



Donal McCarthy

Leading the data centre charge

Sisk has been delivering in the data centres, life sciences and technology sectors for the best part of 40 years. Now, under the leadership of Donal McCarthy, these sectors have become a key growth focus for the firm going forward.

IN JUNE of this year, Sisk carried out a restructuring in response to the growth it has been experiencing in the data centres, life sciences and technology sectors, which combined now account for around one third of the firm's annual turnover. Donal McCarthy was promoted to the role of Chief Operating Officer (COO) for Data Centres, Life Sciences & Technology having joined the company over 20 years' ago.

In this newly created role, Donal is taking responsibility for the data centres, life sciences and technology sectors across Ireland, the UK and Europe, reporting to Sisk CEO Paul Brown and building on the strong client relationships and track record he has in these sectors.

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Two new Managing Directors are reporting to Donal to drive the business opportunity in these sectors across all geographies – Owen Sisk as Managing Director, Data Centres and Tom Wall as Managing Director, Life Sciences & Technology.

“Sisk recognised the need to put a strong focus on these sectors by creating a dedicated business unit. While the current economic environment will mean a downturn in certain sectors, we are confident that data centres and life sciences will be more robust.

We have been working with a large number of life sciences FDI businesses for 40 years in Ireland. In the past few years, we have followed our key accounts into Europe as well as creating new client relationships,” Donal explains.

“Our data centre work in Ireland started 20 years ago. This has expanded in the past decade to incorporate significant projects with hyperscale clients. Similar to life sciences, as these data centre clients started to move into Europe, it was part of our strategy to move with them. We have been successful in that, having completed a number of projects and are currently working on others.”

Donal has over 30 years' experience in the construction industry with a proven

track record of delivering impressive results across a broad range of geographies (Ireland, Europe and the US), in sectors including data centres, pharma, commercial, residential, healthcare, leisure, public works and fit-out.

“Sisk's purpose is to create places for future generations. In this extremely challenging world with an uncertain economic climate, following the pandemic and the war in Ukraine, we have to change as a business to make sure we are maximising value for our stakeholders. Looking after our people is one

of our core values and I see it as extremely important to create a positive, challenging, safe and fun culture that attracts and retains people.”

The division Donal is responsible for employs around 450 people.

“As our needs continue to grow, we are on a recruitment drive across Ireland, the UK and Europe to meet our strong pipeline of work. We have fantastic people within our business with proven experience and have leveraged that into Europe, with many existing employees benefitting from attractive mobility packages. On the back of that, we have been recruiting in-country to complement our core teams as we believe it's really important to have local expertise and diversity. We have had up to 27 nationalities and cultures represented on some of our projects in Europe,” he says.

He adds: “I have travelled a lot to our European sites and met new people who have joined us for the first time. It has been great to be able to talk to them about the business and inform them of our strategy. As part of our two-year graduate programme at Sisk, we are now linking in with colleges across Europe. Several of our locations are in vibrant college towns, including Copenhagen, Malmo, Ghent and Leiden.”

Sisk has not traditionally been that active in data centres and life sciences in the UK.

“One of the objectives of the restructuring is to maximise opportunities in the UK.



Sisk project team dinner in Zagreb, Croatia

We see substantial growth in data, life sciences and technology. We have recently won some initial projects in life sciences including The Oxford Science Park and Birmingham Health Innovation Campus (BHIC) and are looking at a strong pipeline of projects.”

DATA CENTRE DRIVE

Ireland’s challenges in relation to energy capacity and the pressure data centres put on the grid is common knowledge. Donal is keen to note that data centres are critical pieces of infrastructure that play a key role in enabling digitalisation.

“Despite difficulties with the grid in Ireland, we are still seeing potential here as data centres move more towards self-generation of electricity. Data centre providers have to establish new, additional locations. There is movement into the Nordics, Central and Southern Europe plus Africa to meet demand,” he notes.

The Malmo project was a landmark achievement for Sisk as it was its first data centre delivered in Sweden. Sisk is also close to completing a second data centre in Northern Sweden.

