

# MATRIXNEWS

## FEATURES

Harnessing our 'can do' attitude, our skills and innovation resources for a healthier, wealthier NI economy.

Putting Northern Ireland at the Hub of Transatlantic Communication.

MATRIX, the NI Science Industry Panel, formally unveils its plan of action to position NI among the world's most successful high-tech economies.

AND MUCH MORE...

# WELCOME TO THE LATEST EDITION OF MATRIX NEWS



The Northern Ireland Science Industry Newsletter aims to provide you with a greater understanding of the work of MATRIX and give further insight into the opportunities and challenges which exist in Northern Ireland's science, technology and R&D fields.

In this issue we detail the recommendations of the MATRIX report and provide a flavour of how these might work in practice. We also outline successful case studies of collaboration; detail recent initiatives designed to foster innovation and talent and put forward the argument for change from a range of experts in the field.

The Newsletter expresses the views of those who are directly involved in MATRIX, but we are keen to create an ongoing forum for debate on the key issues facing Northern Ireland in the commercial development of its science, technology and R&D resources. Please feel free to contact us with your views or questions (contact details are provided on the back cover).



Arlene Foster, Minister for Enterprise, Trade and Investment is joined by UK Business Secretary Peter Mandelson (left) and Michael Ryan, Vice President of Bombardier Aerospace. Mr Mandelson was in Belfast to hold talks about ways to improve the local economy.

**ARLENE FOSTER, MLA**  
DETI MINISTER

**NOW IS THE TIME FOR COMPANIES TO COMBINE THEIR SHORT-TERM SURVIVAL NEEDS WITH FORWARD THINKING AND INNOVATIVE FUTURE PLANNING, BASED ON ROADMAPS SET OUT BY SOURCES SUCH AS MATRIX.**

**I and my Executive colleagues will** do all that we can to help Northern Ireland businesses address this very significant economic downturn while, at the same time, assist with laying the foundations for future prosperity. It is therefore timely that the MATRIX Panel has provided Government and Industry with a blueprint for future market opportunities, and if we are to maximise our share of these markets, we must consider how best to implement the panel's findings.

In these challenging economic times, it would be tempting to focus solely on the 'here-and-now'. But, in reality, now is the time for companies to combine their short-term survival needs with forward thinking and innovative future planning, based on roadmaps set out in sources such as MATRIX. Only then can we all seek to improve the effectiveness and competitiveness of the Northern Ireland economy, over the medium to long term.

I am pleased to note that the MATRIX report has been well received by the Executive and an interdepartmental group of senior officials is currently examining the implementation of those elements of the report which fall to Government.

I am also encouraged to see that the MATRIX Panel has continued to work actively with industry to implement the report and I look forward to seeing the first industry-led innovation communities develop over the next year.

In the meantime, it is of the utmost importance that businesses continue to invest in R&D and my Department, working through Invest Northern Ireland, is committed to

helping business make this important investment, particularly at this time. In December, I launched a new, £50 million programme of support for companies across Northern Ireland. The Invest Northern Ireland 'Grant for R&D', which is part funded by the European Regional Development Programme, will make it easier for companies to access financial support from Invest NI, for innovation-focused projects from 2008 to 2011.

In addition, the Executive remains committed to investing in infrastructure which will improve the capacity and capability of Northern Ireland business to compete in global markets. The new £30 million direct transatlantic telecommunications links to North America, which I recently announced, is an example of how technology can support our future economic growth. This project will, for the first time, provide Northern Ireland with a direct telecommunications link to North America and improve how we connect to both there and Europe. It will provide opportunities for companies here selling goods and services overseas and also improve our attractiveness to knowledge-based inward investment. This exemplifies the ways in which Government can facilitate business to lead on the R&D exploitation agenda. A number of Northern Ireland firms have already begun to exploit the strategic opportunities which the project has provided.

I look forward to working closely with Northern Ireland businesses, academics and my Executive and Assembly colleagues in taking the MATRIX report forward to implementation.



