for the purpose of basic and diluted loss per share	5,537,461,036	-
Basic and diluted loss per ordinary share	(0.056)p	(0.52)p

The basic loss per share reduced by 89 per cent. from 0.52p per share to 0.056p per share. Whilst there was an increase in the loss after tax to equity shareholders this was more than offset by the share reorganisation and issue of equity as set out in Note 18. Potential ordinary shares are not treated as dilutive as the Company is loss making, therefore the weighted average number of ordinary shares for the purposes of the basic and diluted loss per share are the same.

11. Intangible assets

Intangible assets comprise patents, trademarks and software owned by the Company. The cost is amortised on a straight-line basis over their estimated useful life.

Year ended 31 December 2021:	£
Cost	
At 1 January 2021	592,296
Additions	28,883
At 31 December 2021	621,179
Amortisation	
At 1 January 2021	508,533
Charge for the year	38,241
At 31 December 2021	546,774
Net book value	
At 31 December 2021	74,405
Year ended 31 December 2020	£
Cost	
At 1 January 2020	564,977
Additions	27,319
At 31 December 2020	592,296
Amortisation	
At 1 January 2020	467,766
Charge for the year	40,767
At 31 December 2020	508,533
Net book value	
At 31 December 2020	83,763

12. Property, plant and equipment

Year ended 31 December 2021:

	Plant and equipment £	Fixtures and fittings £	Total £
Cost			
At 1 January 2021	850,596	178,307	1,028,903
Additions	305,334	-	305,334
Disposals	(64,246)	-	(64,246)
Transfers	(25,270)	-	(25,270)
At 31 December 2021	1,066,414	178,307	1,244,721
Depreciation			
At 1 January 2021	736,472	178,286	914,758
Charge for the year	90,607	21	90,628
Disposals	(64,246)	-	(64,246)
Transfers	(2,106)	-	(2,106)
At 31 December 2021	760,727	178,307	939,034
Net book value			
At 31 December 2021	305,687	-	305,687

Year ended 31 December 2020:

	Plant and equipment £	Fixtures and fittings £	Total £
Cost			
At 1 January 2020	787,487	185,038	972,525
Additions	69,452	-	69,452
Disposals	(6,343)	(6,731)	(13,074)
At 31 December 2020	850,596	178,307	1,028,903
Depreciation			
At 1 January 2020	663,015	184,783	847,798
Charge for the year	79,802	232	80,034
Disposals	(6,345)	(6,729)	(13,074)
At 31 December 2020	736,472	178,286	914,758
Net book value			
At 31 December 2020	114,124	21	114,145

Transfers from plant and equipment were moved to stock and then sold to a customer.

13. Lease reporting

IFRS 16 was effective for annual reporting periods on or after 1 January 2019 and removes the distinction between finance and operating leases for lessees. For lessees, all leases are now recorded on the balance sheet as liabilities, at the present value of the future lease payments, along with an asset reflecting the right of use of the asset over the lease term. This information aims to provide users of financial statements with the basis to assess the effect leases have on the financial position, financial performance and cash flows of an entity.

Right of use lease assets

	Property £	Equipment £	Total £
Cost			
At 1 January 2021	179,763	8,441	188,204
Additions	138,933	9,961	148,894
Disposals	-	(8,441)	(8,441)
At 31 December 2021	318,696	9,961	328,657
Depreciation			
At 1 January 2021	133,816	4,984	138,800
Charge for the year	67,643	2,856	70,499
Disposals	-	(7,175)	(7,175)
At 31 December 2021	201,459	665	202,124
Carrying amount			
At 31 December 2021	117,237	9,296	126,533

Lease liability	Property £	Equipment £	Total £
At 1 January 2021	49,831	3,636	53,467
Repayment of lease liabilities	(74,997)	(3,073)	(78,070)
Additions	138,933	9,961	148,894
Interest on lease liabilities	4,326	107	4,433
Disposals	-	(1,379)	(1,379)
At 31 December 2021	118,093	9,252	127,345