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“Both projects combined are a total 50 Mega Watts (MW). In the coming years, we see further opportunity as co-location data centre companies look at Europe and we’re already talking to some of these.”

Sisk have also recently begun their first data centre project in Denmark, a 20MW facility. Phase 1 of the project was approved to proceed in Q2 2022 and enabling works commenced in late April. The civils infrastructure and concrete works are being carried out by a regional partner from Malmo, Sweden (AKEA) and the majority of the other specialist work packages are being carried out by Irish companies.

“Our experience in Malmo has given us confidence to harness those relationships we have built with our strong supply chain to deliver across Europe. This gives us continuity as main contractor and assurance for our clients that Sisk has the capability and experience to deliver these type of projects.”

DIGITAL TECHNOLOGY

Sisk is implementing its Digital Project Delivery (DPD) strategy from site mobilisation right through to final commissioning on all its data centre projects.

Reality-capture technology gives the site management team insights into progress, with the BIM team facilitating visualisation of the Point Cloud models.

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“Our Data Centre team recently won a prestigious global ‘Innovator of the Year’ award for our Lulea project. This was at a ceremony held in New Orleans as part of Autodesk University, a flagship global conference on the use of digital technology in the construction industry,” says Donal.

Previously, it won awards for its work on the aforementioned Malmo project and the EO3 project in Wembley, London. “These awards are a strong testament to the great work we’re doing across the business in terms of adopting a DPD approach, utilising best-in-class technologies – such as 4D, 5D and augmented reality – and processes

Tom Wall and Donal McCarthy, Sisk pictured at the FOYA ISPE Facility of the Year Awards 2022, Florida, USA



to improve project delivery and collaboration on our projects,” says Donal.

Sisk have been busy piloting some exciting innovative technology in the form of Mixed Reality over the past year. This allows the site teams to visualise, review and share 3D BIM models and access information directly in a physical environment using holograms. Sisk is striving to leverage the power of this innovative technology to bring maximum benefits to project teams.

“We are continuously looking at new ways to be much more sustainable. There are so many benefits to off-site fabrication, including improving safety and quality on-site. Being leaders rather than lagging in Digital Project Delivery (DPD) and this enables us to be flexible and bring that skill and expertise to our clients to help them to implement their own strategies in this space.”

Donal adds: “This technology is still at the early stages of development and implementation, and there is a big effort and a lot of heavy lifting from the project team onsite to make sure it can be successfully rolled out to get the required results.”

LIFE SCIENCES BUOYANCY

Ireland has been a key European location for the global pharmaceutical industry for decades and Sisk has been at the forefront of innovative delivery throughout that time. Since 2000 alone, it has constructed over €3bn in pharmaceutical facilities through its dedicated Pharma team.

“Sisk has proudly delivered many of the pioneering and cutting-edge life sciences facilities across Ireland and Europe over the years, many of which have been part of significant US FDI investment programmes. Longstanding partnerships have developed based on a culture of first-class safety, quality and delivery of performance. This has resulted in a high level of repeat work with a number of our blue-chip clients,” says Donal.

“In our view, the life sciences sector remains buoyant as evidenced from strong market data and our customer relationship management pipeline. Lead-in times for process equipment are influencing investment decision-making, with clients moving faster to place orders in some cases.

“We have expanded our footprint across Europe, including into Croatia, The Netherlands and Belgium, Switzerland and Denmark. Our teams are at the forefront of life-saving products. For example, we’re currently working on two CAR-T projects for two different large-scale life sciences clients in Belgium and The Netherlands. CAR-T is a groundbreaking, complex treatment for blood cancer. The fact that these facilities are so cutting-edge and will save peoples’ lives has



been hugely motivational for our teams. Work has been accelerated and we will complete these projects quicker than expected.”

project while simultaneously enabling the production of small-scale vaccine batches without disrupting operations – not to

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Recently at the International Society for Pharmaceutical Engineering (IPSE) Annual Meeting and Expo in Florida, Janssen Biologics won the Project Execution award for its expansion of the Leiden Vaccine Launch Facility (VLF) in The Netherlands. This innovative manufacturing facility supported large-scale production of vaccines for late-stage clinical trials as well as the launch of new vaccines on a large scale for global public use.

