

**Committee for Enterprise, Trade & Investment**

**Report on Committee Members' Delegation**

**Invest NI Trade Mission and Visit**

**USA**

**23-26 June 2014**

## Introduction

### Background

At the invitation of Alastair Hamilton, Chief Executive, Invest NI, a delegation of the Northern Ireland Assembly Committee for Enterprise, Trade and Investment was invited to join and participate in a Trade Mission and Visit Programme to the USA

The following members of the ETI Committee participated:

Gordon Dunne MLA  
Megan Fearon MLA  
Fearghal McKinney MLA  
Sandra Overend MLA

Members were accompanied by Jim McManus, Clerk to the Committee and Nigel Sands, Trade Manager, Invest NI.

### Northern Ireland Participation in BIO

Ten companies and three organisations participated in the Trade Mission to the BIO International Convention, San Diego, California, 23-26 June 2014.

<b>Company/Organisation Name</b>	<b>Invest NI Exhibitor (E), Invest NI Capability Stand (C), Visitor &amp; Partnering (V&amp;P)</b>
Agri-Food Bioscience Institute (AFBI)	E
Almac Group	C
Almac Discovery	E (own stand)
Centre for Cancer Research & Cell Biology (CCRCB)	E
Ciga Healthcare Ltd.	V&P
FR Kelly	V&P
Queen's University, Belfast	C
RegenaGraft – Functional Bioprosthetic Scaffolds	V&P
Sepha	V&P
Sisaf	V&P
University of Ulster – Biomedical Sciences Research Institute	E
University of Ulster – Office of Innovation	V&P
Wavteq Ltd.	V&P

## **1. Meeting at San Diego Economic Regional Economic Development (SDREDC)**

Location: 530 B St # 700, San Diego, CA 92101  
(619) 234-8484

Date and Time: Monday 23 June 2014, 10:15 – 11:40

### **Background**

San Diego Regional Economic Development Corporation (SDREDC) mobilizes business, government and civic leaders to maximize the region's economic prosperity and global competitiveness.

San Diego Regional Economic Development Corporation is a nonprofit corporation funded by more than 150 companies and public partners that are committed to enhancing regional prosperity. The strength of their private sector support enables them to provide their services free of charge and their network of public partners increases their effectiveness as they work to spur job growth throughout the region and across significant sectors in the region's diverse economy.

San Diego Regional Economic Development Corporation serves local companies by providing assistance with expansion plans, programs to help retain businesses, and advocating for policies that enhance the region's economic competitiveness. The organization leads efforts to bring new investment and new companies to the region. They collaborate with industry associations and economic development partners to develop cohesive approaches to regional issues and market the region to highlight the incredible talent available and the quality of life that keeps them here.

In 2011, The Brookings Institution a nonprofit think tank based in Washington DC, developed the Metropolitan Export Initiative (MEI), a ground-up collaborative effort to help a pilot group of regional civic, business, and political leaders, with their states, create and implement customized Metropolitan Export Plans (MEP). Eight cities were chosen including San Diego. These localized export plans apply market intelligence to develop better targeted, integrated export-related services and strategies to help regions better connect their firms to global customers, as outlined by their individualized export goals. Brookings instituted the MEI programme to assist high potential metropolitan areas to boost their export capability in support of the Obama administration's National Export Initiative. San Diego is part of a number of metropolitan areas they identified in terms of being high potential for export facilitation. David Graham has been leading on the initiative and SDREDC has been an integral partner

## **SDREDC Representatives**

### ***David Graham, Deputy Chief Operating Officer, Office of Neighborhood Services, City of San Diego***

David is a veteran local government advisor having worked for the County of San Diego and City of San Diego as well as a stint in private sector public affairs. He is transitioning into a new role as DCOO for the Office of Neighborhood Services overseeing a group of departments including Libraries, Parks & Recreation, Development Services, Economic Development, and Planning.

Representing the City as a core team member, Graham was instrumental in developing the region's Global San Diego Export Plan, and currently represents the City on its efforts to attract foreign direct investment, including work with the Brookings Institution.

### ***Efrem Bycer, Manager of Economic Development at SDREDC***

Efrem Bycer also serves on the Young Non-profits Professional San Diego advisory board, Neighborhood House Association Head Start Policy Council and the board for the Congo Leadership Initiative. He has also been involved in the recovery for New Orleans.

## **Meeting Summary**

San Diego has three main traded economies, defense, tourism and advanced industries/innovation. In relation to advanced industries SDREDC works with the Brookings Institute on its FDI strategy. The Brookings Institute is based in Washington DC. It is an international think-tank. It influences policy in the USA. It is funded primarily from private sources and provides data and information to inform elected representatives. The Institute announced the Global Cities Initiative. This is a five-year metropolitan Export Initiative which includes eight cities to drive export strategies. This is on the basis that cities will drive the next phase of global economic growth rather than regions. San Diego is the 17<sup>th</sup> largest economy in the USA but is 55<sup>th</sup> in relation to exports. This says a lot about its global engagement. The next Global Cities forum is in Germany in October.

Mergers and acquisitions drive the innovation economy which leads to a churn of capital. 90% of FDI in the USA comes from mergers and acquisitions. Companies are interested in acquiring companies in San Diego and this brings inward investment. SDREDC has a number of organisations which are interested in specializing in industry clusters. This includes green-field investments, investment through other means such as venture capital and investment into existing companies. Major players are putting money into the region. The biotech industry is behind the strategy to find buyers for companies. If a company moves out of the region people do not tend to move with the company. They are committed to the region. This, in turn, drives

entrepreneurial initiatives. Proximity to the border also creates opportunities for San Diego



**Members of the Committee with representatives of the San Diego Regional Economic Development Corporation**

**Pictured (L-R): Gordon Dunne MLA, Megan Fearon MLA, David Graham SDREDC, Efram Brycer SDREDC, Fearghal McKinney MLA and Sandra Overend MLA**

University of California San Diego specializes in Engineering. Land use around the University is perfect for innovative companies with land zoning geared to relevant companies and the commercialization of intellectual property. The right conditions are being created for companies to invest around the University.

SDREDC is looking at the next wave of investment. This includes small start-ups and putting together incubators. They have become intentional about talent. San Diego is creating the environment where smart, innovative people want to live. There is mentorship available from successful companies and access to capital. Attracting the right people is as much about creating the right living conditions as it is about creating incentives. This includes transport links, places to live etc.

Some of San Diego's success has to do with history and geography including the geographical location, weather (San Diego enjoys over 3,000 hours of sunshine per annum) and the naval presence. San Diego is fairly isolated from other parts of California. Therefore it has to have a collaborative nature.

Most cluster organisations develop because there is a requirement for more support for clusters. San Diego supports a number of organisations which support clusters. The approach has allowed the San Diego economy to be more resilient. It has a start-up and SME culture rather than one based on Fortune 500 companies.

