

**ACEI Design Excellence Awards 2017
Nomination Form**

Category (1) Mechanical & Electrical (M & E) Project
Category (2) Innovation Project (all disciplines)
Category (3) Overseas Project (all disciplines)

Company Details

Contact Name: _____
Firm: _____
Address: _____
Tel: _____ **Email:** _____

Categories/Groups:

Project Category: M & E ☐ Innovation ☐ Overseas ☐

Project Group:

Small project (under €2.5m) ☐ **Medium project** (€2.5m - €10m) ☐ **Large project** (over €10m) ☐

Project Information:

Name of Project: _____

Location: _____

Commencement date: _____ **Completion Date:** _____

Client: _____

Contact: _____ *Tel:* _____

Design Team:

Architect _____

Contact Email: _____ Tel: _____

Contractor _____

Contact Email: _____ Tel: _____

Authorisation to contact above: Yes ☐ No ☐

Project Details:

(1) Provide a brief outline of the project (Max 200 words):

In 2012, Kerry Group announced their plan to invest €100 million in a new state of the art Global Technology and Innovation Centre to be located in Naas, Ireland. The flagship global technology and customer innovation centre serves as the centre of excellence for the EMEA business region. The brief for the facility was to provide international strategic customers with access to the group's scientific research, innovation and applications expertise across food, beverage and also pharmaceutical markets. The facility comprises 25,000m² of accommodation, including 5,000m² of pilot plant production facilities, 8,500m² of laboratories, and a 3,500m² customer experience building.

Kerry are forthright in their commitment to quality and sustainability and tasked the project team with a target of LEED (Leadership in Energy & Environmental Design) Silver certification which, for a facility such as this, is a significant challenge. This involved significant commitment of financial investment and considerable design efforts by Arup and RKD to devise innovative solutions to satisfy the demanding technical and environmental LEED requirements.

(2) Provide a statement regarding why this project might be considered award winning: (Max 300 words):

The €100 million investment in this project created 800 jobs initially, which will rise to 900 after 3 years. A peak of 800 construction workers were employed through the construction period with almost 1 million man hours employed. This obviously had a real impact for the Irish construction sector employment at a critical time for the country when projects such as this were scarce.

The project was a collaborative BIM project across the disciplines of architecture, structural engineering and building services engineering, cost control and construction. The model was developed by Arup and RKD and used for design visualisation, cost estimating, trade co-ordination, off-site fabrication and constructability reviews. The end goal was to produce a final 'as-built' model which would be used by Kerry to support an integrated facility life cycle process.

The ambitious programme for design and construction was necessary due to Kerry's need for speed to market. This was achieved by implementing various innovative procurement techniques. Multi-package tendering allowed the works to be awarded and implemented on a rolling basis such that design work for some elements was able to overlap with the construction programme. The BIM model produced by Arup and RKD provided the platform for the construction team to eliminate coordination issues and also utilise many opportunities for off-site prefabrication.

The project was delivered ahead of schedule in early 2015 and at 5% below the initial project budget. It is already a benchmark project both for large scale construction procurement and delivery techniques. From a technical design and quality aspect, it is noted throughout the industry as a point of reference across the fields of building engineering and architecture.

(3) Provide further details of the project such as: design elements / procedures; complexities involved; innovation aspects; site management and supervision; health & safety issues; project cost controls and any other relevant information (Max 500 words):

All Mechanical and Electrical systems were designed to be highly efficient through both state of the art equipment efficiencies and also intelligent control systems to minimise energy consumption. The Air Handling Units used to feed the building ventilation systems were the first instance in Ireland where ACEI Design Excellence Awards 2017

highly efficient “IE4” rated electric motors were utilised. The building façade includes twin-skin elevations with motorised interstitial blinds and high specification g and u values. The system works in tandem with an intelligent lighting control system which actively dims any light fittings in an area of plentiful daylight.