Lease liability maturity analysis

	2021		2020	
	Property £	Equipment £	Property £	Equipment £
Gross lease payments due:				
Within one year	75,000	3,279	51,577	2,637
Between two and five years	51,666	6,609	-	1,111
	126,666	9,888	51,577	3,748
Less future financing charges	(8,573)	(636)	(1,746)	(112)
	118,093	9,252	49,831	3,636

14. Inventories

	Year to 31 December 2021 £	Year to 31 December 2020 £
Raw materials	177,212	262,506
Finished goods	196,829	364,687
Subtotal	374,041	627,193
Provision for inventories	(90,139)	(57,604)
Total	283,902	569,589

Inventories are lower in 2021 following a significantly higher level of sales during the year and production challenges due to a global shortage of components. The provision increased in 2021, mainly due to a small number of units of finished goods.

15. Trade and other receivables

	Year to 31 December 2021 £	Year to 31 December 2020 £
Amounts falling due within one year		
Trade receivables	327,061	108,529
Provision for expected credit losses	(2,762)	(68,587)
Other receivables	307,649	123,385
Other taxes and social security	-	10,544
	631,948	173,871
	Year to 31 December 2021 £	Year to 31 December 2020 £
Not past due	299,160	37,849
1 to 30 days past due	901	2,506
270 days past due	27,000	68,174
	327,061	108,529

15. Trade and other receivables (continued)

	Year to 31 December 2021	Year to 31 December 2020
	£	£
Provision for expected credit losses on trade receivables:		
Balance brought forward	(68,587)	(4,306)
Written back to P&L during the year	68,587	4,306
Provided during the year	(2,762)	(68,587)
Balance carried forward	(2,762)	(68,587)

The provision for expected credit losses is entirely in respect of not past due invoices. For trade receivables the loss allowance is mandatorily measured at an amount equal to the lifetime expected credit losses.

16. Trade and other payables

	Year to 31 December 2021	Year to 31 December 2020
	£	£
Amounts falling due within one year		
Trade payables	230,494	63,034
Other taxes and social security	43,514	29,174
Other payables	30,979	11,278
Accruals and deferred income	49,624	82,441
	354,611	185,927

17. Provisions

	Dilapidations £	Warranties £	TOTAL £
Balance at 1 January 2021	75,779	48,256	124,035
Provided for/(reduced) during the year	-	(24,075)	(24,075)
Balance at 31 December 2021	75,779	24,181	99,960

The provision for anticipated dilapidations is in respect of the Company's leasehold premises at Woking. The amount carried forward of £75,779 is based on the potential future cost which could be incurred at the end of the lease.

The Company provides OEMs and distributors with a 15-month warranty on MS products. The provision represents the anticipated cost of servicing those warranty claims. The provision is based on historical costs including product, replacement parts and the cost-of-service engineers that may have to be incurred over the warranty period. The provision for warranty at the end of the year is £24,181. There were no significant claims during the year.

18. Deferred tax

Deferred taxation provided in the financial statements:			£
Balance at 1 January and 31 December 2021			-
	Year to 31 December 2021	Year to 31 December 2020	
	£	£	
Accelerated capital allowances	61,741	21,688	
Tax losses carried forward	(61,741)	(21,688)	
	-	-	

A deferred tax asset in respect of tax losses has only been recognised to the extent of the deferred tax liability in respect of accelerated capital allowances at a tax rate of 25 per cent. (2020: 19 per cent.). The Company has estimated tax losses of £25,056,703 (2020: £23,587,006) available for carry forward against future trading profits. The deferred tax asset that would arise on these losses if it were recognised at 25% is £6,264,176 (2020: £4,481,531 based on 19%).