A good example is the CONNECT organisation and its Springboard model. Springboard, CONNECT's flagship program, is designed to assist science and technology companies with marketing, financial, and strategic business advice. Since the inception of the program in 1993, more than 3000 scientific and technological breakthroughs have been guided through the process of innovation to commercialization. Together, these companies have raised over \$1.4 Billion in capital.

There is very little actual financial support for businesses. The focus is on looking at how Government can make financial support go further.

Commenting on similarities with Northern Ireland, Sandra Overend MLA stated that San Diego, *"had quite a low level of exports but is recognized as needing to increase – just like Northern Ireland – export figures need improved upon."*

### **Agreed Committee Actions**

SDREDC is developing a strategy. The Committee will contact SDREDC to request information on the original thinking behind its establishment and to request a copy of the Strategy Document when completed.

The Committee agreed to raise the following points with the Department:

- How does support for high-tech companies in Northern Ireland compare with the support provided in San Diego through the CONNECT program?
- It was mentioned that the next Global Cities Forum is in Germany in October. Is the Forum something that the Minister of Enterprise, Trade & Investment should consider involvement in for DETI in the future?
- The cost of living is very high in San Diego and many of the jobs that are created are high level, and high-paying. There are also lower-skilled jobs created, as there is a need for a diverse range of people and skills in every sector. However, those lower-paid tend to live outside the city and commute. As the economy here grows, how does Northern Ireland ensure that there are jobs created at all levels and prevent the cost of living from rising above what many can afford?

## **Related Websites**

[www.connect.org](http://www.connect.org)

[www.connect.org/entrepreneurs/springboard/](http://www.connect.org/entrepreneurs/springboard/)

## **2. Briefing with Invest NI Staff**

Location: The Bristol Hotel  
City Scene Room

Date & Time: Monday 23 June, 12:15 – 14:10

### **Invest NI Representatives in Attendance:**

Sam Kinghan, R&D Manager, Life Sciences

Nigel Sands, Trade Manager, Invest NI

### **Background**

Invest NI staff provided members with a full briefing, covering the NI Life Sciences Sector, the BIO International Convention and the visit programme. Dr Samana Hussain-Brannigan, Technical Executive, Life Sciences

### **Meeting Summary**

The meeting with Invest NI provided members with the appropriate background knowledge to participate fully in discussions during BIO 2014. Members received detailed information about the event and the reasons why Northern Ireland is so well represented at the event.

The presentation outlined the economic impact of the sector and highlighted how the sector has grown in Northern Ireland and the opportunities that exist for Northern Ireland companies. Detail was provided on the biotechnology industry and the processes that companies such as Almac and Randox undertake in drug discovery and development. Representatives provided an overview of the benefits of stratified medicine (also known as personalized/precision medicine) and the opportunities that exist in for clinical trials in Northern Ireland.

The presentation demonstrated how Invest NI participation in Bio over the past number of years has leveraged jobs and business opportunities in Northern Ireland for Northern Ireland companies. Large pharmaceutical companies are outsourcing R&D to smaller biotech companies and this provides opportunities for companies such as Randox and Almac.

Representatives informed the delegation that Invest NI had identified an infrastructure deficit in certain sectors. This led to a call for projects which has resulted in the first degree in Stratified Medicine in Northern Ireland being developed at the University of Ulster.



The issue was raised that there is no formal mechanism to record clinical trials in Northern Ireland. There seems to be some tension between the clinicians and the pharmaceutical industry. Collating clinical trials information could help sell Northern Ireland as a place to do business in this sector. There is a need to ascertain the number of clinical trials going on in Northern Ireland, who is involved.

### **Agreed Committee Actions**

A Life and Health Sciences Strategy for Northern Ireland was expected in September 2014. It may be delayed. The Committee will receive a written briefing on the strategy when it is finalised.

The Committee will receive an oral briefing from Invest NI on the economic impact of the bio sector and its growth in Northern Ireland. The briefing should include an overview of the opportunities in stratified medicine and the identified infrastructure deficit in some sectors. Members of the Committee for Health, Social Services and Public Safety will be invited to attend.

### 3. QUB Centre for Cancer Research & Cell Biology (CCRCB)

Location: The Bristol Hotel  
City Scene Room

Date & Time: Monday 23 June, 14:20 – 15:35

#### **Background**

CCRCB specializes in the integration of clinical and scientific investigation to underpin advances relevant to the promotion of personalized cancer medicine. Core to its research is its accredited Molecular Pathology Unit providing real-time diagnostics for patients and a clinically and genetically-annotated tissue repository for use by the research community. CCRCB's research programmes into major solid tumours of gastro-intestinal, prostate, breast and ovarian origins, in addition to adult hematological malignancies, focuses on the discovery of biomarkers and therapeutic targets. CCRCB's extensive use of industrial-academic partnerships underpins transition into innovative biomarker-led trials of novel agents through its Northern Ireland Clinical Trials Unit.

#### **CCRCB Representative**

##### ***Professor David Waugh, Director, CCRCB***

David is director of the Cancer Research & Cell Biology (CCRCB) at Queen's University Belfast. This is a cross-Faculty, interdisciplinary research centre with over 300 clinical and basic researchers from across the world and is committed to the highest quality of research excellence

#### **Meeting Summary**

Prof. Waugh outlined how advances in personalised therapy and innovative improvements in the trials landscape and diagnostics coupled with high-quality clinical and scientific training programmes have led to dramatic improvements in Northern Ireland cancer survival rates.

It was demonstrated how partnerships between businesses, universities and government can lead to improved patient outcomes. Prof. Waugh highlighted his belief that, in order to maximise the societal gains, DETI, DHSSPS, and DEL must work in a coordinated manner to support the sector. It was also stated that although there is, and will continue to be, a global impact resulting from the work of the Centre, the level of impact at a local level is much less certain.

In Prof. Waugh's opinion, it is one thing to have knowledge but to apply that knowledge is the differentiator of a progressive healthcare system. He informed members that every £1 spent on R&D is worth £8 to the local economy in terms of employment, taxation and change in economic data.

### **Agreed Committee Actions**

The Committee will receive a briefing from Prof. Waugh to include:

- How DETI, DHSSPS and DEL can work more cooperatively to support the sector to bring jobs to Northern Ireland and to improve outcomes for patients.
- The importance of collaboration with traditional and non-traditional partners in order to succeed.
- The benefits of improved collation of information on clinical trials.

The Committee will receive a written briefing from DETI on progress with the Connected Health Initiative.