**HARNESSING OUR 'CAN DO' ATTITUDE, OUR SKILLS AND INNOVATION RESOURCES ARE VITAL FOR A HEALTHIER, WEALTHIER NORTHERN IRELAND ECONOMY, WRITES DAMIEN MCDONNELL, CHAIR OF MATRIX**

MATRIX Chairman Professor Damien McDonnell with Dr Robert Hardeman, Senior Director Seagate Technology on a visit to the Springtown facility in Londonderry.

**It has been a most interesting and stimulating** period over the past two years working with my colleagues on the MATRIX Panel and it has been an enormous pleasure to meet and talk with a large number of our business and research people, who contributed wholeheartedly to the work of MATRIX and its Horizon Panels.

Throughout our deliberations we have maintained a clear business-led market focus, which has resulted in strategic market opportunities being identified across the five sectors which we investigated.

In our comprehensive, eight-volume report delivered to the DETI Minister in October 2008, a suite of complementary recommendations at both the macro and micro-economic levels were proposed with the scope to break new ground in innovation policy in Northern Ireland.

The report identified that the key challenge to address in accelerating innovation was to effect a permanent cultural change in which the responsibility for leading the innovation agenda lay with business and not government or academia. It surmised that in order for Northern Ireland to compete effectively, market-led, cross sector and multi-disciplinary innovation must become at least as important over the coming decade as technology-led innovation was in the past.

Since the October launch we have been involved in a programme of outreach, communicating the key findings and recommendations to a wider audience of stakeholders both within and outside Northern Ireland. Our analysis and recommendations were well received and our approach endorsed by the UK Technology Strategy Board and its Strategic Advisory Group, a panel composed of all the Chairs of the UK Regional Science and Industry Councils.

There was also a strong resonance with our message from the Forfás, the national policy advisory board for science, technology and innovation in the Republic of Ireland, when we met with them in Dublin in November 2008.

Both bodies expressed a strong interest and desire to engage with us as we go forward. Indeed, the feedback from all the outreach activity has been tremendous in terms of the level of support, enthusiasm, 'can do attitude' and strong desire to get involved from all those we have spoken to. This is all very encouraging as we now look forward to the next stage of MATRIX working with Invest Northern Ireland and all the stakeholders to putting shape and structure to Business Innovation Communities allowing community members to aggregate their existing resources and support programmes for maximum impact and to increase the absorptive capacity of new ideas.

Importantly the Communities can play an active role in skills development aligned to the technology road map strategies to assure sustainable growth and I am delighted that our discussions with DEL and ANIC are moving apace.



**...in order for Northern Ireland to compete effectively, market-led, cross sector and multi-disciplinary innovation must become at least as important over the coming decade as technology-led innovation was in the past.**



We are entering difficult and uncertain times as a result of the Global credit crunch so it is all the more important that we double our efforts and work harder and smarter to achieve a healthier and wealthier Northern Ireland economy. As we move forward MATRIX stands ready to play its full part.

**DAMIEN MCDONNELL  
CHAIR**



### **RAE RECOGNISES QUB, UU**

Queen's University and the University of Ulster have been recognised for their excellent research capabilities in the latest results of the UK Research Assessment Exercise (RAE) 2008, with both universities confirming their place as members of the premier league of UK research-intensive universities. The RAE is crucial to both universities as it determines how much money they will receive for research in the future.



# TEAM WORKING BRIDGES THE KNOWLEDGE GAP

**Despite worries about the global economy,** Co Antrim-based precast concrete supplier Macrete is continuing to reap the benefits of its intensive collaboration between industry, academia and government with plans to expand its reach in the UK, Europe and Asia.

Macrete, in conjunction with Queen's University's School of Planning, Architecture and Civil Engineering (SPACE) and with support from Invest NI, has developed 'FlexiArch', an innovative flexible, flat-pack concrete arch that cuts construction and maintenance costs and provides a sustainable and durable alternative to steel reinforced concrete - a standard in most bridges.