In the midst of the pandemic, Janssen recognised the opportunity to enable large-scale COVID-19 vaccine drug-substance manufacturing by building a new, 25,000 square foot sterile manufacturing facility adjacent to the existing facility in Leiden. Sisk was appointed for the design and build and commissioning, qualification and validation of the additional building.

“We are extremely proud and appreciative to the entire Leiden site team, who committed to the project and delivered it one month earlier than the anticipated construction programme,” says Donal.

The fast-track project was developed to design and build the new facility within nine months and to secure regulatory approval for initial commercial batches in the facility within 12 months. In addition to the aggressive timeframe, the project faced other challenges, including completing the

mention ensuring the safety and wellness of the entire project team during the height of the pandemic.

Work began on the facility in July 2020 and construction was completed in the first quarter of 2021. Regulatory approvals were received within 11 months of the project start-date. According to Janssen Biologics, this unprecedented delivery was made possible by “Early contractor engagement, unique project/programme methodologies to enable rapid decision-making and processes/tools that ensured close end-to-end collaboration/alignment with business stakeholders.”

According to Donal, the Janssen Leiden VLF is a brilliant example of a collaborative approach across the whole project team to achieve the best possible outcome for the client.

“We also provided virtual walkthroughs of the processed facility as part of our standard client engagement process throughout design and construction. This gave the client a better understanding of the design, which led to faster decision-making, better design and overall, a better performance.”

The emphasis on safety first onsite resulted in the project being delivered without a single lost-time incident; there were no serious safety incidents or injuries and no non-planned impacts on operations. The project delivered additional benefits to the community in the



Leiden, The Netherlands CAR-T project

form of sustainability features, including water efficiency, HVAC energy recovery, LED lighting and associated energy-saving controls and low-emitting materials in building construction.

“The Leiden VLF is a prime example of how Sisk is leading the charge across the environmental and ESG agenda. It epitomises our purpose of creating places for future generations. What we’re doing in drug manufacturing and medical treatment facilities is at the leading edge of building differently to adapt to a changing world,” says Donal.

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Sisk have been actively involved in the Life Sciences sector in Denmark since 2018. They have delivered and supported the qualification of two vaccine manufacturing suites with associated facilities and utilities for Bavarian Nordic, a fully integrated vaccines company focused on the development and manufacturing of life-saving vaccines.

Donal says: “Bavarian Nordic is a global leader in vaccines. BN’s product portfolio includes market-leading vaccines and they have created a diverse portfolio designed to save and improve lives by unlocking the power of the immune system, including an Ebola vaccine.”

ICT DELIVERY

Sisk has a proven track record in delivering high-end Information and Communication Technology (ICT) projects for national and multi-national clients in Ireland, UK and Europe.

Analog Devices is a world leader in high performance signal processing, and Sisk’s history with this cutting-edge company stems back as far as 1983. During that time, Sisk have completed a number of developments at their Limerick facility, with a value exceeding €450m. Their latest project is a new European Research and Development Centre, to bring all the Analog Engineering staff together in one building.

Sisk is also currently working on the Intel Campus in Leixlip, Co. Kildare on the base build works for critical upgrade projects for new technology within the existing Fab’s.

SUSTAINABILITY AND MODERN METHODS OF CONSTRUCTION (MMC)

In his first six months as COO, one of Donal’s main areas of focus is to further the environmental, social and governance (ESG) agenda within Sisk. “Achieving net-zero emissions by 2030 is a really important strategic priority for us and I am trying to drive this into the business across Ireland and Europe by continuing to introduce Modern Methods of Construction and digitalisation,” he says.