### **Related Websites**

[www.qub.ac.uk/research-centres/CentreforCancerResearchCellBiology/](http://www.qub.ac.uk/research-centres/CentreforCancerResearchCellBiology/)  
[www.qub.ac.uk/research-centres/CEM/](http://www.qub.ac.uk/research-centres/CEM/)

#### 4. UKTI BIO Reception

Location: Marriott Marquis & Marina Hotel  
Marina Kitchen  
333 West Harbor Drive  
San Diego, California 92101

Date and Time: Monday 23 June, 17:00 – 18:30

#### **Background**

This event is a networking reception, organized by UKTI, British Consulate-General, LA.

Guest speakers are the Rt. Hon David Willetts, Minister of State for Universities and Science and Mark Stevenson, Executive Vice President & President of Life Sciences Solutions, Thermo Fisher Scientific. The topics discussed will centre on the experiences of stewarding a science-driven business and a Government's priorities in research funding through macroeconomic, market, and technology change.

Thermo Fisher Scientific Inc. is the world leader in serving science, with revenues of \$17 billion and 50,000 employees in 50 countries. Its mission is to enable its customers to make the world healthier, cleaner and safer. It helps its customers accelerate life sciences research, solve complex analytical challenges, improve patient diagnostics and increase laboratory productivity.

#### **UKTI Representatives**

##### ***Rt Hon David Willetts MP***

Minister of State for Universities & Science. Appointed in May 2010, he is the Conservative MP for Havant in Hampshire. David began his career in Parliament as the MP for Havant in 1992. He served as Paymaster General and then in the Shadow Cabinet in a range of roles, including Shadow Secretary of State for Trade and Industry, Shadow Secretary for Education and Skills, and Shadow Secretary for Innovation, Universities and Skills. He has also worked at HM Treasury and in the Number 10 Policy Unit.

##### ***Mark P. Stevenson, Executive Vice President & President of Life Sciences Solutions, Thermo Fisher Scientific***

Mark Stevenson has been Executive Vice President and President of Life Sciences Solutions at Thermo Fisher Scientific, Inc. since February 2014. Mr. Stevenson served as the Chief Operating Officer and President of Life Technologies Corporation (formerly, Invitrogen Corp.) since November 2008.

He has more than 20 years of sales, marketing, and international executive management experience. He served as a Co-President of Life Technologies Corporation.



**Members of the Committee with Rt Hon. David Willetts MP, Minister of State for Universities and Science**

### **Meeting Summary**

This informal event provided members to network with businesses and researchers and to hear from the UK Minister of State for Universities and Science on his vision for the future of bio-tech in the UK.

The event concentrated on how government and industry must develop policies and business models to capitalize on developments in the area of life sciences. The Minister highlighted the benefits to the life sciences industry of a health service which provides a resource for a wide range of research, and which supports business, research and the medical profession to transform research into pharmaceutical products.

### **Agreed Committee Actions**

The Committee will receive information from DETI and UKTI on the work UKTI has undertaken and plans to undertake with the Northern Ireland Executive and with Northern Ireland to support and assist the business sector here.

**Related Website**

[www.gov.uk/government/organisations/uk-trade-investment](http://www.gov.uk/government/organisations/uk-trade-investment)

## 5. BIO Breakfast Meeting

Location: The US Grant Hotel  
326 Broadway, San Diego, CA 92101 USA.  
Phone: (619) 232-3121

Date & Time: Tuesday 24 June. 07:00 – 09:00

### Background

The key aim of the Bio Breakfast meeting was to allow potential investors to hear about activities which are taking place within Northern Ireland.

Present at meeting were:

From NI:

- Client companies
- Governmental officials (including ETI Members)
- Invest NI team

International Attendees:

- Potential company investors
- Academic institutions
- Investment organisations
- International governmental officials
- Trade associations

### BIO Breakfast Speakers

#### ***Karen Borda, Almac, Global Head of Business Systems Adoption***

Karen manages a team of professionals that define the needs for business systems and ensures business and operational readiness for those systems. As part of her nearly 10 year tenure at Almac, she has also served in various capacities in the design, development and implementation of new products and services. Prior to her work at Almac, Karen served as an entrepreneur, business manager, and consultant with a major focus in the pharmaceutical industry.

#### ***Professor David Waugh, Director, CCRCB***

David is director of the Cancer Research & Cell Biology (CCRCB) at Queen's University Belfast. This is a cross-Faculty, interdisciplinary research centre with over 300 clinical and basic researchers from across the world and is committed to the highest quality of research excellence

## **Meeting Summary**

This event provided members with the opportunity to see how the Minister, the Department and Invest NI engage with existing investors, indigenous Northern Ireland businesses and potential overseas investors to help attract inward investment to Northern Ireland.

Presentations were made by the Minister, Invest NI, Almac and QUB Centre for Cancer Research & Cell Biology. Almac presented the work they undertake covering manufacturing activities, service activities and R&D. QUB highlighted some of the work they are undertaking in Collaborations, Translational medicine activities and R&D.

The event also provided an opportunity for Committee members to contribute to discussions and to network with both existing and potential investors.

## **Agreed Committee Actions**

The Committee will write to Invest NI to highlight that during the visit members were impressed by the ability of Invest NI representatives to adapt their style and approach to make it appropriate to the clientele they are dealing with and the way in which they promote the many positive attributes that Northern Ireland has to offer potential investors.

The Committee is aware that Invest NI holds an annual event in Northern Ireland which is attended by all Invest NI representatives. The Committee would welcome the opportunity to engage informally with representatives during the next event and also to receive a formal oral evidence session from a representative sample of overseas representatives to highlight the work that they do and the benefits this work brings to Northern Ireland.

## **Related Website**

[www.investni.com](http://www.investni.com)



## **6. Meeting NI Exhibitors on Invest NI Stand at BIO International Convention**

Location: Stand 3223  
San Diego Convention Centre  
111, W Harbor Drive, San Diego

Date & Time: Tuesday 24 June. 09.45 – 11:00

### **Background**

Life Sciences is one of the priority sectors that will drive the future growth of Northern Ireland's economy. Over the past few years, Northern Ireland industry, academia and government have made significant commitments to the development of life sciences capability. Northern Ireland has developed a prime location for biotechnology and pharmaceutical companies, thanks to a long history of technical innovation, backed by a highly educated young workforce and an internationally recognized research base.

### **Committee Members Engagement with Exhibitors on the Northern Ireland BIO Stand 2014**

#### ***Agri Food & Bioscience Institute (AFBI)***

AFBI's mission is to maintain and enhance its reputation as a world class scientific institute, delivering proven value to Government and to customers. AFBI provides research and development, analytical and diagnostic services, and scientific advice in areas of agriculture, economics, food, animal and plant health, marine and fresh water ecosystem management, renewable energies and the agri-environment.

AFBI has long-standing, world-renowned expertise in serving the agri-food industry locally and across the world. It engages in collaborations with other agencies, academic institutions and private companies as well as organizations worldwide, and has formal reciprocal agreements with organizations in many territories, including China and India.