Construction of the award-winning product was made possible through the Knowledge Transfer Partnership (KTP) scheme which is managed by Invest NI. The KTP initiative helps businesses develop effective linkages with third-level education, and helps improve competitiveness by making use of the knowledge, technology and skill that resides within third-level education.

Under the scheme, SPACE was aligned with Macrete to explore the possibility of developing a concrete arch that could be made without using expensive and corrosible steel and utilising composite material technology to guarantee a strong yet flexible replacement to standard steel-reinforced arches.

Dr Su Taylor, Senior Lecturer in Structural Engineering at QUB and the Academic Supervisor for the KTP, said: "The initial research into using composite polymer fibres instead of steel reinforcement in concrete was

conducted with Professor Adrian Long and Dr Jim Kirkpatrick at Queen's. Unfortunately we did not have enough resources to fully develop it. KTP provided us with the opportunity to partner with Macrete so that we could develop and manufacture the system into a commercially viable product."

Steel reinforcement in concrete bridges tends to corrode with time, undermining the structure's integrity and usually requiring extensive repair even after only a relatively short period of time - particularly when usage rates are high.

In Northern Ireland, around 65 per cent of the 6,400 bridges are masonry structures that may require either replacement or extensive maintenance work costing millions of pounds every year.

**The Knowledge Transfer Partnership initiative helps businesses develop effective linkages with third-level education, and helps improve competitiveness by making use of the knowledge, technology and skill that resides within third-level education.**

These significant costs alone made finding a sustainable alternative to steel reinforcement a priority and the research developed by QUB provided the ideal starting point and impetus for the product's development.

Macrete recognised the complexity of the research task - successful product development demands extensive and expensive cost analysis, advanced material development, numerical analysis and field testing, as well as resource and staff management. Abhey Gupta, a QUB graduate, joined the project as an Associate at Macrete to further develop the plans, giving the company access to the knowledge and facilities within SPACE at QUB.

A rigorous analysis of the potential market was then carried out to assess the merit of developing the idea further - it soon became clear there was a definite demand for a product that potential buyers found was innovative, sustainable and offered value for money.

Macrete's Abhey Gupta said this was a crucial stage in the product's development: "Neither Macrete or QUB had truly realised the full commercial potential of this project, but by intensely studying the market we recognised that this system offered a cost-effective, highly durable, aesthetic solution and would provide us with a major advantage in the marketplace."

This two-year partnership quickly led to the development of a complete modular system for arch bridges, with spans from four to 15 metres, which could be erected within one month of order and transported to site in 'flat-pack' form. Before the partnership, the company had only been able to provide large span arches,



stretching to more than 15 metres and had to be shipped in finished form at a high cost.

"Arches have been used in the construction of bridges for more than two centuries because they offer a strong and exceptionally durable form," Abhey said. "However, their use is becoming less frequent these days because of the time it takes to make them and the cost involved."

"The FlexiArch system is based on the same principles as traditional stone masonry-built arch bridges which date back to Roman times, but without the stone mason. Instead, we developed individual tapered concrete blocks that are connected by a flexible polymer membrane, which allows the arch to fall perfectly into position."

As FlexiArch contains no metal reinforcement, it is extremely durable when properly maintained. FlexiArch is quick and easy to install, with the process taking little more than a few hours to complete, reducing the likelihood of disruption to local communities.

At this point, it was important that further, practical onsite testing took place, an activity which was supported by the Department of Regional Development (DRD).

DRD Roads Service Director of Engineering Bob Cairns, who manages an extensive repair and replacement programme for thousands of traditional arch bridges in Northern Ireland, said the FlexiArch offered his department the opportunity to improve safety while saving time and money.

"FlexiArch offered us the ideal solution, quick construction, and it can be easily integrated into the natural environment. We were pleased to facilitate testing of this innovative product and will be watching closely for future developments."

Since then, eight FlexiArch bridges have been built for a range of clients including Newtownabbey Borough Council and DRD and the future looks extremely bright for this mutually-beneficial partnership.

"The FlexiArch is unlike anything else on the market, it will take time, but we hope to gain further endorsements from DRD and the Roads Authority in the Republic of Ireland," Abhey said. "We are also working on having the product licensed in the EU, the US, South America, India, China and Bangladesh."

