



# **Spectris Teach-In: Particle Measuring Systems**

Tuesday, 4<sup>th</sup> June 2024

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## **Introduction**

Matthew Wootton

*Director, Investor Relations, Spectris*

### **Welcome**

Hello, everyone, and welcome to today's Teach-In on Particle Measuring Systems. I am Matt Wootton, IR Director, and with me today is Andrew Heath, Chief Executive of Spectris, and Andy Cowan, president of Particle Measuring Systems.

Before we begin the presentation, a reminder that if you would like to submit a question about PMS, you can do so by accessing the questions box that sits below the video player.

And with that, I will hand you over to Andrew.

## **Particle Measuring Systems**

Andrew Heath

*Chief Executive Officer, Spectris*

### **Introduction**

Thank you, Matt.

Today is all about providing you with a greater insight into Particle Measuring Systems, a phenomenal business that has achieved double-digit growth over a prolonged period, with continued strong opportunities given the very attractive nature of its end markets and also the strength of its technology and product offering.

### **Spectris Scientific – "making the invisible, visible"**

PMS forms part of Spectris Scientific, representing just over one-fifth of the division. Overall, on a pro forma basis, Scientific had sales of £800 million and attractive margins of over 21% in 2023. In Spectris Scientific, we have brought together three complementary precision instrument businesses – Malvern Panalytical, Particle Measuring Systems and Servomex. Each have leading positions at the premium end of common markets, where their deep domain knowledge is essential and drives high levels of customer-centricity, and where their depth of capability and expertise play a vital role in making the invisible visible for our customers.

Furthermore, as one division of scale, this provides real opportunities to collaborate, sharing best practise in areas like operational effectiveness, including common IT systems and the Spectris Business System (SBS), as well as in research and development. I have to say, I am really excited about the future potential of Spectris Scientific and the contribution it continues to make to the Group.

### **Strategy for Sustainable Growth**

Before Andy takes you through PMS in detail, I just want to take this opportunity to talk about Particle Measuring Systems in the context of our strategy and our business model. As you will hear today, PMS is a great business with strong market positions and market-leading technology developed over the course of over half a century. Its strong track record of growth and significant future potential are derived not only from its exposure to two attractive

structural growth markets with semiconductors and life sciences, but also high levels of customer intimacy underpinned by its strong domain expertise, direct selling model and local support presence.

PMS has delivered exceptionally strong growth over many years and is continuing to invest for growth through high levels of R&D, building on its strong track record of innovation through to new product launches, and it has a very healthy pipeline. Like all our businesses, we are deploying the Spectris Business System and our new ERP model in PMS to deliver operational excellence. Additionally, we are investing and upgrading PMS's capabilities through the move to a brand-new, state-of-the-art facility in 2025. And we look forward to welcome you there once it is operational.

And PMS continues to invest in its people with a focus on engagement and leadership through the Spectris Connect and Ascend leadership programmes, as well as promoting the importance of STEM across the employee life cycle to ensure the organisation attracts and retains the very best talent.

And with that, I will hand you over to Andy, who will tell you more about our PMS business.

## **Particle Measuring Systems**

Andy Cowan

*President, Particle Measuring Systems, Spectris*

### **Particle Measuring Systems**

*Without measurement, there is no control*

Thank you, Andrew.

Good day, everyone, whichever time zone you are joining from today. I am Andy Cowan, president of Particle Measuring Systems. I started as PMS president in March of this year, so it is three months into the role now. I do, however, have previous experience working at PMS and was their CFO between 2016 to 2018, so it is great to be back working for a company where I have had such great times before.

In terms of my background, prior to joining PMS in 2016, I worked as a finance leader within the test and measurement industry, within companies such as Agilent technologies and Viavi Solutions. Prior to rejoining PMS, I spent two years as President of Servomex, which is also part of Spectris Scientific.

It is my pleasure to present to you today about this great business, including how we help our customers make the world cleaner, healthier and more productive, and to share how we are investing to deliver sustainable growth in the future.

*Providing solutions where detecting the smallest particles and ensuring ultra-clean is mission-critical*

To start, I want to emphasise through a couple of examples just how advanced our technology is and how powerful and sensitive our particle counters are. As you saw from the video, and we will hear today, what we do enables customers to detect the smallest particles invisible to the naked eye, in environments where being ultra-clean is absolutely mission-critical. Through our expertise and know-how built up over the last 50 years, we can detect

particles to the lowest nanometre levels. For example, in our aerosol particle counter range, we can detect particles at a ten nanometre level. Now, 10 nm sounds small, but how do I describe to you how small it is? Well, to put it into perspective, being able to detect a ten nm particle sitting on a US penny is the equivalent of standing on earth and being able to see a person on the moon. Another way to think about it is that 10 nm represents the length your fingernail grows in 10 seconds. That is the level of sensitivity to particles that we measure. And throughout this presentation, we will highlight how important that is to our customers.