AFBI has a successful track record of commercialising diagnostic techniques for animal vaccine development with an annual royalty income in excess of £6 million.



**Joel Ferguson, Head of Business Development and Innovation at the Agri-Food and Biosciences Institute, outlines AFBI's success in commercialising diagnostic techniques for animal vaccine development with Sandra Overend MLA and Megan Fearon MLA**

### ***Queen's University, Belfast (QUB)***

QUB is a broadly-based, research-driven university with a dynamic world-class research and education portfolio and strong international connections. An emphasis is placed on the expansion of inter-disciplinary and multi-disciplinary activities and engagement with Industry. Life Science and Biomedical research is a strong research focus for the university. At BIO, QUB will be highlighting the R&D activities of our research centres: Centre for Cancer Research and Cell Biology; Centre for Infection and Immunity; Centre for Public Health; Centre for Vision and Vascular Sciences; Centre for Experimental Medicine; and Questor: Environmental Technologies.

Profiling the unique technologies developed in these centres in the areas of diagnostics, drug discovery, drug delivery, industrial biotech and enabling technologies. QUB offers in-licensing opportunities in early stage technologies in the biotech, pharma and medtech sectors, as well as opportunities in these areas for collaborative research and joint ventures.



**Fearghal McKinney MLA discusses the benefits of increased cooperation between business and universities with Vincent Farrelly, Commercial Development Manager, Queens University Belfast**

### ***Centre for Cancer Research and Cell Biology (CCRCB)***

CCRCB specializes in the integration of clinical and scientific investigation to underpin advances relevant to the promotion of personalized cancer medicine. Core to its research is its accredited Molecular Pathology Unit providing real-time diagnostics for patients and a clinically and genetically-annotated tissue repository for use by the research community. CCRCB's research programmes into major solid tumours of gastro-intestinal, prostate, breast and ovarian origins, in addition to adult hematological malignancies, focuses on the discovery of biomarkers and therapeutic targets. Its extensive use of industrial-academic partnerships underpins transition into innovative biomarker-led trials of novel agents through its Northern Ireland Clinical Trials Unit.

### ***University of Ulster, Biomedical Sciences Research Institute (BMSRI)***

BMSRI undertakes research in biomedical science, personalised medicine, nutrition / dietetics, optometry, and pharmaceutical science. There is a focus on key degenerative diseases, including those with a nutritional aspect, that affect an increasingly ageing population. BMSRI undertake research from the basic molecular level to human clinical trials, with translation to clinical and commercial benefits. Its basic and applied research into disease development has led to improvements in disease prevention, diagnosis and therapy.



**Dr Le Roy Doweey from the University of Ulster Biomedical Sciences Research Institute, highlights for Gordon Dunne MLA, the benefits to the University of attending events such as the Bio International Convention**

### ***Almac Group***

Almac has the most comprehensive range of services extending from research through pharmaceutical and clinical development to commercialization of product. The privately owned, financially stable company with over 3,300 employees has its global headquarters in Northern Ireland and has extensive facilities in the UK and US. Over 600 companies worldwide, including all the market leaders, use its services, which is testament to the quality, innovation and efficiency of its business, proven over the last 30 years.

### ***Ciga Healthcare Ltd***

CIGA Healthcare Ltd. is an award-winning, dynamic company that specializes in the production of Rapid Diagnostic Tests for home use, clinical laboratories, the professional market and healthcare sector. Established in 2005, the company has grown quickly, supplying several of the main supermarkets (e.g. Asda) and over 3,500 UK-based pharmacies, including Boots.

Giga is also a preferred supplier to the UK National Health Service (NHS) and the Health Service Executive (HSE), Republic of Ireland. CIGA Healthcare LLC was established in USA in 2012 and is gaining market share. CIGA Healthcare Ltd. Has international partners, distributing Suresign products to over 70 countries.



## **Sepha Ltd**

Founded in 1980, Sepha is a global leader in the manufacture of specialist non-destructive leak detection, de-blistering and blister packing machines for the pharmaceutical industry. Machines such as the VisionScan, the world's first tool-less vision-based detection machine for blister packs, offers customers a more technologically advanced and reliable alternative to traditional destructive methods such as blue-dye. Sepha offers a smarter alternative to how pharmaceutical companies recover, leak test and package their high-value products, helping reduce production costs and improve efficiencies.



**Paul Smith, Sepha's North American Representative explains to Committee members how Sepha's non-destructive leak detection approach can bring cost savings to pharmaceutical companies and improve the quality assurance process**

## **Meeting Summary**

Members welcomed that fact that many of the Northern Ireland companies and institutions very much welcomed and appreciated their presence at and interest in the conference and the organisations. Sandra Overend MLA commented, *"it was therefore important that we took the time to listen to and converse with those attending the Convention to hear about their work and how they hope to benefit from attending."*

## **Agreed Committee Actions**

Members were pleased with the positive reception they received from Northern Ireland companies attending the event and at how companies welcomed their attendance and members' keen interest in their businesses. The Committee will consider how it will, in the future, highlight and express the interest which members take with regard to local businesses and their growth and development.

## **Related Websites**

[www.afbi.gov.uk](http://www.afbi.gov.uk)

[www.qub.ac.uk](http://www.qub.ac.uk)

[www.qub.ac.uk/research-centres/CentreforCancerResearchCellBiology/](http://www.qub.ac.uk/research-centres/CentreforCancerResearchCellBiology/)

[www.ulster.ac.uk](http://www.ulster.ac.uk)

[biomed.science.ulster.ac.uk/bmsri/](http://biomed.science.ulster.ac.uk/bmsri/)

[www.almacgroup.com](http://www.almacgroup.com)

[www.cigahealthcare.com](http://www.cigahealthcare.com)

[www.sepha.com](http://www.sepha.com)

## **7. Meeting Exhibitors at Scottish Development International Stand**

Location: Stand 3117  
San Diego Convention Centre  
111, W Harbor Drive, San Diego

Date & Time: Tuesday 24 June 11:00 – 11:30

### **Background**

There are more than 650 life sciences companies in Scotland, including 5 of the top 10 global contract research organisations (CROs). £36.8 million has been invested into Scottish life sciences companies in past 5 years by the Scottish Investment Bank. Scotland has a dedicated £50 million Scottish life science and health technologies venture capital fund from Epidarex Capital

The following sectors were represented on the Scottish Development International stand; Oncology; Biotherapeutics and Contract Research providers as well as the following leading Universities;

- University of Aberdeen
- University of Dundee
- University of Edinburgh

### **Meeting Summary**

Members welcomed the opportunity to informally discuss the Scottish experience at Bio and to see how Scotland approaches such events. Whilst there were many positives about the Scottish approach, it did serve to underline the high level of commitment and professionalism adopted by Invest NI in the planning and approach to the Northern Ireland stand.