Sisk staff demonstrating HoloLens to Donal McCarthy in Sweden



In 2022, Sisk became the first construction and engineering firm in Ireland to invest in an electric JCB

Sisk has been on its Sustainability journey since launching its Roadmap in early 2021. There has been some notable milestones in 2022 including, switching to fossil-free HVO fuel across all its Irish construction sites and becoming the first construction and engineering firm in Ireland to invest in an electric telehandler.

Donal says: “It is generally recognised that construction has always been an energy intensive industry. We recognise that immediate action is required to transform our operations, if we are to support the global effort to reduce carbon emissions.”

The company has embraced Modern Methods of Construction (MMC), especially off-site manufacture, both generally and in

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support of our sustainability ambition.

“Technology has a major part to play, meaning we can do more, faster and with less resources. Our teams have extensive experience in delivering prefabricated solutions along with modularised components in both the Data / ICT sector and Life Sciences sector.” Donal says.

PROJECT PIPELINE

Johnson & Johnson

Johnson & Johnson Vision Care company will invest €100m in the expansion of its existing facility in Plassey, Limerick, creating 80 new jobs. The extension to the site has already begun, with production likely to begin in 2024. The site in Limerick is one of the largest contact lens manufacturing sites in the world. Sisk is delighted to be expanding its long-term relationship with J&J going back to 1994. Over the last three decades, the Sisk Life Sciences division have carried out construction and commissioning work at Vision Care totalling over €700m.



Malmo, Sweden



Tánaiste Leo Varadkar (second left) at NIBRT for the Sisk project announcement

The National Institute for Bioprocessing Research and Training (NIBRT)

The National Institute for Bioprocessing Research and Training (NIBRT) has commenced construction work on an ambitious expansion of its existing facility in Dublin. This expansion will increase NIBRT's capacity and capability to conduct manufacturing-focused research and training in advanced therapeutics. Advanced therapeutics is a category of innovative biological medicines that includes cell therapies, gene therapies, mRNA and DNA-based therapies and vaccines, and other novel vaccines.

The construction of this extended facility is expected to be complete and the facility operational in the second quarter of 2023. The new facility will accommodate around twenty-five new researchers and training staff and will serve new and existing NIBRT clients by providing research solutions to manufacturing challenges and staff training in the manufacturing of these highly innovative and complex medicines.

Birmingham Health Innovation Campus (BHIC)

John Sisk & Son and Bruntwood SciTech has marked the topping out of No.1 Birmingham Health Innovation Campus (BHIC) - Birmingham's forthcoming specialist life sciences hub - with a ceremonial event celebrating the next milestone in advancing the world-class infrastructure being developed, in partnership with the University of Birmingham, to support the growth of the West Midlands life sciences sector.

Due to complete in September 2023, No.1 BHIC will provide 133,000 sq. ft. of specialist lab and office space for innovative life science and digital healthcare companies, in response to increasing demand for space from the sector.

The Oxford Science Park (TOSP)

Sisk is currently on-site at The Oxford Science Park (TOSP), one of Europe's leading locations for science and technology companies. The 86,000 sq. ft. laboratory and office named the Iversen Building will be complete in the summer of 2023, providing high-specification grow-on space for science and technology companies. The 78,500 sq. ft. Leggett Building will be completed the following year. ■

Project highlights – Bio Cork 2

- Sisk was chosen as the construction manager for the Janssen, Ringaskiddy large scale facility expansion known as Bio Cork 2. This involved the construction of a new production facility, as well as the expansion of the existing warehouse, canteen, laboratories, offices, wastewater treatment plant, central utilities and carparking.
- Sisk contract on this project ran from pre-construction support through to operational qualification.
- Focus on quality was a key deliverable on this project. The new facility delivers products that are consumed by patients, so the quality of manufacture and cleanliness of the manufacturing space is critical to this process.
- Bio Cork 2 has won a number of international and Irish awards including, CURT Awards 2020 – Project Excellence Award and Safety Excellence Award, Engineering News Record (ENR) - Global Best Healthcare Project, Irish Construction Excellence (ICE) Awards 2020 – Industrial award and Construction News Awards UK 2021 – Best International award.