*Playing a critical role supporting our customers address a number of megatrends*

In common with other businesses in Spectris, PMS and our customers are experiencing a number of mega trends which are here to stay and that underpins the sustainable long-term growth of the business.

Starting with the semiconductor market on the left, there are a number of positive drivers that are fuelling demand for greater volumes and more advanced, more powerful semiconductors to make the world cleaner and more productive. So these include the rapid evolution of artificial intelligence which accelerate processes and get to the answer faster, increased use of software to make vehicles and products in general more autonomous and the connectivity of everyday appliances to the Internet to save time for businesses and people at home.

In life sciences on the right, the landscape is also evolving rapidly as we support our customers to make the world cleaner and healthier. People are living longer, requiring new treatments and drugs. There is a rise in economic prosperity which is increasing accessibility to drugs, and the development and commercialization of new drugs means the regulatory landscape continues to evolve to ensure that they are manufactured safely.

And growth across both end markets is being boosted by onshoring of manufacturing to domestic markets and the associated significant capital investment in new facilities over the next few years.

*A world leader in micro-contamination monitoring solutions for ultra-clean manufacturers*

Who are Particle Measuring Systems? Headquartered in Boulder, Colorado, the business was established in 1972 and subsequently acquired by Spectris in 1996 and today has over 700 employees based in 16 countries. The company has a rich heritage, developed over half a century as the inventor of laser particle counting, and has grown significantly to reach its position today as a leader in premium micro-contamination monitoring solutions. The business has a strong track record of innovation, with its technology protected through a combination of over 260 US and international patents, as well as internal trade secrets.

We have a large install base with approximately 80,000 instruments in the field, providing a strong aftermarket annuity representing a third of the annual sales. And as you can see from the chart on the right, the business has grown rapidly with average annual sales growth over the past ten years of over 10%, with sales of just under £180 million last year. And consistent with other businesses in the Group, a key attraction of PMS for our customers is our high touch sales approach and our ability to help customers solve their complex problems through our local presence across core markets in Asia, the Americas and in Europe.

## Our Markets

*Leading portfolio of mission-critical products and solutions for semiconductor and life sciences markets*

So in which end markets do we play? We provide mission-critical products and solutions for our customers across semiconductor and life sciences. In semiconductor, our core customers are the large global semiconductor manufacturers and their suppliers. Here we provide a range of instruments and solutions to monitor the purity of air, gases and liquids to ensure the supply chain and manufacturing process is contaminate-free. And in life sciences, our customer base is more broad-based and consists predominantly of pharmaceutical manufacturers in the aseptic, biopharma, and vaccine subsegments. Here, we provide instruments and solutions to ensure ultra-clean environments and prevent microbial contamination, and we also provide systems to help customers meet their compliance needs as well.

While there are a number of purchase criteria that are common to customers in both markets, such as having a local presence, our strong domain expertise, a reputation for quality, and strong aftersales service, in semiconductor the degree of instrument sensitivity is the number one criterion, whereas in life sciences the ability to provide customers with advisory services and a full solution to meet regulatory requirements is paramount.

A key source of our competitive advantage comes from the breadth of our product portfolio compared to direct competitors who may focus on specific technologies or capabilities.

## Semiconductor

*Semiconductor – serving the high-growth market of semiconductor manufacturers and their suppliers*

Taking a closer look at each market in turn, in semiconductor, the total addressable market in which we operate is the inline semiconductor measurement space, a market currently sized at \$1.5 billion. The specific market where we play and are the market leader in is the particle counting and airborne molecular contamination market, which is currently sized at \$300 million. Our sales here are derived from the supply of instruments and solutions either directly to new and existing semiconductor fabs or to the suppliers into those fabs.

As you can see from the chart in the top-right of the page, equipment spending in fabs is forecast to grow significantly, driven by a number of structural growth trends requiring semiconductors to be produced in higher volumes, in smaller sizes, and with greater power. In fact, a recent report by McKinsey reported that the global semiconductor industry is poised for a decade of growth and is projected to become a \$1 trillion industry by 2030.

*Our semiconductor product offering is the broadest with the highest sensitivity*

So why is ensuring a clean environment so critical in a semiconductor fab? Now, semiconductor clean rooms are essential for manufacturing semiconductor chips. These chips are used in various devices, from mobile phones to spacecraft. In this manufacturing process, why are clean rooms necessary? Well, first of all, semiconductor chips are made from delicate layers of highly sensitive materials. With even the slightest inconsistencies in those materials can compromise their yield and effectiveness. And clean rooms provide a controlled environment with strict standards, ensuring precise chip manufacturing by minimising contamination and maintaining quality.