"We now have the basic technology and the know-how to take the FlexiArch to the next stage. Current FlexiArches can be used for any kind of new crossing or Highway bridge replacement for distances of up to 10 metres. Plans to develop products that span 15 metres and longer are under way."

There is no doubt that this successful partnership is set to continue in the years ahead, with QUB, Macrete, Invest NI and the Technology Strategy Board currently working hard to develop lightweight, low energy concrete that will enhance the product offering further benefits in sustainability and energy use.

**NEWS  
IN BRIEF**

## FUNDING BOOST FOR i-PATH DIAGNOSTICS

Belfast-based digital technology firm i-Path Diagnostics has announced an investment project worth almost £1 million from a consortium including Invest NI, QUBIS Ltd/University Challenge Fund and Crescent Capital. A spin out firm, from the internationally-renowned Centre for Cancer Research and Cell Biology at Queen's University, i-Path specialises in software products for digital pathology, drug discovery and tissue research.

**NEWS  
IN BRIEF**

## BTI SYSTEMS HEADS FOR BELFAST

North American telecommunications company BTI Systems is to establish a £6 million European headquarters and software centre of excellence in Belfast. BTI Systems, a global supplier of Intelligent Service Edge solutions will invest £6.7 million in the region creating 60 high quality jobs over the next three years. Intelligent Service Edge solutions include the development of state of the art systems for the delivery of high bandwidth voice, video and data communications.



**btisystems**

# MATRIX

# UNVEILS ITS

# PLAN OF ACTION

MATRIX, the NI Science Industry Panel, formally unveiled its ambitious plan of action to position Northern Ireland among the world's most successful high-tech economies in October.



MATRIX Chairman Professor Damien McDonnell and Enterprise Minister Arlene Foster were joined at the launch of the MATRIX Report in W5 by Dromore High School students Simon McCracken and Matthew Duddy.

**It includes a recommendation to set up** industry-led communities engaging business, academia and government directly aimed at capturing emerging market opportunities. Crucially, MATRIX believes that by establishing these new industry-led 'communities', targeted research and business insight will allow companies to effectively utilise their skills and ideas for maximum commercial gain.

MATRIX believes that these industry-led communities should then create roadmaps

which demonstrate and create specific goals for all members - thereby driving effective knowledge and technology exchange among partners.

In addition, the Panel members recommend the establishment of a world class Intellectual Property (IP) infrastructure to enable companies to better exploit opportunities quickly and easily.

Also, it outlined a plan for the development of a flexible and responsive skills system that will lead in its ability to meet changing demands for human resources and accurately reflect the specific requirements of industry at any given time.

The regulatory regime should also be transformed so that enterprises in both the public and private sectors can take on and manage a higher level of risk.

Damien McDonnell, Chair of MATRIX, told 200 delegates at the launch of the report at a major stakeholder and media event in Belfast's W5 that the contribution by local companies in making these recommendations made them directly relevant to the needs of the business community. "They put industry in the driving seat," Damien said. "We are proposing

here a set of key steps towards a cultural shift that could lead to the creation of a world class knowledge-based economy. Innovation communities are central to this goal. The way we work together has to change. The way business collaborates with academia has to change. If approved, these communities will facilitate that change.

Northern Ireland is brimming with ideas, talent and skills. What we now need is the muscle of business and academia to take these recommendations forward and the foresight of government to facilitate them. It's time for all of us to put our foot on the accelerator and move on to the next phase.

The report, which was presented to Arlene Foster, Minister for the Department of Enterprise, Trade and Investment (DETI), was warmly received.

Speaking to the audience of stakeholders from business, Higher and Further Education and Government, the Minister said: "If planning for stability and growth is important at times of economic success it is vital at times of economic slowdown. Right now we need forward thinking and innovative future planning which this MATRIX report represents."



