

# CATEGORY WINNERS SET HIGH STANDARD FOR EFFECTIVE CPD INITIATIVES

The category winners in the CPD Company of the Year Awards 2009 were: Malachy Walsh and Partners in the small-sized company category; Siemens Healthcare Diagnostics Manufacturing Limited in the medium-sized company category; Pfizer Biotechnology Ireland in the large-sized company category; and Dublin City Council in the public sector category



## Hard work brings rewards for Malachy Walsh and Partners

Winner in the small-sized company category, Malachy Walsh and Partners is a multidisciplinary engineering consultancy practice founded in 1967. With offices in Cork, Tralee, Limerick and London, it has been supplying services to both private and public clients throughout Ireland and the UK for over 42 years.

The company objective is to seek continued growth of the practice through increased diversity and the promotion of greater expertise and innovation, particularly in specialised engineering areas. Over the last number of years, Malachy Walsh and Partners has developed a significant environmental capability and has developed particular expertise in the design and project management of renewable energy projects, including wind farms, pumped storage and tidal energy projects. The aim is to provide an all-embracing engineering service encompassing civil, structural, mechanical, electrical, traffic, environmental, renewable energy, project management, PSDP and fire engineering services.

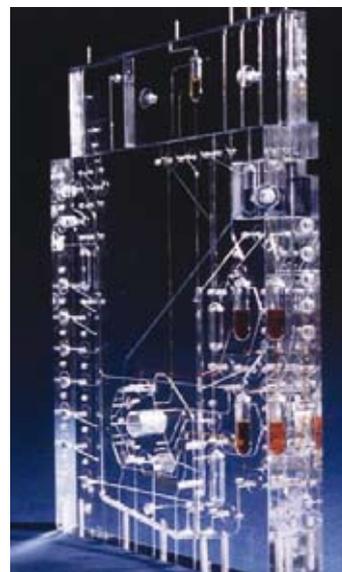
Malachy Walsh and Partners values CPD as a key tool in achieving its core aims of diversity, progression and maintaining a highly motivated staff. The firm utilises CPD to develop its personnel so that it can best advise and guide clients in order to achieve optimum solutions in accordance with the latest engineering and environmental practice. The success of this approach can be measured by the number of repeat clients over the past four decades and also the number of new clients now availing of the many services and in-house expertise provided by Malachy Walsh and Partners. Receiving the award of CPD Company of the Year 2009, Declan Cremen, director of Malachy Walsh and Partners said: "CPD has played a vital role in our firm's ability to adjust to the changing demands of our clients and we are delighted to receive this award as a return for the hard work of everyone in the firm."

## Innovative redesign of microfluidic valves

Siemens Healthcare Diagnostics' achievement in the medium-sized company category was driven by the work of its manufacturing engineers who successfully redesigned miniature microfluidic valves to significantly extend performance and life.

This involved a transition from the core manufacturing engineering discipline into the realm of research and development with key activities in the areas of surface physics, material science, plastic diffusion bonding and elastomer technology.

The project also involved many diverse tasks and technologies, ranging from channel formation in plastic substrates using soluble grit blasting technology to the development of specialist measuring equipment to characterise the performance of elastomeric valve membranes. A combination of internal learning, experimental assessment, test services, and consultancy from local third level institutions were aligned to successfully implement the final result. Siemens Healthcare Diagnostics offer a broad portfolio of performance-driven diagnostic solutions that provide more effective and efficient ways to anticipate, diagnose, monitor and treat disease. Delivery of these solutions requires highly engineered and reliable equipment and technologies. At Siemens Healthcare Diagnostics' manufacturing site in Swords, the company actively



Microfluidic unit.

promotes a high performance culture. Staff members participate in day-to-day problem solving, process development and change implementation within the Swords facility. Team responsibility and employee development, along with an active training plan help to ensure a highly motivated workforce. Six Sigma and lean manufacturing principles underpin the continuous evolution of process and product. Internal CPD teams mentor and support the progression of engineers to chartered status. Acquisition of further third level qualifications is actively supported.



## Pfizer's biotechnology development - a new facility with a pivotal role

Winner in the large-sized company category, Pfizer Biotechnology Ireland has constructed a Mono-clonal Antibodies Small Scale Facility (SSF) at Shanbally, Ringaskiddy, Co. Cork, Ireland. This green-field development is a phase 2B/3 clinical trial scale facility to manufacture, purify, formulate and bulk-fill mammalian cell culture derived proteins. The facility is a strategic biotech manufacturing centre of excellence and is intended to support the rapid development of new biotechnology products. The project was delivered on target to a very aggressive timeline and is currently producing engineering batches of a drug substance in clinical development.

Operational readiness programmes were established early as part of the overall project to ensure that project management principles and delivery methodology applied through to batch production. The operating plant is utilising a novel operating model, including self-directed high performance teams, a low hierarchy organisational approach, an integrated facilities management model and implementation of cross-functional product teams to manage process activities. A learning and development programme for operating personnel was developed and implemented during plant construction by colleagues from Pfizer Global Manufacturing, Pfizer Global R&D, NIBRT and FÁS. It is for these innovative organisational CPD practices that Pfizer Biotechnology Ireland won the Large Sized Company category at the Engineers Ireland awards. The plant is committed to Operational Excellence through implementation of 'right first time' (Six Sigma) and 'lean' principles such as training of all site personnel in the DMAIC approach to root cause analysis, development of standard work, and 5-S workplace setup among other initiatives. The facility includes 5,500 litres of bioreactor capacity and is designed with significant utilisation of disposable technology such as bags, filters, tubing and mixing technology, as well as modularisation of unit operations -- typically downstream operations, utilising roll-in equipment, utility stations, transfer panels and ceiling hubs.



## Centre of excellence in flood risk management

This year's winner in the public sector category, Dublin City Council (DCC) has developed the first coastal flood warning system for Dublin City. Through its establishment of a centre of excellence in flood risk management, DCC's engineering department, under city engineer Michael Phillips and executive manager (engineering) Tom Leahy, has developed sophisticated coastal flood warning systems for future flood events.

Council engineers play a vital role in the maintenance and development of Dublin city's road, drainage and water networks, aiming to provide a high level of public service. The importance of CPD training is highly valued at all levels as an important tool in the development of very skilled and effective staff throughout DCC.

On February 1, 2002, a major flood event occurred, with Dublin city recording its highest tidal level ever. There followed a steep CPD learning curve to achieve a greater understanding of why flooding occurs and to establish a centre of excellence within DCC to provide flood risk management -- through prediction, prevention, preparation, response and recovery. Many flood defence works, including Spencer Dock Lock Gates, have been constructed as a result of this Centre of Excellence.

Tidal warning systems, flood maps, and a complex in-house formula were developed by specialist engineering departments within DCC, to predict flood levels and identify vulnerable areas within the greater Dublin region. A successful CPD programme has ensured that all departments within DCC are now aware of the tidal threat and work together incorporating suitable measures to ensure the risk of flooding within the city is greatly reduced. Through CPD and its involvement in EU INTERREG projects, SAFER, and Flood Resilient Cities, the city council is actively working on strategies to reassess climate change adaptation.

The CPD Company of the Year Awards are co-funded by the Department of Enterprise, Trade and Employment under the National Training Fund and plays an important role in the Government's objective to build a 'smart economy'. The 320 organisations involved in the Engineers Ireland CPD Accredited Employer scheme employ in excess of 30,000 engineers and technicians.