19. Share capital

The total share capital of the Company comprises Ordinary and Deferred shares as follows:

	2021	2021	2020	2020
Allotted, called up and fully paid:	Number	£	Number	£
Ordinary shares of 0.25p each	-	-	456,365,146	1,140,913
Ordinary shares of 0.01p each	6,076,365,146	607,637	-	-
Deferred shares of 0.24p each	456,365,146	1,095,276	-	-
As at 31 December	6,532,730,292	1,702,913	456,365,146	1,140,913

The Ordinary share capital of the Company comprises:

	2021	2021	2020	2020
Allotted, called up and fully paid:	Number	£	Number	£
Ordinary shares of 0.25p each as at 1 January	456,365,146	1,140,913	456,365,146	1,140,913
Effect of share split and deferment	-	(1,095,276)	-	-
Issue of ordinary share capital of 0.01p each	5,620,000,000	562,000	-	-
As at 31 December	6,076,365,146	607,637	456,365,146	1,140,913

On 4 February 2021 the Company undertook a share reorganisation and split each ordinary share of 0.25p each into one (1) ordinary share of 0.01p each and twenty-four (24) deferred shares of 0.01p each followed by the immediate consolidation of every twenty-four (24) deferred shares of 0.01 pence each into one (1) deferred share of 0.24 pence.

19. Share capital (continued)

Each ordinary share of 0.01p each carries the same rights as the ordinary shares of 0.25p each did before the share reorganisation. That is, each ordinary share has the right to one vote and is entitled to participate in any distribution made by the Company including the right to receive a dividend, and on a winding up of the Company. The ordinary shares are not redeemable or liable to be redeemed at the option of the Company or the shareholder.

Each deferred share of 0.24p has no right to receive notice of, or attend or vote at, any general meeting of the Company, no right to participate in the profits of the Company whether by dividend, other distribution, return of capital (whether or not upon a winding up) or otherwise, save that, upon a return of capital upon a winding up, the holders of deferred shares shall be entitled to the return of the nominal value of each deferred share held after £10,000,000 has been returned on each ordinary share, nor are the deferred shares redeemable or liable to be redeemed at the option of the Company or the shareholder.

In addition, the Company issued 5,620,000,000 ordinary shares of 0.01p each as follows:

- 5,000,000,000 ordinary shares of 0.01p each to raise £5.0 million before expenses at the placing price of 0.1 pence per new ordinary share;
- 500,000,000 ordinary shares of 0.01p each to raise £500,000 to the Company's Broker Turner Pope at the Placing Price of 0.1 pence per new ordinary share to meet additional demand for the shares;
- 35,000,000 ordinary shares of 0.01p each at the placing price of 0.1 pence per new ordinary share in respect of the first year of fees due to Turner Pope for the provision of its broking services to the Company; and
- 85,000,000 ordinary shares of 0.01p each at the placing price of 0.1 pence per new ordinary share in settlement of the Non-executive Directors' first year's fees in respect of Gerard Brandon (50,000,000 shares) and Dr Nigel Burton (35,000,000 shares).

The Deferred share capital of the Company comprises:

	2021	2021	2020	2020
Allotted, called up and fully paid:	Number	£	Number	£
Deferred shares of 0.24p each as at 1 January	-	-	-	-
Effect of share split on 4 February 2021 to deferred shares of 0.24p each	456,365,146	1,095,276	-	-
As at 31 December	456,365,146	1,095,276	-	-

20. Reserves

The share premium account represents the excess over the nominal value for shares allotted less issue costs. The share option reserve represents accumulated charges made under IFRS 2 in respect of share-based payments. Where share options that have vested expire, lapse or are exercised, the amounts within the share-based payments reserve relating to those options are transferred to retained earnings as shown in the Statement of Changes in Equity.

21. Share premium

	Year to 31 December 2021	Year to 31 December 2020
	£	£
Opening balance brought forward	24,867,886	24,867,886
Share issue in the year	5,058,000	-
Share issue costs – Cash	(416,860)	-
Share issue costs – Broker Warrants	(1,503,008)	-
Closing balance carried forward	28,006,018	24,867,886

The fundraising on 5 February 2021 raised a total of £5.5 million (before expenses) at a placing price of 0.1p per share. The placing raised £5.0 million and the broker warrant £0.5 million, before expenses. The share premium on the fundraising was the placing price of 0.1p per share less the nominal value of 0.01p per share multiplied by the number of shares issued. The cash costs amounted to £416,860 including broker commissions and fees, legal fees etc. In addition, 997,000,000 broker warrants were issued to Turner Pope Investments (TPI) Ltd at a fair value of £1,503,008.