I talked earlier about the importance of sensitivity and being able to detect the smallest particles. This is also of becoming increasing importance as semiconductor node sizes get smaller and the associated needs of our customers to match those requirements. This slide shows the range and sensitivity of our semiconductor product offering, which is the broadest in the market. To give you an idea of the level of sensitivity, we have compared them to a number of very small objects, which you can see at the bottom of the slide.

Looking at the product mix on the right, you can see that most of our sales and semiconductor are derived from the sales of particle counters, with one-fifth coming from aftermarket services which comprise calibration, maintenance and the supply of spare parts. These are critical services that our customers rely on to keep their operations running. It is also important to note, which we will see more clearly in the next slide, where our products and services are used by the semicon suppliers and the semicon fabs themselves.

*Semiconductor – ensuring ultra-clean at all stages of the manufacturing process*

We play a critical role across the semiconductor manufacturing supply chain. We provide solutions for suppliers for use in the subfab and fab levels, and some of our instruments play a role in more than one part of the manufacturing cycle.

Starting from the bottom of this slide and working our way up, semiconductor manufacturer suppliers produce critical chemicals and air gases into the fab, where our particle counters help to ensure very low particle levels in the product being delivered to the fab. It is crucial for these suppliers to have the cleanest of inputs into the manufacturing process. In the middle section, we move into the semiconductor fab and the subfab layer, which includes utilities and distribution points to the fab. Here, our instruments measure particles as the product is distributed to the fab itself.

And then we move into the clean room layer of the fab where wafer processing takes place. Our equipment is used to monitor the cleanliness of the clean room and the processes going on in the tools themselves. This includes the environment of a tool where the wafer is exposed or the water, chemical or slurry going into the wafer for cleaning or polishing.

*Semiconductor customer case study In-line particle monitoring solution to reduce yield loss*

Before leaving semiconductor, we thought it would be useful to share a customer example. Here we have a well-known major semiconductor manufacturer who wanted a solution to improve yields as their existing solution was not sensitive enough. As you can imagine, in a manufacturing process such as theirs, any small particles of contamination in the process can cause significant issues to wafer and chip yields. Here we were able to help them solve their yield problems by combining our advanced technology alongside our expertise. Our solution included troubleshooting alongside the customer to identify the root cause of yield loss within their process included application design to adopt inline particle monitoring for yield tracking, data interpretation where our particle counter correlated with alternative methods and life cycle aftersales service and support.

In this example, the customer chose PMS for our world leading ultrapure water monitoring solution with the highest sensitivity in the industry, with strong levels of service support and strong collaboration with the customer, leveraging our domain knowledge.

## Life Sciences

*Life sciences – serving a high-growth, large addressable market*

So moving over to life sciences, where the total addressable market for high-precision inline sensing is \$2 billion. The specific area where we play is \$0.5 billion dollars and is focused on aseptic manufacturing.

As you can see, the market is made up of instruments and sensors and facility management systems. We play in all aspects of this market with particular strength in our aerosol and microbial product ranges, with monitoring systems for turnkey solutions for clean room environmental contamination monitoring. And as the charts in the top-right show, the growth outlook in those markets that drive demand for our solutions is very positive, with the pharmaceutical market expected to grow at 6% to 7% and the smaller consultancy market growing at double digits as more customers look for guidance on how to meet increasing regulations.

There are a number of leading indicators or drivers that provide insights into this growth outlook, such as the announcements of investments into new pharma manufacturing facilities. These are typically driven by investment in onshoring across many geographies or manufacturing capacity expansion to cater for growing populations with access to medicines of higher quality, and commercialization of new drugs to tackle things like obesity. Another key market indicator is approval rates for new drugs by the FDA, which are at the highest level since COVID.

In the end, growth is supported by a number of structural trends, all of which are leading to the development of novel drugs and the investment in new manufacturing sites.

*Life sciences – solutions-focused provider to major pharma and life sciences customers*

Within life sciences, our sweet spot is in the aseptic manufacturing and biopharma and vaccine markets. Production of injectables under critical conditions is at the high-value end of the market, which is where we play.

At PMS, we provide peace of mind for our customers through a full sterility assurance offering. So looking at the quadrant in the middle of the slide, I will take you through what is included in that product offering. So starting top-right, we have a number of high-sensitivity remote and mobile contamination monitors across both viable, which means that those contain living organisms and non-viable particulates. Moving to the bottom right, we have a range of environmental monitoring solutions comprising instrumentation, data management systems and software. Bottom-left, our advisory and project services. These help guide our customers on increasing and demanding regulations. And finally top-left where we also provide training and educational resources which further augments our reputation as experts in the industry.

All of this is only possible due to a highly experienced team of technical experts that ensure we meet the critical needs of our customers and help them achieve clean room certification and validation.