### **Agreed Committee Actions**

The Committee recognises the advances made in Scotland in relation to life & health sciences. The Committee will commission research to consider how best to engage in Scotland to learn from the successes there.

### **Related Websites**

[www.sdi.co.uk](http://www.sdi.co.uk)

## **8. Meeting Exhibitors at UKTI Stand**

Location: Stand 3317  
San Diego Convention Centre  
111, W Harbor Drive, San Diego

Date & Time: Tuesday 24 June 11:30 – 12:00

### **Background**

The UK sector was strongly represented at BIO this year with over 30 companies and organisations exhibiting through UK Trade & Investment (UKTI), Scottish Development International and Invest Northern Ireland on the UK Pavilion. There was also significant representation from UKTI's life science trade and investment specialists based at consulates in the USA and in Canada, Mexico, Brazil, India, Japan, Singapore, Australia and New Zealand – all offering support and market advice. The BIA, the trade association for UK bioscience, which is a UKTI Accredited Trade Association, was also present at BIO this year.

### **Meeting Summary**

Members met with Public Health England (PHE); an executive agency of the UK Department of Health. PHE's aim for the mission was to promote access to its network of specialist laboratories and bespoke services for translational research, development and testing of new healthcare products. Particularly in the research, development and testing of new diagnostics, vaccines, antimicrobials and other healthcare interventions.

PHE explained that, despite its name, it has responsibilities covering the entire UK.

### **Agreed Committee Actions**

The Committee will write to the Committee for Health, Social Services and Public Safety to suggest that it receive information from DHSSPS and Public Health England on the work it has undertaken and plans to undertake in Northern Ireland PHE to support and assist the life & health sciences sector here.

### **Related Website**

[www.gov.uk/government/organisations/public-health-england](http://www.gov.uk/government/organisations/public-health-england)



## 9. Almac Discovery Stand at BIO International Convention

Location: Stand 604  
San Diego Convention Centre  
111, W Harbor Drive, San Diego

Date & Time: Tuesday 24 June 14:00 – 14:30

### Background

The Almac Group is a global services provider operating in the pharmaceutical and biotechnology sectors. It employs 2,073 skilled individuals at its headquarters in Craigavon and approx. 1200 in its base in Pennsylvania. Most of the world's large pharma companies are based in the US and is a critically important market for the company and its multiple divisions. Attendance at BIO allows the company to showcase its international capabilities on an international stage.

Almac Discovery is focused on the discovery and development of novel and innovative approaches to the treatment of cancer and associated conditions, with the goal of developing biomarkers or diagnostic tools in parallel with each potential new therapeutic.

They have significant experience in the discovery and development of both small molecules and peptide therapeutics and have taken programmes through all stages from target finding to Phase I clinical trials as evidenced in the company's pipeline.

### Meeting Summary

Following on from members' earlier meeting with Almac Group, this was an opportunity for members to engage informally with representatives from Almac Discovery to learn about their work and products.

### Agreed Committee Actions

The Committee will request a written briefing from Almac Group on the experience of Almac Group and Almac Discovery at Bio and the benefits they gained from attendance.

### Related Website

[www.almacgroup.com/discovery](http://www.almacgroup.com/discovery)

## **10. San Diego Stand at BIO International Convention**

Location: Stand 3523  
San Diego Convention Centre  
111, W Harbor Drive, San Diego

Date & Time: Tuesday 24 June 14:30 – 15:00

### **Background**

The San Diego Regional Economic Development Corporation (SDREDC) reports that the life science cluster in San Diego has an annual economic impact of \$5.3 billion in direct spending and another \$3.8 billion in multiplier spending for a total impact of \$9.1 billion a year (2006 dollars). According to the SDREDC, the county's life science jobs pay an average wage in excess of \$80,000 – 83% above the average pay for all jobs.

San Diego life science companies -- including biotechnology firms and medical device firms -- received more than \$4.9 billion in venture capital funding in the years 2001-2007, according to the MoneyTree Survey of PricewaterhouseCoopers. That figure represents 57.3 percent of all VC investment in San Diego County during that time. San Diego companies and research institutes received more than \$1 billion in combined research funding from the National Institutes of Health and the National Science Foundation in 2005, the latest year for which figures are available according to the SDREDC.

The cluster is also collegial and collaborative. San Diego universities and biotech research institutes have spun off an estimated 200 life science companies, according to the SDREDC. The San Diego Consortium for Regenerative Medicine is California's leading recipient of California state grants to conduct human embryonic stem cell research. The consortium is made up of UCSD, the Burnham Institute for Medical Research, the Salk Institute for Biological Studies, and The Scripps Research Institute.

### **Meeting Summary**

Following on from members' earlier meeting with SDREDC, this was an opportunity for members to engage informally with SDREDC representatives and learn about the organisation's approach to selling the region to the biotech sector.

## **11. RocketSpace Accelerator**

Location: 225 Bush Street  
San Francisco  
CA 94104

Date & Time: Wednesday 25 June, 09:30 – 10:30

### **Background**

RocketSpace is a technology campus for high-growth, seed-funded tech start-ups. They provide the fuel that every start-up needs to accelerate: access to top talent, tier 1 venture capital, and blue-chip brands representing millions of potential customers.

Located in the heart of tech & new media in San Francisco, RocketSpace currently host over 130 of the hottest start-ups in mobile, gaming and Web 2.0 as well as an alumni network including Uber, Zaarly, PocketGems, Zappos and Podio.

### **RocketSpace and Invest NI**

RocketSpace has been a valuable partner of Invest NI for some time; Minister Foster visited their old campus in September 2012. Three NI start-ups use the space, Scaboodle, GoPrezzo and most recently Sophia Search moved their 4-person US team there. In October 2013 RocketSpace and one of their partners, US Market Access Centre hosted the 20 NI Start-ups on the Belfast Tech Mission led by former Belfast Lord Mayor Mairtin O’Muilleoir.

### **Meeting Summary**

The CEOs and senior executives in large multi-national corporations such as LG and Chanel work with RocketSpace to find potential partners. There are some excellent examples of how high-tech brands, which are now well known, have emerged and developed through RocketSpace. Not least of these is Spotify.

RocketSpace is funded through membership fees from companies, through income from consultancy services provided to companies and from training to individuals. It is currently running a 12-week programme for engineers.

RocketSpace recognises that there is a lot of elite talent in Silicon Valley but states that there is a lot of competition for that talent.

Economies of scale are important for RocketSpace. With a community of 400-500 people per year RocketSpace can get CEOs of large businesses involved. If it was on a smaller scale of 40-100 people it would be much more difficult to attract large businesses.