At the same time as the fundraising on 5 February 2021, 120,000,000 ordinary shares of 0.01p were issued in lieu of fees in respect of the first year of fees due to Turner Pope Investments (TPI) for the provision of its broking services to the Company and of the first year of fees for the Non-executive Directors.

Further details of the share issues are set out in note 18.

22. Commitments

	Year to 31 December 2021	Year to 31 December 2020
	£	£
Contracted for but not provided in the financial statements	781,990	426,595

The commitment above relates to purchase orders placed on, and related contractual arrangements and obligations, with our third-party manufacturers.

23. Directors' emoluments

	Year to 31 December 2021	Year to 31 December 2020
	£	£
Salaries and fees	264,797	291,086
Non-cash payments	2,002	1,054
Pension costs	27,325	23,429
Employment related share-based payments	1,071,773	51,753
	1,365,897	367,322

23. Directors' emoluments (continued)

In the year to 31 December 2021 the two Executive Directors that served during the year accrued benefits under the Company's auto-enrolment pension scheme. The employment related share-based payments comprise the charges arising from the grant of options on 5 February 2021 plus non-executive directors fees settled by the issue of 85,000,000 ordinary shares of 0.01p each for a full year in advance, reduced by the credits to the income and expenditure statement in relation to unvested charges in respect of the cancellation of share options granted in prior years.

There are no key management personnel other than the Directors. The highest paid Director, Mr Glenn Tracey, received emoluments of £323,445 as disclosed in the Directors' Remuneration Report, which included a share-based payment charge of £182,255.

There were no gains on the exercise of share options in the year.

24. Employees

	Year to 31 December 2021 Number	Year to 31 December 2020 Number
Directors	4	5
Other staff	18	21
Average Headcount	22	26

	Year to 31 December 2021 £	Year to 31 December 2020 £
Employment costs (including Directors)		
Wages and salaries	1,123,276	1,081,201
Social security costs	160,902	121,141
Termination payments	18,189	58,283
Pension costs	173,051	153,476
Employment related share-based payments	1,332,240	52,241
	2,807,699	1,466,342

25. Share-based payments

The share-based payments charge comprises	Year to 31 December 2021	Year to 31 December 2020
	£	£
Directors' fees settled in shares	76,559	-
Share options granted	1,255,681	52,241
Employment related share-based payments	1,332,240	
Brokers' fees settled in shares	31,524	-
	1,363,764	52,241

The Directors' fees settled in shares and Broker's fees settled in shares are both in respect of paying annual fees in advance from 5 February 2021 at the placing price of that date being a valuation of 0.1p per ordinary share of 0.01p nominal value.

Share option schemes

The Company operates an EMI and an unapproved share option scheme as a means of encouraging ownership and aligning interests of staff and shareholders. The table below shows the number of options outstanding and exercisable at 31 December 2021 and the weighted average exercise price.

	Year to 31 December 2021		Year to 31 December 2020	
	Number of options	Weighted average exercise price	Number of options	Weighted average exercise price
Outstanding at the beginning of the year	17,475,000	5.1p	18,644,000	5.2p
Granted during the year	1,125,000,000	0.1p	-	-
Forfeited/expired during the year	(17,475,000)	(5.1p)	(1,169,000)	6.0p
Exercised during the year	-	-	-	-
Outstanding at 31 December	1,125,000,000	0.1p	17,475,000	5.1p
Exercisable at 31 December	750,000,000	0.1p	4,375,000	9.8p

Staff and Directors agreed to cancel existing options prior to the award of new options as these options were all out-of-the-money. Existing options held by Directors and staff amounting to 13,110,000 were cancelled on 4 February 2021. A further 3,500,000 options held by Peter Grant were cancelled on 5 February 2021, and 865,000 options related to previous leavers.