Now, looking over at the right-hand side of the slide on product mix, our three pillars are standalone products, facility management systems and recurring revenues from services and consumables which represent over a third of sales in life sciences. And then you can see at

the bottom of the page some examples of the products and services that we provide, ranging from particle counters, contamination monitors all the way through to facility monitoring systems and solutions.

In summary, we provide precision solutions with purpose to help our customers take action where their processes need to be controlled.

*Delivering a complete solution to ensure regulatory compliance for our life sciences customers*

Now, as I showed you for semiconductor where the customer workflow was centred around the fab, this slide demonstrates the role that we play across the customer workflow in life sciences and in particular the aseptic pharmaceutical manufacturing cycle. First, looking at the very left-hand side and the start of the manufacturing process, our products and solutions are deployed at the preparation and formulation stage to ensure that we start the process under the right clean conditions with customers using our mobile instrumentation and software.

We then move to the contamination control of critical processes as pharmaceuticals are filled and finished under aseptic conditions with a mix of our systems, sensors and software, and then we facilitate compliance to release the finished product under the final stage of product inspection and quality control using our bench top instrumentation.

Across all these stages, our products, advisory services and data management help to establish the cleanest of environments while also ensuring industry regulations are met, utilising the data provided by our solutions.

*Life sciences customer case study Ensuring ultra-clean and regulatory compliance for new facility*

So this slide provides another example of a strong customer use case, this time with an emerging contract manufacturer in life sciences. The customer was building a brand-new manufacturing facility using the latest state-of-the-art technology to attract business as an emerging European-based contract manufacturer. We had an existing relationship with the OEM manufacturer of the customer's robotic filling line, having provided them with advisory support in the design of that machine. The contract manufacturer was so impressed by our knowledge that they asked us to provide a service to review their clean room design to meet contamination control requirements. During these discussions, we understood that the products met the latest GMP requirements and would also help to scientifically understand their processes, with our solution being the logical choice for the facility. This example highlights great collaboration with the end customer and with in-depth knowledge and advice which helped to create a relationship with this new account.

## **Investing in Growth – Research & Development**

*Investing in Growth through R&D*

So now moving on to where we are investing for future growth, starting with our research and development process.

Investing in new products is a key part of maintaining our strong track record of growth and gaining market share. There is a number of trends that inform where we invest to ensure we maintain our technological advantage and continue to be the number one choice for



customers. I will highlight a few examples in this slide for each market of the key investment drivers for PMS.

So starting with the top-left with semiconductor, the drive for smaller devices and better performance is driving customers to develop even smaller chips with node sizes of 2-3 nm. On the top-right, as the demand for data processing capability increases and traditional chip scaling faces limitations, researchers have explored vertical 3D integration and an attractive strategy to scale. And then there is the general trend related to advances in automotive, artificial intelligence, the Internet of Things. These are all driving demand for higher volume of more advanced chips. And finally, onshoring, which also applies to life sciences, is fuelling investment in new manufacturing facilities.

And then, on the right-hand side in life sciences, if we look at the top-left, the application of digital strategies to pharma manufacturing under Pharma 4.0 is increasing automation. This is providing PMS with a great opportunity to deploy our products into automated manufacturing lines. And bottom-left, changes in the regulatory environment governing the manufacture of sterile products such as GMP Annex 1 and data protection is requiring higher standards where our products, solutions and advisory services can help customers prepare for these new regulations. All of these trends result in our customers needing our technology and know-how to help navigate a growing and evolving end market.

*Introducing industry leading products and solutions R&D investment ~7-8% of sales and vitality index 31%*

Moving on now to some examples of our recent successful product launches and where we will invest in the future to keep PMS at the forefront of technology leadership.

Consistent across the Spectris Group, we are aiming to invest around 7-8% of sales in R&D, with a focus on refreshing the portfolio as measured by the vitality index, where we achieved 31% in 2023. You can see in the left-hand side of the slide a selection of recent new product launches, so I will pull out a couple of examples.

In semiconductor, the NanoAir 10 condensation particle counter is a groundbreaking new product designed to monitor clean room environments, delivering 10 nm detection sensitivity at one-fifth of the size of competitive products. It helps to identify particles to improve yield with process tools, critical clean room areas, and pressurised high-purity gas delivery. In life sciences, our flagship product, the Lasair Pro mobile aerosol particle counter, supports portable and remote clean area monitoring while meeting international clean room standards such as EU GMP Annex 1. This is our biggest-selling particle counter. And then finally, the MiniCapt Pro remote microbial air sampler incorporates the latest viable clean room monitoring technologies into one instrument.

On the right-hand side, you will see where we are prioritising future investment, and semiconductor being the leading-edge of sensitivity advancement continues to be our top priority. In life sciences, we talked about the future development of Pharma 4.0 with automation and digital advancement, and we want to make sure we are at the heart of rapid microbial detection to ensure that our customers identify issues in real-time.

