

**OLLSCOIL NA hÉIREANN, GAILLIMH**  
**NATIONAL UNIVERSITY OF IRELAND, GALWAY**

Text of the Introductory Address delivered by **PROFESSOR LAOISE MC NAMARA**, National University of Ireland, Galway on 26 September, 2016 on the occasion of the Conferring of the Degree of Doctor of Engineering *honoris causa*, on **JOHN O'DEA**

**A Uachtaráin, a mhuintir na hOllscoile agus a dhaoine uaisle.....**

Ireland's medical technology sector started in 1981 when CR Bard established a facility in Galway to manufacture medical equipment for non-invasive cardiology and urology surgery. The Galway plant quickly became the fastest growing of the CR Bard world-wide facilities and in 1996 they opened a £3.5 million research and development centre.

As you will hear later, a number of our graduands were key players in CR Bard from the beginning. A national policy to attract foreign investment to Ireland incentivised Boston Scientific to establish their first international manufacturing facilities in Galway in 1994. Medtronic followed in 1999 when they acquired the former CR Bard facility in Parkmore.

The multinational presence stimulated the growth of an indigenous base of companies in the late 90's, both supplier firms, most notably Creganna, but also new medical device start-ups; such as Mednova, Caradyne and Aerogen. Each of the individuals we honour tonight were instrumental in the growth during the early 90's, and have become outstanding leaders and innovators of the many successful companies in the sector in the 20 years since then.

It is no coincidence that Biomedical Engineering at NUI Galway started in 1998, when Professor Sean McNamara introduced courses to provide specific training for Mechanical Engineering students for future employment in the growing medical device industry. Soon after, in 2002, came the first graduates of a new Biomedical Engineering Degree. Our medical device partners have been invaluable to the program since then. The people we honour tonight were particularly supportive of the development of a placement program for Mechanical engineering students in the 1990's and have continued to support the placement program for Biomedical and Mechanical Engineering over the past 20 years. These companies also provide input into our program design. Our Biomedical graduates have found employment in the rapidly growing and thriving medical device industry. Today well over 1000 of our NUI Galway alumni are employed in the medical sector alone. Many others have gone into related careers in medicine or biomedical research.

In 1999 an interdisciplinary research centre, the National Centre for Biomedical Engineering Science (NCBES), was established at NUI, Galway, funded by the Ireland's Programme for Research in Third Level Institutions (PRTLTI). The NCBES brought together scientists, engineers, information technologists and clinicians to research innovative therapies for cardiovascular disease, orthopaedics, reproductive medicine, and cancer. This was the stimulus for research in the area, after which came a number of centres and dedicated research institutes, in particular REMEDI, and a total research funding portfolio of over €150 million for research in Biomedical Engineering and Science at NUI Galway. In 2015 CÚRAM, the National Centre for Research in Medical Devices, was established at NUI Galway under funding Science Foundation Ireland and over 40 industry partners. The centre brings together researchers from across Ireland striving to enhance Ireland's position as a driver in medical technology innovation and a global hub for MedTech R&D.

Our graduands have played important collaboratory and advisory roles in NUI Galway research activities over the past 20 years.

A particular link that ties our honorands together is the culture of innovation that they have built in the West of Ireland. Between them they have established, been CEO's or acted on the boards of many successful companies, Creganna, Aerogen, Veryan, Crospon, Novate, Neuravi, Vistamed, Cambus, Mednova, to name but a few. In 2011, NUI Galway

launched the Enterprise Ireland funded BioInnovate program, to provide education, training and mentorship to become leaders in medical device innovation, with a particular focus on start-up companies. Embo Medical is one of Bioinnovates success stories, the co-founders participated in the first Bioinnovate program in 2011 and developed a new, safer, and more cost-effective way of carrying out embolization surgery. Our graduands have supported the development of an innovation culture at NUI Galway, in particular through their support for the BioInnovate program.

Today Ireland is a world-leading cluster for medical device development and Galway employs one third of the industries 29,000 employees. The medical device cluster in Galway evolved because of the skilled labour pool, the growth of supplier firms, university-industry linkages and a growing international multinational reputation. The University and the MedTech sector have grown and flourished side by side, through a continual provision of trainees, industry engagement with the University and knowledge transfer. Our graduands are owed a debt of gratitude for their invaluable and significant contribution to the development of the MedTech industry, for supporting education and training in Biomedical Engineering and, most importantly, for creating a culture of innovation and entrepreneurship in the West of Ireland.”

**John O'Dea** holds Undergraduate and Masters degrees in Mechanical Engineering, and a PhD in Electrical and Electronic Engineering, all from UCD, as well as an MSc in Clinical Research from NUI Galway.

He spent the first six years of his career in the electronics industry with Dataproducts in Dublin and Digital Equipment Corporation in Galway. In 1991 he moved into medical devices and established a ventilator R&D facility in Galway for Puritan Bennett, a world leader in mechanical critical care ventilation.

In 1997, John co-founded Caradyne, to develop non-invasive care devices for pre-hospital and neo-natal areas. The company was acquired by Respirationics in 2004, and John served for two and a half years as Managing Director of their Irish subsidiary.

In 2006 John founded Crospon, to develop minimally invasive medical devices for imaging and aiding surgery in the esophagus and stomach. John is Chairman of Janisys, a spinout from Crospon, which is developing a novel micro-needle-based active transdermal drug delivery technology.

John is an Adjunct Professor at the School of Engineering and Informatics at NUI Galway where he is Chairman of the External Advisory Board of BioInnovate Ireland and Special Advisor to the SFI CURAM Centre for Research in Medical Devices.

He has served as Chairman of the Irish Medical Devices Association and as Chairman of the External Advisory Board of the Irish Regenerative Medicine Institute (REMEDI) at NUI Galway.

John is a named author on eighteen US patents. A chartered Fellow of the Institution of Engineers of Ireland (IEI), and Fellow of the Irish Academy of Engineering, John served as President of Engineers Ireland in 2013-2014. John is married to Caroline and they have one daughter Aoife, who is in 6th class.

**PRAEHONORABILIS PRAESES, TOTAQUE UNIVERSITAS:**

Praesento vobis hasce meas filias filiosque meos, quos omnes scio tam moribus quam doctrina habiles et idoneos esse qui admittantur, honoris causa, ad gradum Doctoratus in Arte Ingeniaria, idque tibi fide mea testor ac spondeo, totique Academiae