## SINGULARITY INVESTS FOR GROWTH

Business process software innovator Singularity is investing over £3.5 million to expand its operations in Londonderry and Belfast. Singularity employs over 200 staff across its offices in Londonderry, Belfast, London, New York, Singapore and Hyderabad in India. The jobs created by the investment will be spread across Londonderry and Belfast, taking the total Northern Ireland staff to 161, up from the current 99, and bringing staff numbers worldwide to over 300.

# MATRIX WINS BUSINESS BACKING

The recommendations outlined by MATRIX have caught the imagination of some of our biggest companies, which have been quick to provide their backing. We publish just a few of the many positive responses received.



**BOMBARDIER**



**ALMAC**



**Allstate**  
Northern Ireland



**Ulster Bank**



*The miracles of science™*

## BOMBARDIER

**Gavin Campbell, Director, Design Engineering and Technology Development:**

"This report comes at an exciting time of change in Northern Ireland and offers the opportunity for both large and small companies to work together to tap into and develop the talent and science skills that will lead to maximum economic gain. The contribution from companies from all sectors across Northern Ireland is unprecedented. Bombardier believes that this collaborative effort involving industry, government and academia must continue to ensure the future success of Northern Ireland's economy."

## DUPONT

**Dr Fahed Fallaha, Technology Manager, Advanced Fibre Systems, DuPont:**

"As a technology and innovation-driven company based in Northern Ireland, we fully support MATRIX in its drive to foster and develop a strong knowledge-based economy and are impressed by the level of enthusiasm and motivation we have seen from the Panel. We look forward to working with MATRIX in the future and to play our part in helping Northern Ireland to prosper from its strong technology base as well as its intelligent and experienced workforce."

## ALMAC

**Dr Stephen Barr, Managing Director, Almac Sciences:**

"It is clear that Northern Ireland's potential to become an international centre of R&D, science and technology has not been realised. At Almac our work is internationally recognised and we are setting new standards for our industry. We are not the only company in Northern Ireland making advances at this level. We welcome the report submitted to the Minister today and hope that she will act to ensure that steps are taken to build a sustainable knowledge based economy. While the Minister's task is difficult, it is not insurmountable, and is all the more important given current economic conditions. By maximising our R&D opportunities internationally, we can ensure that our economy becomes strong and sustainable both in the medium and longer term."

## WRIGHTBUS

**Mark Nodder, Group Managing Director, the Wright Group:**

As a locally-based company we are excited about the MATRIX report and all that it has to offer the local economy at this exciting time of growth and regeneration. The reports findings will not only advise local companies on how to use their strengths to commercial advantage but will also drive all companies, big or small, across the region to compete globally in an ever increasingly competitive marketplace. We at Wrightbus are committed to expanding our product range and customer base to ensure that we are well positioned to service the future needs of public transportation throughout the world and look forward to working with MATRIX in the future to ensure that Northern Ireland's economy prospers so that we, as a region, can become a leading player on the global stage."

## ULSTER BANK

**Ulster Bank chairman Sean Dorgan and former head of the Republic of Ireland's Industrial Development Agency (IDA):**

"MATRIX wants Northern Ireland's innovation system to be market-focused. This would not devalue in any way the contribution of the academic or research communities. Rather, it would ensure that the benefits of new knowledge and of government programmes have the widest impact. Committed, focused efforts, drawing on all the talents and resources available, and assembled in an agile and responsive way by business with the support of public institutions will provide a sound platform. MATRIX provides a convincing formula for that."

## ALLSTATE NI

**Bro McFerran CBE, NI Chamber of Commerce President and Managing Director of Allstate Northern Ireland:**

I had the pleasure of being involved with the ICT Panel, and while the Horizon Programme was sectorally-focussed, each Panel's recommendations played a crucial role in the formation of the over-arching MATRIX report. And this is what makes the MATRIX Report so important to us all. By implementing its recommendations, Northern Ireland's companies can benefit from increased profits, rapid growth, increased opportunities for overseas partnerships and investments, all of which will lead to more and better jobs and provide the wealth and resources required to build the peaceful, prosperous, fair and healthy society we all want to see, supported by the public services and infrastructure which people expect and deserve.