In summary, at PMS, it is our intent to continue to be a technology leader in the particle counter contamination monitoring space.

*A focus on sustainability*

Another area of investment at PMS is around sustainability, which is front of mind as we seek to be net-zero by 2030. We have made strong progress on sustainability across a number of areas. Starting with our own impact, we have had a number of initiatives in place related to energy use and waste. In fact, 100% of the energy used at our sites is now derived from renewable sources. We have ambitious plans in place related to waste, with a target of zero waste to landfill by 2030. And for supply chain, we expect have close to three-quarters of our suppliers rated by Ecovadis by the end of this year. PMS itself was awarded a silver sustainability rating by Ecovadis only last month, and we will be pushing for gold in 2025. And as part of our work on scope three emissions, we have commenced a full life cycle analysis to assess the impact of our products on emissions as used by our customers in the field.

We also recognise that we have an important role to play in the local community. Through the Spectris foundation, employees can nominate local causes for funding, which serves not only to help society but also promotes the high levels of engagement for employees. You can actually see a recent example in the bottom-right where we donated to the Boulder Emergency squad to enable women firefighters to have the equipment they need to help with the volunteer search and rescue team serving the people of Boulder County.

*Investing in new capability*

Finally, we are also investing for the future with our new modern, state-of-the-art manufacturing and Innovation Centre in Boulder. This will be a transformational move for PMS from the current facility in Boulder that we have occupied for the past 30 years. The building will be tailored to PMS-specific industry and customer needs, providing additional capacity to grow and one where we can develop, manufacture and service new products at scale. As well as being a lighthouse for the Spectris Business System, it will also provide an ideal environment to promote high levels of employee engagement and facilitate cross-collaboration between other businesses within the Spectris Group. And last but not least, it will allow us to leverage the latest sustainable business practises and energy-efficient building technology. We are due to move into the new building in the second half of next year.

*Summary*

In summary, PMS is a great business. We are a market leader with strong market positions, operating in two attractive end markets, benefiting from a number of structural growth trends which we talked about earlier. We have strong relationships with our customers, built over decades and underpinned by our technology, our local presence and our domain expertise. And we are continuing to invest in the business through higher levels of R&D and in new capabilities and an infrastructure for PMS to scale further.

We are excited about the opportunities that lie ahead, and I hope this presentation has been helpful in demonstrating our future potential. Thank you for listening today and with that, I will hand back to you, Matt, for the Q&A.

## Q&A

**Matthew Wootton:** Thanks, Andy. So the first question we have had in, actually, there is a couple for you, Andrew, here. The first one is what characteristics a business needs to qualify for being a Scientific-like business?

**Andrew Heath:** Right. Okay, thank you. Well, it makes the same criteria matters as for all of our businesses and for both divisions, Scientific and Dynamics, that really there is six parts to our business model. Firstly, we are looking for great businesses. Clearly, PMS, Andy's taking you through that. However, businesses that have got strong technology, strong products, leading positions in their markets, strong brands, great reputation. And then secondly, they face off to structural growth markets that are attractive, often underpinned by sustainability drivers. Thirdly, that we are really meaningful for our customers and that we are typically solving some of their toughest challenges. And Andy took you through a number of examples for PMS today. Fourthly, that we then underpin that growth by investing for further growth through investing in R&D, new products, new innovations, but also in terms of M&A. We still have a very strong self-help agenda in terms of operational excellence, our fifth element, that we are driving our ERP implementation across the Group, plus the Spectris Business System, then driving operating leverage as we go. Then lastly, it is about continuing to build a really healthy, high-performance culture. So they are the six elements that we look for in all of our businesses. And I think what Andy's taking you through today is a great testament of that business model in practise, in reality.

**Matthew Wootton:** Thanks, Andrew. And then just as a follow-up, this is like a Scientific-level question rather than being sort of business-specific. However, as you think about Scientific's overall margin profile, do you think there is still opportunity to improve the Scientific margin over the next few years? And what will be the main drivers for that?

**Andrew Heath:** Well, the simple answer is absolutely. I mean, we were over 21% net operating margin last year. As we go forward, that operational excellence, that self-help story that I just spoke about is really what we focus on to drive further margin expansion. So getting that operating leverage, getting that drop through as we grow. And you are all well aware of our sort of through-cycle growth rate target is 6% or 7% organic. And then on top of that, clearly the ERP implementation is worth 150 basis points at a Group level as we roll that out across all the businesses, and we will be broadly finished in the first half of 2026, in terms of the final implementations, we hope. And then continually driving the Spectris Business System, which contributed over £10 million of annualised savings directly to the P&L last year. So they are really the three elements that will drive Scientific, just as it will in Dynamics.