**Committee members at the RocketSpace Campus**  
**Pictured (L-R) Megan Fearon MLA, Ronan Roche RocketSpace, Fearghal McKinney MLA, Gordon Dunne MLA, Stefan Seltz-Axmacher Accelerator Associate RocketSpace and Sandra Overend MLA**

### **Agreed Committee Actions**

RocketSpace is one of a number of such incubator organisations in the San Bay Area. Considering the success of RocketSpace and other similar centres, members considered how a similar approach could be employed to support the development of innovative ideas in Northern Ireland. The Committee agreed to raise the following points with Invest NI and the Northern Ireland Science Park:

- Northern Ireland has the Northern Ireland Science Park (NISP). Is there scope for the development of other incubation centres for innovative start-up companies?
- Do the economies of scale exist to develop such centres in Northern Ireland?
- What else can Northern Ireland do to develop and grow the high-tech business sector?

## Related Website

[www.rocket-space.com](http://www.rocket-space.com)

## **12. Roundtable Lunch with Existing and Potential Investors**

Location: Terrace Room at the Garden Court Hotel  
530 Cowper Street  
Downtown Palo Alto, CA 94301

Date & Time: Wednesday 25 June, 12:00 – 14:00

### **Background**

This was an opportunity for Committee members to see at first-hand how the Minister and Invest NI engage with existing and potential investors to Northern Ireland to build relationships and to highlight the opportunities for businesses in establishing here. The Committee was aware that the process of attracting inward investment requires the building of relationships and trust over a number of years. This event provided an opportunity for members to see US businesses at various stages along the development of those relationships.

The event also provided an opportunity for Committee members to contribute to discussions and to network with both existing and potential investors.

### **Meeting Summary**

Companies from the United States which have already been established in Northern Ireland were represented by:

- John McDonnell, CEO, BitNet (current investor)
- David Richards, CEO, Wandisco (current investor)

Existing investors were able to highlight the positive experience they have had from investing in Northern Ireland. This included the importance attached to the economy by the Executive resulting in support from government at all levels; the young, well educated population; how the universities and FE colleges will work with companies to develop the skills they require; and the quality of the working and living environment that exists in Northern Ireland.

Members contributed to discussions and helped promote the message that Northern Ireland is open for business. It also provided the opportunity for members to emphasize and actively demonstrate the all-party support that exists here for the development of a successful knowledge driven economy.

### **Agreed Committee Actions**

The Committee would like to be kept informed by Invest NI on investment decisions by potential investors.



### ***Current Position***

As the Northern Ireland team has advanced its knowledge and skills in Hard Disc Drive technology, the Group has increasingly invested more in R&D in Northern Ireland resulting in the local facility being responsible for taking products through from research, design, preproduction, development and into large scale manufacture. Historically, the NI facility required significant support from the US R&D teams to introduce new products to NI, but through continued investment in the NI R&D team, these roles have shifted, with NI now providing support to the US for the introduction of 'Notebook' products.

During the years of expansion of the facility and advancement of the technological capability, IDB and now Invest NI has been providing support to help develop this world renowned capability. The advancement in technology has also spilled over to Queens University Belfast as a result of Seagate's substantial investment in the Ansin Centre at the university where a team of 34 people are involved in leading edge materials technology research that spans a number of industries.

### ***Future Developments***

Annual growth rates of up to 100% p.a. have been required by the growth in the need for personal and enterprise data storage, driven by the ownership of consumer products such as smart-phones and tablet/notebook computers. It is this rapid growth in demand for storage that is driving the need for these new technologies.

There is an opportunity for the Springtown facility, which played a major role in the successful development, productisation and deployment of Perpendicular Magnetic Recording heads (the current leading technology in this area), to play a major role in the development of this new technology. In doing so, they would establish their expertise in this technology and place the Springtown head-manufacturing facility in an excellent position to ride the further growth of the disc-drive storage industry.

### **Seagate Representatives**

#### ***Patrick O'Malley, Exec VP & Chief Financial Officer***

Patrick O'Malley joined Seagate in 1988. He assumed the role of EVP and CFO effective 25 August 2008. In his previous role as SVP Finance & Treasurer, he was responsible for Corporate Accounting, Reporting, Treasury, Credit & Collections and Risk Management, along with Corporate Financial Planning & Analysis and support for our Business Unit GMs, Sales and other functions.

In October 2005, he returned to Finance from the Sales Organisation, where he coordinated the Company's activities surrounding the consumer electronics market as SVP for Consumer Electronics Business Development from January 2004



### ***Forrest Monroy, VP, Government Relations – Worldwide***

Forrest has over 20 years of experience in integrated marketing communications, corporate marketing, public relations government relations and corporate communications functions, primarily in the technology sector.

He is responsible for directing the company's collaboration with government ministries, industry stakeholders, association partners and customers to build relationships and understand national and local trends, infrastructure capability and government strategies globally, providing business insights to the company for long term strategic planning.

### **Meeting Summary**

The Springtown facility is one of the most important sites for Seagate. It represents relatively low cost and high value for the company. The future of the plant will involve increasing amounts of research. Seagate is also becoming involved with the universities more than ever.

The current environment is challenging. The company needs to attract the best and the brightest and to maintain a workforce that continues to develop and become educated as technology becomes increasingly complex. 2015 will bring a lot of investment in infrastructure and technology.

Northern Ireland is ideal to do business in because of three main things: education, infrastructure and access. The workforce aspect is critical. Invest NI and Northern Ireland provides a good business environment. Invest NI has a very good team. Seagate benefits from a unified voice from Northern Ireland on what investment means for the region. This is something that does not exist widely in other countries.

Northern Ireland should use its engaging work environment as an asset. This needs to be promoted more. The Invest NI team is in the top tier of anywhere in the world. The Government interface with business and the proximity of access is huge and important. Invest NI should make more visits to the USA and elsewhere. They are hugely important.

Automation is happening. There is more focus on technicians and higher education for employees. Manual jobs have left the Bay Area with the economic downturn and are not coming back. Higher skilled jobs are coming back much faster.

Seagate representatives shared their views that languages are a very important part of education and should be encouraged more, especially Chinese, Russian, Japanese and Spanish.



**Committee Members visit Seagate Cupertino Facility**  
Pictured (L-R) Patrick O'Malley, Exec VP & Chief Financial Officer Seagate, Megan Fearon MLA, Gordon Dunne MLA, Fearghal McKinney MLA, Forrest Monroy, VP, Worldwide Government Relations Seagate and Sandra Overend MLA

The workforce aspect is critical. The relationship with the universities is also critical. It has been everything Seagate has expected given what was promised. Seagate's technological needs are not in the normal silos that would pervade in a university syllabus. The syllabus is being developed to help meet the needs of the company. In Northern Ireland the relationship with the universities is now "best in class". Northern Ireland and Singapore are both in this category.