## Project Kelvin: Putting Northern Ireland at the Hub of Transatlantic Communication

Northern Ireland is set to benefit from a significant improvement in its telecommunications infrastructure which will mean that for the first time will have direct international telecommunications connections with the Northern American market.

### **The new transatlantic submarine link called**

'Project Kelvin' is a joint a29.5 million initiative between the Department for Enterprise Trade and Investment (DETI) and the Department Communications, Energy and Natural Resources (DCENR) in the Republic of Ireland and will be installed by Hibernia Atlantic, a wholly-owned subsidiary of US-based Columbia Ventures. It is partly funded through the EC INTERREG IVA programme.

When the project is completed, information from Northern Ireland will no longer have to travel east to London and then Cornwall before going to North America, but will instead go directly west. Importantly the cable links directly in to Northern Ireland's existing Saturn Network which means that the significant improvements which it brings in international connectivity will create business opportunities across all of Northern Ireland.

Commenting on the project DETI Minister Arlene Foster said: "Northern Ireland businesses are competing more than ever for business in global markets. This

project will deliver the kind of international telecommunications companies located in London, Amsterdam, Dublin and New York already depend on.

It will provide opportunities for Northern Ireland companies selling goods and services overseas and also improve our attractiveness to knowledge-based inward investment. The current difficult economic situation makes it even more important that Northern Ireland businesses target overseas markets.

Mike Saunders, vice president of Business Development at Hibernia Atlantic, said the new cable would help the region compete effectively in the global economy: "The cable will ensure that Northern Ireland has a world class infrastructure in terms of broadband capacity, access and cost."

The move comes at a crucial time for MATRIX, which is keen to create the context in which the ICT sector can make an increasingly significant contribution to the growth and success of the Northern Ireland economy. In markets such as financial services and digital media the degree of latency in transmitting

large amounts of data can be a major factor in deciding where to do business. Kelvin will reduce the latency encountered by Northern Ireland's internationally-focussed firms by approximately 25 per cent giving them a potential edge over competitors in other regions.

"The MATRIX ICT Horizon Panel has identified three focus areas where NI has the potential to make a significant difference and the construction of this submarine high-capacity cable will help in our goal to deliver it," said MATRIX ICT Panel member Bro McFerran.

"Fast, direct transatlantic communications with minimal latency puts us in the best place possible. In terms of high speed communications access, there's literally nothing but the speed of light holding us back now. High speed telecommunications access is the greatest enabler to fully exploit Northern Ireland's knowledge potential."

Mr McFerran is also managing director of Allstate NI which has centres in Londonderry, Strabane and Belfast and a member of the board at Invest NI.





# Innovation goal gets fresh R&D support

“Tough markets happen, but good companies that focus on customer-driven innovation can get stronger in bad times”

As the world faces fresh economic woes, retreat isn't an option, says Bryan Keating, Chair of ambitious ICT firm Andor Technology, a member of the MATRIX Panel and an Invest NI Board member.

**“Tough markets happen, but good companies that focus on customer driven innovation can get stronger in bad times. In the present economic environment Northern Ireland faces tough challenges. But user-led innovation is the key. It's our primary objective, which is why Invest NI has launched a new initiative designed to help forward-thinking businesses prepare for a more sustainable, prosperous future.”**

#### Why is R&D important for business success?

If your business is serious about growing market share, you should invest in harnessing user ideas to drive your product development. Now, more than ever, businesses need to differentiate themselves or risk an uncertain future due to shorter product life cycles, intensifying competition and increasingly sophisticated customers. Innovative products, services and processes can help increase sales, improve profits and increase operational efficiencies. Research and Development (R&D) is essential to achieve these objectives.

#### How will the 'Grant for R&D' initiative help?

Invest NI has refined its R&D support to offer a range of financial and advisory R&D through a single gateway, the 'Grant for R&D'. The process has been simplified to make it easier for businesses to apply for R&D support. Eligible businesses now only need to submit a single application that covers the R&D continuum from industrial research through to experimental development.