Options and warrants over 1,125 million ordinary shares were awarded to Directors, staff and a consultant on 5 February 2021 (2020: nil), at the time of the fundraising. The new options granted are exercisable at the placing price of 0.1p for five years from the 5 February 2021.

The 750 million options and warrants granted to Directors and a consultant vested during the year, as the performance criterion that the Company's ordinary shares traded at a Volume Weighted Average Price at or above a 50 per cent. premium to the placing price for 20 consecutive business days, was achieved. The share-based payment charge is estimated at £1,125,281 and has been recognised in full in 2021.

25. Share-based payments (continued)

The 375 million options granted to staff have no performance conditions associated with them but there is a two-year holding period before the options can vest. The share-based payment charge is estimated at £577,826 vesting over two years from the date of grant.

Details of options in issue at the year-end are:

Date of grant	Exercise price	Latest exercise date	Estimated fair value	Number of options 31 December 2021	Number of options 31 December 2020
July 2012	42.00p	July 2022	12.1p	-	190,000
May 2014	46.80p	May 2024	11.4p	-	90,000
November 2014	49.50p	November 2024	11.9p	-	100,000
April 2015	47.75p	May 2025	10.5p	-	100,000
January 2016	23.50p	January 2026	11.7p	-	395,000
September 2016	5.00p	September 2026	2.0p	-	2,000,000
September 2016	5.00p	September 2026	0.6p	-	2,000,000
January 2018	4.05p	January 2028	1.3p	-	2,100,000
January 2018	4.05p	January 2028	2.2p	-	5,500,000
June 2019	1.55p	June 2029	0.7p	-	5,000,000
February 2021	0.1p	February 2026	0.150p	750,000,000	-
February 2021	0.1p	February 2026	0.153p	375,000,000	-
				1,125,000,000	17,475,000

The weighted average share price at the date of grant for share options granted in the year was 0.25 pence. The options outstanding at 31 December 2021 were all granted at an exercise price of 0.1p with an exercise period of five years from the date of grant and a remaining contractual life of 4 years and 1 month.

The fair value of the 375 million options granted to staff on 5 February 2021 was estimated at 0.153p per share and for the 750 million options granted to Directors was estimated at 0.150p per share on the measurement date.

The estimated fair values of the share options were calculated by applying the Black Scholes or Monte Carlo models in all cases except for the 750 million options granted to Directors. In respect of the 750 million options granted to the Directors, a binomial model was used since the options were significantly in the money at the grant date and there was a very high probability of achieving the share price hurdle condition.

The period of exercise for all options granted up to 31 December 2020 is ten years from the date of grant and the vesting period is normally three years from the date of grant. Prior to 2016 the expected volatility had been determined by calculating the historical volatility of the share price over the previous year. From September 2016, and consistent with the application guidance in IFRS 2, the Directors considered the most appropriate method to calculating volatility to be the use of the historical volatility of comparable listed companies. The model inputs are detailed below.

25. Share-based payments (continued)

The model inputs using Black Scholes were:

Date of grant	Exercise price	Share price	Risk free rate	Expected volatility	Gross dividend yield
July 2012	42.00p	42.00p	0.50%	33%	-
May 2014	46.80p	46.80p	2.69%	16%	-
November 2014	49.50p	49.50p	2.05%	18%	-
April 2015	47.75p	47.75p	1.58%	17%	-
January 2016	23.50p	23.50p	1.74%	38%	-
September 2016	5.00p	5.12p	0.87%	30%	-
January 2018 (staff)	4.05p	4.29p	0.79%	31%	-
January 2018 (directors)	4.05p	4.29p	1.29%	39%	-
June 2019	1.55p	1.55p	0.87%	34%	-
February 2021	0.10p	0.25p	0.03%	29%	-

The expected volatility for the February 2021 grant is based on the 5-year volatility of comparable companies.