### **Agreed Committee Actions**

In relation to the development of partnerships between universities and businesses. The Committee agreed to find out from Invest NI how they work to convince potential investors that partnerships will be developed with universities to ensure the skills required by business are the skills being developed through university syllabuses.

### **Related Website**

[www.seagate.com](http://www.seagate.com)

## 14. Breakfast Roundtable with Bay Area Council

Location: Invest NI  
44 Montgomery Street, Suite 3050  
San Francisco  
CA 94104

Date & Time: Thursday 26 June, 09:00-10:00

### Background

The Bay Area Council is the most powerful industry lobbying group in California representing Fortune 500 companies across a number of key sectors including utilities, technology, pharmaceuticals and services. It is a business-sponsored, public policy advocacy organization for the nine-county Bay Area. The Council proactively advocates for a strong economy, a vital business environment, and a better quality of life for everyone who lives in the region.

Founded in 1945, as a way for the region's business community and like-minded individuals to concentrate and coordinate their efforts, the Bay Area Council is widely respected by elected officials, policy makers and other civic leaders as the regional voice of business in the Bay Area. More than 275 of the largest employers in the region support the Bay Area Council and offer their CEO or top executive as a member. Matt Regan, originally from Northern Ireland is the VP of Government Relations for the Bay Area Council.

### Bay Area Council Representatives

#### ***Matt Regan, VP Public Policy, Bay Area Council***

Matt Regan is the Bay Area Council's Vice President of Public Policy and his responsibilities include promoting the Bay Area Council's legislative and political agendas at the local, state and federal levels.

Matt has over 15 years' experience working in the political arena and prior to joining the Bay Area Council Matt worked as a contract lobbyist, an in house Government Affairs specialist for a large bank, a State Assembly legislative aide and a field organizer for several high profile elections across the Bay Area. Matt is a native of Londonderry and has lived in California for over 20 years.

He attended the Middlesex University School of Law in London where he earned his LLB and the University Of Ulster School Of Business where he graduated with a Post Graduate Degree in Marketing.

### ***Tracey Grose, VP, Bay Area Council, Economic Institute***

The Bay Area Council Economic Institute, a public-private partnership of business, labour, government and higher education that works to foster a competitive economy in California and the San Francisco Bay Area, including San Francisco, Oakland and Silicon Valley. She directs research and manages the Institute's operations.

Over her career as a researcher and consultant based in the Bay Area, Tracey has explored new ways of explaining our changing economy. Tracey possesses a deep curiosity for regional innovation systems, growing global linkages, and the clean energy economy. At the Economic Institute, Tracey has designed and directed the Bay Area's global linkages with Europe and other places, the future of transportation systems and the role of Alameda County in the movement of goods and people in the region, and the role of transportation systems in supporting continued growth in the Tri-Valley. Currently, she is leading research and engagement efforts on the topics of communications technology, advanced manufacturing, and a regional economic strategy.

In international work, Tracey has supported efforts developing regional innovation strategies in multiple regions of France and in Southern Sweden and has carried out informal study of energy and innovation policy in Germany. Tracey has a Master's degree in Political Science with minors in Economics and Sociology from the Johann Wolfgang Goethe-University in Frankfurt, Germany. Tracey is fluent in German and conversational in French.

### **Meeting Summary**

The Bay Area Council deals with issues which are not directly business related. The organisation makes sure there is a business representative voice at the table during government decision-making, for example, on rail, water, etc.

Companies such as Chevron and Apple are underpinning of the region's economy. The region also leads the world in venture capital. Most VC comes from the Bay Area and most is invested in the Bay Area. The Bay Area is the seventh largest economy in the world.

The key issues facing businesses in the Bay Area are the high cost of housing, the highly regulated business environment and the unpredictable revenue stream from taxes. The biggest threat to the knowledge-based economy is the inability to attract talent due to costs. Around 80% of state tax comes from a small number of high earners. There is not a predictable, reliable revenue stream from taxes.

The investment management team in Belfast is excellent. Invest NI does a much better job than other similar organisations elsewhere. Invest NI is

punching above its weight. It is important that they keep coming and that they keep bringing delegations. The opportunities are there for Northern Ireland because the costs of doing business in the Bay Area are so high. A lot of these relationships are personal, therefore visits such as the current one are important and so are visits from US firms to Northern Ireland. It is important to bring people to Northern Ireland to see what is available for them there. Strong credible relationships can take a number of years to build.



**Committee Members pictured with Tracey Grose, VP, Bay Area Council, Economic Institute and Matt Regan, VP Public Policy, Bay Area Council**

There is an issue where Invest NI is working to sell Northern Ireland to a potential investor and once the investor comes to an agreement, the relationship changes to one of due diligence where Invest NI must get as much information as possible about the company in order to make a decision.

### **Agreed Committee Actions**

The Committee agreed to raise the following points with Invest NI:

- Where companies wish to expand into Europe what opportunities exist to encourage companies to invest in Northern Ireland where there is a pool of available talent?
- How does Northern Ireland business regulation compare with that in the Bay Area?
- How does Invest NI ensure that its policies and procedures are appropriate for attracting high-tech fast-growing companies from abroad.

What changes in policies, procedures and approach has there been in recent times to focus on this sector?

- How does Invest NI ensure that its policies and procedures are appropriate for support indigenous fast-growing start-up businesses?  
What changes in policies, procedures and approach has there been in recent times to focus on this sector?

### **Related Website**

[www.bayareacouncil.org](http://www.bayareacouncil.org)



## 15. Meeting with Mayor Tom Bates, City of Berkeley

Location: Mayor's Office  
2180 Milvia St., 5<sup>th</sup> Floor  
Berkeley, CA 94704

Date & Time: Thursday 26 June, 11:00 – 12:00

### Background

Berkeley is a small city in California (120,000 people) and in fact, there are 30 cities bigger than Berkeley in California alone however it is known around the world for its innovation, economic vitality, healthy and safe neighbourhoods, it's clean and green environment, diverse population and unique cultural experience. The city is nationally recognized as an environmental, solar, and green city with the number one public university in the country.

Tom and his wife Loni Hancock have visited Northern Ireland most recently in 2011 when they spent time in both Belfast and Londonderry and met representatives from both councils. They are very supportive of Invest NI's work and attend many of our events when they can.

Most recently, Tom hosted Máirtín Ó Muilleoir, Belfast Mayor when he was in San Francisco in October 2013 for the Belfast Tech Mission. Tom also led a tour of the Berkeley technology Incubator for a number of our NI companies and since then, Kainos, our largest indigenous technology company have taken some space there.

