

Chief Executive Officer's review

We are at the cutting edge of a rapidly changing market and have a significant opportunity as gene editing and gene modulation become embedded at an industrial scale into our customers' workflows.

Terry Pizzie, Chief Executive Officer



Terry became Chief Executive Officer in May 2018, having joined Horizon Discovery Group in February 2017 as Head of Commercial Operations. He draws on more than 30 years of commercial experience within the life sciences sector. He started his career with Applied Biosystems in 1988, going on to become Vice President of Europe in 2003. In 2005, Terry joined the Swedish biotechnology firm Biacore as SVP Global Commercial Operations. He was part of the team that reignited the company's commercial performance, leading to the company's acquisition by GE Life Sciences. After a period with Genetix PLC as Director, Global Commercial Operations prior to its acquisition by Danaher, Terry returned to the sequencing market as Global Head of Sales at Pacific Biosciences. Terry graduated with a degree in physiology and biochemistry from the University of Reading and has spent most of his career focused on commercial excellence within the life sciences sector.

“With the changes we are implementing under our Investing for Growth strategy, Horizon is well positioned to capitalise on its market-leading position.”

Advancing scientific leadership

The life sciences industry, most notably those companies developing novel therapies, is in an era of transformational change. Relatively recent technological innovations have enabled researchers to not only 'read' the human genome but also to be able to 'write' the code, giving them a better understanding of how DNA is being read and translated into proteins. This is hugely important in a pharmaceutical context, as it helps scientists to determine how drugs work, the pathways they are impacting, any side-effects that they might cause, which patient populations might benefit and importantly, how those drugs can be produced at scale.

Horizon is at the forefront of this innovation wave. We are a world-leader in gene editing and gene modulation tools and their use, we have more than 10 years' experience of building cell models; and our unmatched toolset and expertise allow us to help our customers answer key questions across research, drug discovery, drug development and diagnostics.

Our customers include many of the world's leading academic institutes and global pharmaceutical companies. Our expertise and insights into the challenges that they face drive us to create products and services that not only differentiate our business, but also help our customers to achieve deeper understanding of biological systems, thereby fuelling the development of the next wave of precision medicine.

Strategic update

2018 was a pivotal year for Horizon and we achieved much that we can be proud of. In May, I was appointed to the role of Chief Executive Officer having spent the previous 15 months restructuring and evolving the Group's commercial organisation. The first order of business for me as CEO was to conduct a review of our strategy to reassess Horizon's long-term outlook, taking into account both internal and external stakeholders and most importantly, our customers.

Over the years, Horizon has broadened into a number of different markets and it became increasingly apparent that not all opportunities shared the same potential for success. So, the strategic review sought to identify the highest growth segments within our target markets, while also assessing Horizon's internal capabilities

to meet current and anticipated market demand. Growth and market leadership need to be counterbalanced by scalability and sustainability, so we also looked at opportunities for strategic investment to enhance our scientific leadership and market-leading position.

Investing for Growth

The Investing for Growth strategy supports our goal to become the 'go to' provider of IP-rich cell engineering solutions and to establish leadership positions in our key markets, based on a highly scalable and repeatable business model. In essence it will see the business shift from being a scientifically-led life sciences company to a fully commercial tools company with industrialised processes and commercially directed R&D.

This strategy will see us prioritise the highest value, highest growth areas of our core markets, in particular CRISPR screening and reagents, diagnostic reference standards, bioproduction and cell engineering.

To support this growth, we are making investments in automation to increase production capacity, in improved data handling to add customer and business insight and in digitisation to enhance customer experience through our eCommerce channel and in other areas of commercially-led scientific innovation. The investment projects commenced in H2 2018 and are expected to complete within 12-24 months. They include:

- Redevelopment of our web and eCommerce platform
- Investment in lab-based areas of automation, with the aim of increasing capacity and decreasing manufacturing costs. This will allow us to more effectively address the broader market at lower prices but with equivalent gross margin
- Further advances in our Laboratory Information Management Systems (LIMS) to enable efficiencies and industrialising our processes for scalable growth

These are significant projects requiring specific expertise to execute, so we have recruited the appropriate talent. We expect these investments to generate significant payback in the short and long-term by increasing capacity and opening up new avenues of growth.

Focused on our market

Horizon has an excellent commercial team that achieves both scale and focus in the cell biology market through its ability to serve customers through direct field sales, distribution and digital channels.

The commercial team was transformed during 2018 as we fully integrated our two formerly separate sales teams. The acquisition of Dharmacon in 2017 provided reach into the academic market where Horizon had limited customer presence historically. It also strengthened our position globally, through greater territory coverage in our main markets and enhanced distributor coverage within the Asia Pacific region. We ended the year with a 50-person sales organisation, comprising key account partners, business development and field application specialists, providing global reach.