Total expenses of £1,332,280 related to equity settled share-based payment transactions were recognised in the Statement of Comprehensive Income the year (2020: £52,241) comprising charges in respect of new options granted totalling £1,385,700 (2020: £52,241) plus directors' fees settled in shares totalling £76,599 less credits in respect of cancelled options that had not vested totalling £130,019 (£nil).

In respect of cancelled options that had vested, £194,246 (2020: £140,516 comprising £10,819 in respect of cancelled staff options and £129,697 in respect of lapsed warrants per note 26) was transferred from share-based payment reserve to the retained losses reserve.

26. Warrants

Broker warrants to subscribe for up to 997,000,000 ordinary shares, which represented 20 per cent of the placing shares, were granted to Turner Pope Investments (TPI) Ltd as part of the fundraising on 5 February 2021. The broker warrants are capable of exercise for a period of two years from 5 February 2021. The fair market value of the warrants charged to share based payment reserved was calculated at £1,503,008 based on the following inputs:

Date of grant	Exercise price	Share price	Risk free rate	Expected volatility	Gross dividend yield
February 2021	0.01p	0.25p	0.03%	33%	-

The expected volatility for the February 2021 grant is based on the 2-year volatility of comparable companies.

27. Financial instruments

The Company's financial instruments comprise cash and various trade receivables and trade payables that arise directly from its operations. No trading in financial instruments is undertaken. The main risks arising from the Company's financial instruments are liquidity, currency and interest rate. The Board oversees the management of these risks, which are summarised below.

27. Financial instruments (continued)

Liquidity risk

The Company finances its operations from equity funding provided by shareholders and revenues generated by the business. The Company seeks to manage liquidity risk to ensure enough funds are available to meet working capital requirements. The Company successfully raised £5.5 million before expenses through the issue of new shares in February 2021.

The Company invests its cash reserves in bank and money market deposits as a liquid resource to fund its operations. The Company's strategy for managing cash is to balance interest income with counterparty risk ensuring the availability of cash to match the profile of the Company's cash flows.

The £5.5 million raised in February 2021 is anticipated by the Board of Directors to take the Company through to profitability. In reviewing the Company as a going concern, as outlined in note 3, management prepared alternative business scenarios where performance falls below management expectation. Contingency plans and mitigating actions have been identified in case actual results differ from the Company's business plans. There can be no guarantee that the commercial objectives of the Company will be achieved.

Interest rate risk

The Company does not face any significant interest rate risk as it has no borrowings. Surplus funds are invested to maintain a balance between accessibility of funds, competitive rates, and counterparty risk while investing funds safely.

Credit risk

The Company manages its credit risk in cash and cash equivalents by spreading surplus funds between creditworthy financial institutions. The Company is also exposed to credit risk attributable to trade and other receivables. The maximum credit risk in respect of the financial assets at each period end is represented by the balance outstanding on trade and other receivables. The Company monitors the credit worthiness of its customers on a regular basis.

Foreign currency risk

The majority of the Company's transactions are denominated in pounds sterling. The Company has no long-term commitments to purchase goods or services in foreign currencies. Purchases denominated in foreign currency are expensed at the exchange rate prevailing at the date of the transaction and represents an immaterial proportion of the Company's total expenditure.

The only assets and liabilities denominated in foreign currencies relate to trade receivables and trade payables with overseas counterparties together with small balances of US dollar and Euro currencies to settle these liabilities. The risks and sums involved are immaterial.

Fair values

The Directors consider that there is no material difference between the book value and the fair value of the financial instruments on 31 December 2021 and 31 December 2020.

Capital management

The Company's capital base comprises equity attributable to shareholders. As the Company's focus has been on establishing itself as a successful supplier of equipment design and engineering services, the primary objective in managing cash spend has been to achieve progress on product development and commercialisation in a cost-efficient manner and in managing liquidity risk to ensure the Company continues as a going concern.

28. Related party transactions

Microsaic and DeepVerge plc (“DeepVerge”) have two directors in common: Gerard Brandon and Nigel Burton. In particular, Gerard Brandon is Chairman of Microsaic and CEO of DeepVerge.