### City of Berkeley Representative

#### *Mayor Tom Bates*

Thomas H. Bates (born February 9, 1938) is an [American politician](#) and is currently serving as the [Mayor](#) of [Berkeley, California](#). He previously served 20 years as a member of the [California State Assembly](#) before being termed out in 1996. Bates is married to [Loni Hancock](#), a former mayor of Berkeley and State Assembly member who currently serves in the California State Senate. Bates is a graduate of the [University of California, Berkeley](#) and was a member of the [Golden Bears'](#) 1959 [Rose Bowl](#) team. Bates was a Captain in the [United States Army Reserves](#) after graduating from college and served in Germany. He worked in real estate prior to his service in the state legislature. Bates also served as a member of the [Alameda County](#) Board of Supervisors.

Bates served in the California State Assembly representing the [14th District](#) (the [East Bay Area](#)) from 1976 to 1996. During those 20 years, Bates was known as one of the legislature's most liberal members. Under Republican

governors, Bates authored over 220 bills that became law, including the creation of the East Bay Shoreline State Park, a number of progressive social policy laws, and the founding of the first Community Bank in the Bay Area. Bates authored the first legislation in the country allowing "brew pubs" - establishments that brew their own beer for sales on and off the premises and are typically combined with a restaurant. After retiring from the Assembly in 1996, Bates taught at UC Berkeley and worked to ensure healthier foods in the Oakland and Berkeley school districts. In 2002, Bates was drafted out of retirement to challenge the two-term incumbent mayor of Berkeley, [Shirley Dean](#). He won the race with 55% of the vote.



**Mayor of Berkeley, Tom Bates welcomes members of the Committee to the City**

## **Meeting Summary**

The City looked at how Berkeley can reposition itself. It has a strong image of the University and the National Laboratory. These work well together. Graduates attached to the university provide talent for innovation.

These people generate ideas and companies develop from those ideas. They would then have to move to San Francisco when these companies grow in order to get the space they need as there are space limitations in Berkeley. Berkeley is looking to help these companies start-up and now have around 250 start-ups. The next stage is to determine how they can be supported to stay in Berkeley. This has led to more cooperation with other cities and a move to thinking about the region as a whole. For example, when a company grows to a size that Berkeley cannot contain them, the next best option is for that company to move to a neighbouring city where some benefits still accrue



to Berkeley from people staying in the area and commuting. The job growth in Berkeley is in small companies.

Berkeley is also working on 'place-making'. Cultural amenities are important including places such as theatres for people to socialize.

It is important to figure out the relationship between government, business and education. Berkeley Startup Cluster is creating an advisory group of 25 or so 'tech veterans', serial entrepreneurs, etc who consult with the Mayor's Office a number of times a year to see if the Office is working appropriately to support such businesses. Berkeley is taking a long-term focus on education from elementary (primary) school level, to develop a knowledge driven, educated workforce.

### **Agreed Committee Actions**

The Committee agreed to raise the following points with Invest NI:

- Northern Ireland does not have the high-costs associated with cities such as San Francisco. Would there be advantages to Northern Ireland of supporting fast-growing US companies to retain a presence in cities such as Berkeley and expand operations to Northern Ireland when considering a European presence?
- What is Invest NI's current focus in attracting smaller companies to invest from overseas? Is there more potential from smaller, high-growth companies to help grow the economy here than from larger businesses?
- How does Invest NI engage with business and check with business that its policies are succeeding in supporting businesses to grow?

The Committee agreed to ask the Minister, to outline the extent to which the Executive has considered the long-term development of the economy from the perspective of developing the right skills from early education through to higher education to the world of work.

### **Related Website**

[www.berkeleystartupcluster.com](http://www.berkeleystartupcluster.com)

## 16. Company Meeting with Ekso Bionics

Location: 1414 Harbour Way  
Suite 1201  
Richmond, CA 94804

Date & Time: Thursday 26 June 2014, 13:00-14:30

### Background

Ekso Bionics develop and manufacture powered exoskeleton bionic devices that can be strapped on as wearable robots to enhance the strength, mobility, and endurance of two groups of people; those with mobility problems, and military personnel in the field. These assistive robots have a variety of applications in the medical, military, industrial, and consumer markets. It enables individuals with any amount of lower extremity weakness, including those who are paralyzed, to stand up and walk.



**Members of the Committee see the Ekso bionic suit in operation  
Pictured (L-R) Russ Angold Chief Technology Officer Ekso Bionics, Gordon Dunne  
MLA, Fearghal McKinney MLA, Matt Tilford Ekso Bionics, Darrel Musick VP Clinical  
Ekso Bionics, Sandra Overend MLA, Megan Fearon MLA and Patrick McStravick,  
Director of Materials and New Product Introduction Ekso Bionics**

The company is a spin out from the University of California, Berkeley and was founded in 2005.

## **Ekso Bionics Representatives**

### ***Patrick McStravick, Director of Materials and New Product Introduction***

Patrick has been in his current role since joining the company in 2011. Prior to this Patrick ran supply chain and manufacturing business groups for other leaders in the medical and robotics space, including Intuitive Surgical (maker of the famous 'Da Vinci' Surgical robot) and Ultra Clean Technology. Patrick is originally from the greater Belfast area, and has been in the US for the past 20 years. He met with Belfast Lord Mayor Máirtín O' Muilleoir in Oct 2013 and was presented with a book of poetry in appreciation of his work by the Mayor.

### ***Russ Angold, Co-Founder & CTO***

Russ works closely with the Lockheed Martin Corporation, licensing Ekso technology to further develop the HULCTM exoskeleton for military use. Formerly Vice President of Engineering, Russ provided many of the concepts that shape today's current designs as well as those of the ExoHikerTM, ExoClimberTM and HULCTM. Before Ekso Bionics, Russ held various engineering positions at Rain Bird Corporation, Berkeley Process Control and the Irrigation Training and Research Center in San Luis Obispo, California.

Russ has a bachelor's degree in BioResource and Agricultural Engineering from California Polytechnic State University, San Luis Obispo.

He is a California registered Professional Mechanical Engineer and has two granted patents and another seven pending.

## **Meeting Summary**

This meeting provided the committee with the opportunity to see an example of a university spin out that has grown and scaled rapidly in a short period. It was an excellent example of the potential that high-tech companies have and how, with appropriate support, they can move to commercialise cutting edge research.

Ekso Bionics representatives visited Northern Ireland in 2013 and were very impressed with the skills and support on offer. They intend to visit again in mid-July this year.

## **Agreed Committee Actions**

The Committee agreed to ask Invest NI:

- To outline how it supports university spin-out companies in Northern Ireland to help them achieve their potential and compete commercially.
- Following the visit by Ekso Bionics to Northern Ireland, what follow-up has there been between Invest Ni and the company?

## **Related Website**

[www.eksobionics.com](http://www.eksobionics.com)