**Matthew Wootton:** Thanks, Andrew. And then Andy, we have got quite a few questions coming in on PMS, Andy. We get asked about competition from time to time when we are on the road. So there is a couple of questions here relating to the competition, Andy. First of all, I will give you both questions. What really gives PMS a competitive edge is the first question. And I guess the flip side to that is what are the barriers to entry in terms of where PMS plays today?

**Andy Cowan:** Okay, yes, good questions. I would say obviously the presentation highlighted quite a number of the competitive advantages, but I think if I had to pick probably the top

areas that give us that edge, probably I would say the strong global infrastructure we have so we can support a very wide customer base. Direct access to customers, so we like to make sure we are highly engaged with our customers. We have got quality services that we give to them as well. And then I would say the technical expertise of our employees. So that whether that is in production, service, engineering or app support, those are just some of the areas where they are customer-facing and product-facing for our customers.

If we look at the different markets, I would probably say in semi it is the sensitivity of the products. I think we highlighted that in the presentation, along with the technical expertise that we have mentioned. And in life sciences, I would say it is that consultancy advice for our customers to help them meet their compliance obligations, and then that end-to-end solution capability is also a strong advantage in life sciences.

Barrier to entry, I would say again, we mentioned it briefly in the presentation, the formal IP, the patents that we have, the trade secrets, but also that core expertise that is within our teams. Extensive direct sales is definitely a strong barrier to entry, that service close to the customer. And then I think just using semi as an example, once you become process of record and semi, then your position becomes very sticky with the customers. So that would be a strong barrier to entry as well.

**Matthew Wootton:** Thanks, Andy. A couple more. These are more relating to sales split, first of all, and market share. So first of all, we obviously shared on the slide the total sales in 2023 from PMS. However, what is the sales split between semi and life sciences, and has this varied?

**Andy Cowan:** It is usually around 50-50 if you are looking at it across all of the years. There is definitely movement within those years. It is actually great to have that diversification of two strong structural growth markets. However, I would say in general, Matt, the answer would be 50-50. And it can vary in certain years, depending on the certain markets.

**Matthew Wootton:** And then moving on to market share, can you tell us a little bit about market share, where we are positioned in both end markets, and how I guess we are using R&D to grow that share?

**Andy Cowan:** Yes, so I would say in our markets, but in both end markets, certainly within the various major product ranges that we have, we are number one and number two. If we look at semi specifically first, I would say we have got a very strong market share in liquid and gas. So in those product ranges especially, there is a high sensitivity angle to it. On the aerosol side, we still have a large market share, but it is probably a more crowded market with a lot more competitors in that space. And life sciences, it can range, depending on the application, the products between 10-25%. I would say, in terms of R&D investment, as long as we continue to invest, as we are doing in R&D, then we should be in a very good position to continue leadership in those markets and application spaces.

**Matthew Wootton:** Thanks, Andy. And then coming back specifically to competition. So who do we compete with in PMS, and what is the competitive environment like?

**Andy Cowan:** So I would say in general it is competitive and there is a healthy level of competition. Obviously, those barriers to entry play into that as well. The main competitors for us would be traditional particle counter manufacturers, companies like TSI, Rion, Beckman

Coulter, their particle counter division and Lighthouse. Those would be the main ones. I would say in general, because of our track record of innovation and the fact that we are continuing to invest in R&D, then that continues to give us strong value and differentiation. And obviously that needs to continue going forward.

We also have an advantage, as I mentioned, in terms of serving our major customers directly. So sales in all of those key geographies, service we mentioned before, again, with a network of service centres close to our customers, building strong relationships with them. And actually, we have a number of service labs that are on customer sites or very close to customer sites, so we can actually provide the best possible service. So I think as long as we continue to provide that service, have those strong relationships, then we are hopefully in a good position against competition.

**Matthew Wootton:** Thanks, Andy. Moving on to some customer type questions. There are two questions here for you, Andy. One is what is your customer concentration like? And then as a follow-up to that, this is a question I have certainly had on the road, is in semi, are you more exposed to any one area of the chip market, e.g., memory or logic? And if we were to look at new fab, what level of total sales would PMS derive from that fab?

**Andy Cowan:** Starting with customer concentration, so in semi we have got over 1,000 customers, major semiconductor customers, but also their suppliers as well. Our largest customers, the top 100 customers, probably make up about 80% of the business, so quite a strong concentration there. In life sciences, we work with every aseptic manufacturer around the world, with a strong focus on biopharma. So that is typically the two markets there.

In terms of the question around exposed to one area of the chip market, memory versus logic, I think was the question. We have sales in both, so both memory and logic, it can vary year by year. There is sometimes more volatility in the memory market, but in general, we have more sales in logic because there are more logic fabs in the world.