In March 2021, the two companies signed a three-year technology and commercial agreement, via DeepVerge’s subsidiary, Innovenn UK Limited, whereby Microsaic will supply its products and services on a non-exclusive basis across DeepVerge’s global sales, marketing and distribution channels, delivering portable solutions for healthcare diagnostic evaluation and environmental contamination detection of samples. This included an initial order by DeepVerge for three units with a total value of £100,000, plus a commitment of up to £150,000 from DeepVerge for equipment and services to be installed at pilot facilities in DeepVerge's laboratories based in York.

In July 2021, Microsaic processed a further smaller purchase order from DeepVerge under the Agreement, supplying certain additional mass spectrometry equipment for quality and contamination detection in a range of markets including water and soil analysis. The value of this order was approximately £72,000.

In December 2021, Microsaic received a further order from DeepVerge for additional miniaturised MS equipment and services with a total order value of approximately £262k. Of this, £109k was pursuant to the March 2021 agreement. Additionally, £153k of the order includes a number of units of Microsaic's newly developed SPE-LC Systems and related consumables which will be used for quality and contamination detection in a range of markets including water and soil analysis.

The SPE-LC System is expected to be used to detect CECs in water, and will be supplied to DeepVerge to form part of DeepVerge's third generation solution of multiplex pathogen detection and the launch of its Modern Water Mobile Services, which will facilitate auto-sampling at wastewater sites to reduce the time and cost of detection.

In summary for the year ended 31 December 2021, revenue from DeepVerge sales totalled £385,593 and purchases from DeepVerge totalled £210,600. At 31 December 2021, £247,412 was owed by DeepVerge to Microsaic in relation to the December 2021 orders and £65,610 was owed by Microsaic to DeepVerge.

29. Control

As at 31 December 2021, no individual shareholder had a controlling interest in the Company.

30. Events after the Reporting Date

Subsequent to 31 December 2021:

- On 14 February 2022, Dr Nigel Burton, Non-executive Director, exercised warrants relating to 200 million Ordinary Shares, reflecting an investment of £200,000 in Microsaic;
- On 19 April 2022, Microsaic signed a new Manufacturing Services Framework Agreement (“MSFA”) with Innovenn UK Limited, a division of DeepVerge plc (“DeepVerge”), to refine and miniaturise existing monitoring equipment for environmental and human health diagnostics, together with an initial contract worth £400,000. The MSFA framework sets out the terms and conditions for Microsaic to improve and manufacture certain DeepVerge products and to provide the design, assembly, quality, and project management functions necessary to produce and ship equipment based on DeepVerge approved specifications, design, and quality requirements. DeepVerge is a related party and further details regarding the relationship are set out in the Related party transactions note 28.

31. Cash absorbed by operations

	Year to 31 December 2021 £	Year to 31 December 2020 £
Total comprehensive loss for the year	(3,128,581)	(2,372,658)
Adjustments for:		
Amortisation of intangible assets	38,241	40,767
Depreciation of right of use assets	70,499	87,237
Depreciation of property, plant and equipment	90,628	80,034
Transfer of property, plant and equipment to cost of goods	23,164	-
Profit on disposal of right of use assets	(113)	(1,426)
Decrease in provision for warranty	(24,075)	(12,713)
(Decrease)/Increase in provision for expected credit losses	(65,825)	64,281
Share-based payments	1,363,764	52,241
Increase/(Decrease) in inventory provision	32,535	17,650
Tax on loss on ordinary activities	(267,785)	(217,711)
Interest on lease liability	4,433	9,041
Interest received	(6,237)	(4,393)
Movements in working capital		
Decrease /(Increase) in inventories	253,152	(200,998)
(Increase)/Decrease in trade and other receivables	(398,083)	209,838
Increase/(Decrease) in trade and other payables	168,684	(104,636)
Accrued furlough income	17,748	(17,748)
Cash absorbed by operations	(1,827,851)	(2,371,194)