Partnerships with key accounts

A key feature of our evolving commercial organisation has been our approach to serving key accounts, typically large pharmaceutical and biotech companies with complex global structures. Our highly experienced key account partners look to understand the complex nature and requirements of these international companies by building high-level relationships globally that benefit both parties.

Uniquely, being in a position to offer both products and services, has allowed us to engage with companies looking to outsource services, as well as those choosing to retain expertise in-house. Maintaining these adaptable supply arrangements means that we stay close to our customers whichever route they take, helping us to build an understanding of present and future needs, and often to help drive future product development.

Expanding Japanese operations

To expand reach within the APAC region and directly address the valuable Japanese market, we established a new regional office in Tokyo. The small team consists of business development and marketing specialists focused on increasing market share and building localised operations.

Chief Executive Officer's review continued

Global footprint

The acquisition of Dharmacon not only provided a natural extension of Horizon's product catalogue but also created an important base in North America. At acquisition, the site was predominantly focused on manufacturing and logistics. Since then, we have absorbed key people into executive and senior management roles as we build out a truly global leadership team. Having such a high-profile facility has helped us attract and retain high calibre employees in the US, which allows us to more effectively serve a key customer base that represents over 50% of our global business.

Corporate development

Horizon has made significant progress in revitalising the corporate development function. During the period we appointed Dr Brian Burke as Head of Strategy and Corporate Development. Brian has extensive experience in the life sciences market and was integral to developing some of Horizon's early bioproduction and diagnostics portfolios. To continue to position Horizon as the provider of choice, the Group is evaluating both in- and out-licensing opportunities, as well as merger and acquisition development, in line with the corporate strategy and to support the annual strategic planning cycle.

Group performance*

Given that 2018 was a year of change, I am pleased to report a solid set of results for the year, with a substantial increase in reported revenues (up 68% at £58.7m (FY17 restated: £35.0m)) an increase of 73% on a constant currency basis. Our gross margin improved (up to 67.3% (FY17: restated 61.1%)) and, for the first time, a positive adjusted EBITDA of £0.7m (FY17 restated: loss of £3m). Like for like growth from the Horizon business (i.e. excluding Dharmacon) was 16%, which is all the more encouraging given that the two sales forces were only integrated in January 2018 and only at that point did cross-training in the product portfolios begin.

Business unit managers

One of the latest developments in our core market and customer-centric organisational review has been the formation of a business unit management structure. These new positions were filled internally by the promotion of experienced and talented individuals, appointed in January 2019. We are confident that this

change will bring about better market focus and understanding. It will allow the Group to better develop and target the product and service offerings, which are being increasingly required by our evolving markets.

Maintaining market leadership

Horizon has committed to investing in high value technologies that maintain our market leadership. In addition to internal product development initiatives, during the year we signed a number of strategic partnerships, including with Celyad and Rutgers University.

Celyad (NASDAQ: CYAD) is a clinical-stage biopharmaceutical company developing specialised CAR-T cell-based therapies and recently announced its first-in-class non-gene-edited allogeneic CAR-T candidate. In October 2018, we signed an exclusive agreement that will provide Celyad with access to Horizon's novel shRNA technology to generate its second non-gene-edited allogeneic platform.

The well-established shRNA technology licensed to Celyad is an alternative gene editing approach designed to deliver efficient target knock down with high specificity.

Just after the period end, in January 2019, Horizon signed a strategic partnership with Rutgers, The State University of New Jersey in the US, to develop and commercialise base editing, a novel and potentially revolutionary technology platform.

Base editing has the potential to provide more accurate gene editing and fewer unintended genomic changes compared to currently available gene editing methodologies and could help to target many diseases that to date have no treatment. Horizon will collaborate with Rutgers University to further develop the novel base editing platform from the laboratory of Dr Shengkan Jin, associate professor of pharmacology at Rutgers Robert Wood Johnson Medical School. As part of the agreement, Horizon has an option to exclusively license the base editing technology for use in all therapeutic applications. In addition, Horizon will also fund further research in base editing at Rutgers University while undertaking its own evaluation and proof of concept studies at Horizon.

By extending our scientific and IP capabilities through such partnerships, Horizon will be able to more fully support our pharma, biotech and academic partners to deliver better cell therapy solutions to patients.

Built by our people

You cannot build a world-class organisation without world-class people, and we are blessed with many. Going through a leadership change, a business integration, coping with the challenges of high-growth businesses and the required changes of approach, is a lot to ask for, but our team has risen to the challenge admirably.