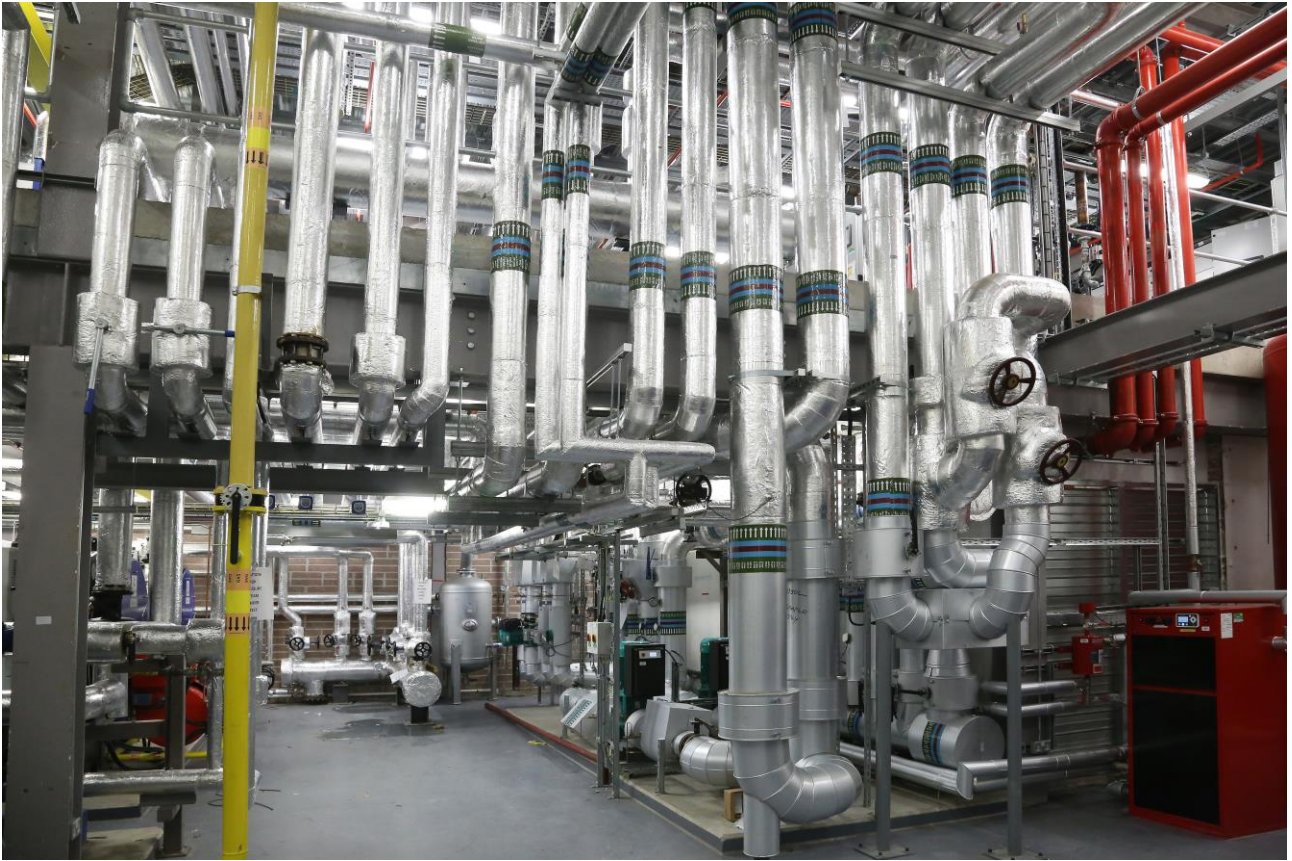
The major component of the LEED accreditation process is an ASHRAE energy model. This was developed by Arup to analyse in detail the building services systems performance. All mechanical and electrical systems were modelled physically down to the specific detail of each plant item such as a fan or pump, including the technical parameters, specific efficiencies and electrical consumption of each item. A layer of BMS control functionality was added to this to simulate how the systems would operate through each day of the year dynamically.

Innovation was key in the delivery of the project and the use of BIM technology was breaking new ground for construction projects in Ireland. This scale of project had not yet been delivered utilising BIM techniques from design through to construction, installation and now in building operation. As the industry continues to find its feet and grow confidence in using BIM technology, the Kerry GTIC project is a clear and outright benchmark for future projects in how this process can be properly implemented. Many lessons were learned throughout and only through valuable real world experience such as this can the Irish engineering profession learn, adapt and refine for the future.

Innovative prefabrication of specific work elements was a strategy used to compress the schedule and accelerate the construction process. Off-site fabrication was utilised for large sections of pipework and multi-service arrangements. These were arranged on service modules which were exported from the BIM model to a 3rd party for off-site construction and testing. The most substantial of which was a series of 4 storey vertical pipework riser modules which were constructed off site in one piece. These modules were delivered to site fully completed, insulated, cleaned and pressure tested and craned in to place over the space of several hours.

The introduction of 900 staff to the Millennium Park Campus brings with it a great economic boost for the Naas area. Local businesses, service industry operators and retail operators will all feel the benefit of the additional consumer spend in the area. The local property market is also greatly boosted by such an influx of new staff seeking accommodation. The addition of such a high profile facility and company in the Kerry GTIC will also add further to reinforce the attractiveness of the site to other potential national and international companies. This, in turn, is likely to further boost the economic input to the area.







Entries should highlight where possible the particular influence or benefit the project engineering design has on society and the wider environment.

Please confirm by electronic or written signature that:

- (a) The supplied text may be used in any marketing material issued in connection with the awards.
- (b) Agreement has been received from the client and other stakeholders that the project can be inspected by the adjudicator and provide contact details as requested above for the relevant person to be contacted in this regard.

Signed:  _____

Firm: _____

Entry details:

Note: Applicants are encouraged to review the Awards Regulations and Procedures before submitting nominations.

Send the completed entry form and supporting photos / images altogether in **one PDF document** (one pdf document per project nomination) by email to: info@acei.ie with a subject line: ACEI Design Awards 2017.

Note: Closing date for receipt of nomination forms: **17:00, Monday 16th January 2017**

Enquiries: ACEI office info@acei.ie 01 6425588