And then your question around value. So for a new fab, a new tier-1 fab were selected, we would probably be looking at multi-millions in sales, probably between £2-4 million in a fab. It really depends on the circumstances, but that is a general broad-base number.

**Matthew Wootton:** Thanks, Andy. And then pricing. So the question around that, the importance of price in terms of the purchasing criteria of the customer, obviously the presentation covered a lot of the purchasing criteria, some was common to both markets, some specific to each end market. However, in terms of importance of pricing, how do we price our products and solutions? And is there a typical price, average price for our instruments?

**Andy Cowan:** Okay, so I think first of all, in general pricing, I would say that obviously I think there are a couple of factors probably to take into account. First of all it is the accuracy, the sensitivity of our products, the reliability, the domain expertise. So when we do value-based pricing model, we take all of that into account, and we will always continually assess prices based on the specific market or applications or products. So it really depends on many of those things. However, to answer your last part of the question, in terms of value, it can range. Some of our counters can be in the low thousands. Obviously, we sell consumables and other products as well, but some of our counters can go up to triple-digit hundreds of

thousands. So there is definitely a wide range. And then systems that we sell can be in millions as well. So very wide range of pricing for certain products, solutions or services.

**Matthew Wootton:** And therefore an average is actually not that useful, to be honest, given that wide range.

**Andy Cowan:** No, it would have to be averaged by product or by application. We would have to go into that level of detail.

**Matthew Wootton:** And then just turning to markets, market conditions in each end market, if you are able to say a little bit perhaps about what market conditions are like at the moment in both semi and life sciences, perhaps looking back at 2023.

**Andy Cowan:** Yes, and the presentation did pick up on some of this, but just to maybe reinforce a few things as well. So first of all, in semi, it was a strong year for us for sales in 2023, although the market had actually bottomed out a little bit in 2023 from a chip orders and fab utilisation perspective. So we came into 2023 with a strong order backlog, delivering in sales. So that was probably over the last 12 to 18 months. However, going forward, we are starting to see that growth now pick up this year and the strong growth really expected over the 2025 to 2027 period as we identified in the presentation.

On life sciences, if we look at some of the regional markets, Americas and EMEA are definitely showing some good growth right now. Asia recovering from a softer market in 2023. However, overall, I think a very positive view of the future, that the market CAGR is of around 6% to 7%, as we mentioned, should enable good steady growth over the next five years. And just again, not forgetting and reinforcing those megatrends we identified for both semi and life sciences so that we firmly believe that is going to drive market growth as well.

**Matthew Wootton:** Thanks, Andy. And then switching gears again in terms of profitability. Can you give some colour, flavour around the level of profitability of PMS? We heard that Scientific's got margins just over 20%. It would be good to sort of look at PMS in that context. And then as a follow-up to that, what are the opportunities to increase profitability over the next few years? And then we might come on to SBS and ERP and their position within that, Andy.

**Andy Cowan:** Right. So I think on margins, first of all, we are in that range with the overall Spectris Scientific average. So strong margins. In terms of increasing, I think you actually mentioned a couple that I would probably call out there very specifically, SBS and ERP. However, obviously, that investment in new product development is important as well, so we can look at opportunities to improve margins there as well. It is not just about new product sales and looking for what the customer wants us to actually have in terms of new products. It is also about how can we deliver more value there.

On SBS, we are sort of in the early stages of our journey, and we are progressing very well. We want the new building we are about to move into, which we talked about the presentation, to be a true SBS lighthouse for us in terms of going forward, what it looks like for a strong manufacturing operation. And we think the new building as well, given the capacity increase, but also we will be able to bring in new ways of working which will link very closely to SBS and lean also.

And then ERP, yes, definitely that will have a significant impact on us once we deploy that. We are currently scheduling to roll that out, certainly planning this year, implementation and testing, etc. in 2025 and look at implementation in 2026. And so that will be a very strong implementation for PMS to further improve our margins, but also our business processes, and it will really help transform how we work also. So we are really looking forward to the further improvements in efficiency that is going to give us.

**Matthew Wootton:** It is fair to say that on the SBS, I mean, clearly across the Spectris Group, different businesses are at different stages. From PMS's perspective, you are probably in the earlier stages of the SBS journey. Is that fair to say?

**Andy Cowan:** That is fair to say, but I think as we move into the rest of this year, into next year, I look forward to progressing that very well. And obviously, as we mentioned, and combining it with a new headquarters, a new manufacturing and innovation centre, that is really going to help us to progress that really well.

**Matthew Wootton:** Yes, absolutely. Looking at instruments products themselves, talk about replacement cycles. How long do our instruments last typically? What is the replacement cycle like?