I thank them all for their dedication and hard work during the year.

Summary and outlook 2019

The market opportunity for gene editing and gene modulation is substantial and with limited direct competition, Horizon has strong prospects for growth.

Our commercial excellence, scientific innovation and industry know-how remain key differentiators and with our Investing for Growth strategy, Horizon is increasingly well placed to capitalise on its position as one of the market-leaders. The new eCommerce platform to be launched in H219, will support enhanced customer experience and drive future revenue growth, while the process improvements and automation are expected to increase capacity in cell line engineering.

With a robust balance sheet and an already strong order book for 2019, we are confident in our growth prospects. The Board expects FY19 revenues to be in-line with current market expectation and to maintain a positive EBITDA performance.



Terry Pizzie
Chief Executive Officer

*For the alternative performance measures refer to the Financial review section (page 17)

Performance by business unit

Research Products

	Growth	FY18	FY17
Revenue	148%	£31.3m	£12.6m
Revenue CC	158%	£32.5m	£12.6m
GM%		64%	59%

The availability of gene editing and gene modulation tools for researchers, underpinned by the increase in sequencing data, has substantially accelerated the use of these tools to understand biology. Horizon's main customers for this revenue stream are academic research labs and biopharmaceutical companies, with sales that are high volume and transactional in nature, captured primarily through our eCommerce platform.

2018 saw the full year impact of the Dharmacon acquisition and we continue to benefit from close synergies across our business. The integration was executed efficiently, with all transitional service agreements from General Electric completed by September 2018. We are pleased to have returned the portfolio to growth and expect this trajectory to continue into 2019 and beyond, as we further invest in the commercialisation of the offering.

The team in Lafayette has extensive experience in global logistics and manufacturing. We continue to leverage this capability to bring cost-effective scale to other areas of the business.

Applied Products

	Growth	FY18	FY17
Revenue	72%	£15.0m	£8.7m
Revenue CC	76%	£15.3m	£8.7m
GM%		81%	73%

Molecular Diagnostics

Our industry leading Molecular Diagnostics Reference Standards continue to transform the way potential sources of error in molecular diagnostics are controlled. Regulatory shifts are also continuing in Europe that will bring the Continent much more in-line with the approach of the US Food and Drug Administration. This promises to have significant implications for all stakeholders as the bar is set higher in Europe.

The portfolio continues to deliver good growth and during the year we launched the largest cell line derived reference standard focused on myeloid cancer.

BioProduction

With seven out of 10 new drugs now being biological rather than small molecules, there is significant demand for Horizon's high quality bioproduction cell lines from drug manufacturers, including pharmaceutical and biotechnology companies requiring therapeutic antibodies for research and clinical trials.

With our cell lines validated by successful Investigational New Drug (IND) filings by customers, our market access and credentials are now well established, resulting in an increasing number of customers proceeding directly to full commercial licences with no evaluation period. Notable developments included two orders worth in the region of £1m, one of which was a site-wide licence with a major pharmaceutical company.

Services (including leveraged R&D)

	Growth	FY18	FY17
Revenue	-9%	£12.4m	£13.7m
Revenue CC	-7%	£12.7m	£13.7m
GM%		60%	54%

The Services business proved challenging in some areas due to a difficulty in accessing specific markets, some of which are dominated by much larger and more established competitors and others where competitors have industrialised processes and attract customers with available capacity and pricing. As a result of the strategic review, the decision was taken to reduce investments in specific parts of the Service portfolio where Horizon is not well positioned, in order to concentrate on the rapidly emerging area of functional genomic screening (also known as CRISPR screening) where Horizon has a market-leading position. In addition, we decided to invest in automation to industrialise areas such as cell line engineering, allowing us to serve a much broader market. Included within this unit is the leveraged R&D projects which reported revenue of £1.6m (FY17: £nil) at a gross margin of 82%.

CRISPR screening is emerging as an important technique that is being deployed in various areas of the drug development pipeline, contributing to the efforts to bring better drugs to market faster. In the second half of the year, we were delighted to announce two CRISPR screening agreements with major pharmaceutical companies, which are significant in representing the direction of travel of our customers' focus in the screening services market. Post period-end in the early part of 2019, we announced the launch of the world's first T-Cell CRISPR Screening Service, underlining our leading position in this important developing market.

Impairment of In Vivo

During the strategic review, it became apparent that the Group's In Vivo business unit was one of its Service areas facing challenging market headwinds and that its revenue growth would not meet previous expectations. Accordingly, we have taken the decision to reset our expectations to a more sustainable long-term growth trajectory, which has led to an impairment of £32.1m in the financial statements. This impairment is non-cash in nature and does not affect the business operations going forwards.