**Andy Cowan:** Historically, our instruments are very long-life, both in the field and in the market. In general, our products are designed to support field service and our global service provides an excellent opportunity for us to extend the capital asset for our customers. I would say in semiconductor, probably in both, but especially in semiconductor, our product life can extend 10, 15 years, maybe even longer. However, in general, I would say ten years is a good number to work from. Of course, it is our role to make sure that when we innovate based on what customers actually want to see that we are looking at how we do that and making sure that we can service that appropriately in the field as well.

**Matthew Wootton:** Thank you. And we talked about a lot in terms of our targets, organic growth, but in terms of gaps and M&A, what gaps do you think PMS has in its current offering and to what extent could these be filled through M&A?

**Andy Cowan:** Probably will not get into too much detail, but there is definitely a number of adjacencies that we think we could look to acquire within, certainly within that core customer workflow that we showed you in both semi and life science as well. Specifically on life sciences, I think our M&A strategy has always been to expand horizontally and match that value chain. Sterility assurance is a great example of where we want to focus and continue to look at areas that support growing in that area. I think the ability though to actually acquire will depend obviously in the nature of the ownership of certain companies. However, what we do is we continually assess through our whole organisation, through PMS, but also with other companies and within Spectris, we do assess many opportunities and look at how we can look for those opportunities now to develop those and potentially progress.

**Matthew Wootton:** Perfect. Moving back to organic growth, obviously the slides covered around a couple of slides around research and development. There is a couple of questions here on R&D if that is okay. Are you spending more on R&D at the moment than you did a few years ago? That is a question that we have had. And could you spend more on R&D than we do today? What is the limiting factor? And again, this is something we get asked. So there is a couple of R&D-related questions for you there, Andy.

**Andy Cowan:** Right. I think in terms of the R&D levels, first of all in terms of spending, they are steadily increasing over the last few years and are certainly growing as a percentage of sales, and we are planning to continue to, to do that over the coming years.

In terms of the limiting factor, that part of the question, Matt, it is always possible to spend more. Obviously, there is a need to balance the total spend with capacity and the ability of the market to absorb new products and also where we want to focus and prioritise. So it is really important when we do this that we have a good internal process to review and decide how do we trade off decisions on where to invest in the short-term or short-to-medium-term and then also the longer term. So it is probably a combination of all of those factors, Matt. However, we are comfortable right now that we have those processes in place, and we are spending at levels that will help us to grow in the future.

**Matthew Wootton:** Thanks, Andy, that is great. And then this could be the final question, I think, before, I think Andrew might make some closing remarks after this final question. You have obviously worked at PMS before, Andy. You were FD CFO there. However, what do you think employees would say about PMS as a company and working for PMS as a company?

**Andy Cowan:** So obviously, speaking on behalf of them, I think speaking to a number in the corridors and on my various sites, I would say they would say it is a great place to work. Strong values which are shared across the whole of Spectris. That is something that is across every single operating company within Spectris. I would say they love the fact that we are always looking to try and improve processes, that we want to invest in the business. We showed, today and the presentation, a number of areas where we are investing. So that is important not just for the scale of the company, but for employee engagement as well.

We are a global company, so I would say that helps us to maintain a strong relationship with our customers, and I think our employees get to engage with each other across geographies as well and to help our customers. There is definitely a culture of wanting to help fellow colleagues when they are dealing, especially with customers. And I think in general, there is a real pride in what they do. Not many people can do what we do. Obviously, we invented particle measurements, so there is a history there as well, I think they are very proud of. And I think they can also see hopefully the future journey that we are on as a company as well to scale and grow. So I would say that are some of the areas where what the employees would say, and I will certainly ask more as I go about visiting the various sites about that question, Matt.

**Matthew Wootton:** Thanks very much, Andy. And just before I hand over to Andrew for some closing remarks, there are a few more questions that we have not been able to get to, but I will make a note of those and endeavour to work with Andy to get answers back on those. Apologies if we have not covered everything. I think we have covered quite a lot of the questions that have come in, but again, anything specifically we have not done, I will endeavour to come back to you with some good answers. So that is great, Andy. Thanks for the Q&A.

And Andrew, I think you might just want to make a few closing remarks.

**Andrew Heath:** Yes, thank you. Thank you, Andy. Well done. Great answers to those questions.



Look, I mean, we have a fabulous business in PMS that we are really proud of. PMS planted the flag really at the top of particle measuring many years ago. As Andy said, they invented the particle counting philosophy and the technology and have been a leader ever since. So it is a fabulous business. We have shown today that they absolutely win through performance, and then they retain through the service that they provide to customers. And being able to provide critical measurements to allow our customers control what is really fundamentally mission-critical processes in their operations is at the heart of what we are enabling here.

So thank you very much for joining. I hope you found it useful and look forward to catching up with you all in the near future. So thank you very much.

**Matthew Wootton:** Thank you.

[END OF TRANSCRIPT]