#### What is on offer?

There are two types of support available and while these are not a prerequisite for accessing support under Grant for R&D, your business can initially undertake a 'Project Definition' exercise to help plan and clearly define an R&D

project. Up to £50,000 is available for this stage. If you have already defined an R&D project and can meet the selection criteria, your business can access the appropriate level of financial support under Grant for R&D without undertaking the Project Definition stage. The level of funding available will depend on the type of project and size of your business.

#### Who is eligible?

The support offered under Grant for R&D will focus on those projects which demonstrate the greatest potential to generate economic growth and prosperity for Northern Ireland. All projects must be viable, show a need for Invest NI support, and generate a positive return to the economy. Applications will be assessed against some or all of a range of criteria, including the level of innovation resulting in new or improved products or services, the level of technical risk and R&D challenge and the potential for wider economic and social benefits accruing to Northern Ireland.

#### Is your business eligible?

Grant for R&D is available to both individuals and new or existing businesses that want to carry out an R&D project either on their own or by collaborating with other businesses, universities or research bodies. If your business is an Invest NI client, or can demonstrate the

# Now, more than ever, businesses need to differentiate themselves

potential to become one, you can apply for Grant for R&D support. If you are currently not an Invest NI client, your business will have to meet some straightforward criteria.

## What if you want to collaborate with other businesses, academia or research bodies?

Grant for R&D provides additional assistance for companies wishing to collaborate. Collaborative projects build on effective partnerships between industry, academia and research bodies to promote research that can be commercialised. Collaboration allows smaller businesses to develop innovative technologies without having to invest in large R&D departments. If you want your business to collaborate with universities, research bodies or other businesses, you may be eligible for additional support of up to 15 per cent, providing the total support accessed under Grant for R&D does not exceed 80 per cent of total project costs.

## What other types of support are available?

Invest NI has a range of other support available to innovative businesses, including a Design Advice Service, Innovation Vouchers, Venture Capital Support for R&D, Support for Knowledge Transfer and those seeking Technology Collaboration. Experienced Innovation Advisors are also on hand to facilitate ideas and growth.

## What is the view of MATRIX?

MATRIX has welcomed details of the Grant for R&D, describing it as a "significant, forward-thinking initiative" which will help to encourage the development of a sustainable and innovative local knowledge economy. MATRIX Chairman, Professor Damien McDonnell, said: "This is a helpful step in our goal to create a world-class, knowledge-based economy focused on seizing emerging global market opportunities. Northern Ireland is brimming with ideas, talent and skills and we believe that this Invest NI initiative will help to harness these in a constructive and meaningful way by making it easier to access public sector support for R&D investment. The MATRIX panel, he said, looked forward to working closely with Invest Northern Ireland in the months ahead as it continued to seek ways to improve the effectiveness and competitiveness of the economy over the medium to long term.

**Grant for Research and Development will focus on those projects which demonstrate the greatest potential to generate economic growth and prosperity for Northern Ireland.**



## CARIDIANBCT

US global medical device maker CaridianBCT is investing £16 million in the local economy. The investment is expected to create 235 additional skilled jobs over the next three years. The investment will establish the Larne facility, which is operated by CaridianBCT Northern Ireland, as the one of the company's strategic manufacturing sites. The principal objective of CaridianBCT's development plan is expanding the Larne facility's role in the assembly and delivery of its Atreus® Whole Blood Processing system.



## BOMBARDIER LANDS DEAL WITH GERMAN AIRLINE FOR 30 JETS

Bombardier Aerospace is investing half a billion pounds in Northern Ireland, which will help to sustain over 800 jobs. The Canadian firm will invest £519 million to support the design and manufacture of the wings for the 110 - 130 seat CSeries family of aircraft. In addition, the company is currently bidding for further work which could increase the total investment to £563 million.

## BOMBARDIER

# HOW DOES MATRIX WORK?

MATRIX has been developed to ensure that Northern Ireland is equipped to compete in the global economy of the future by improving the region's ability to maximise its commercial return from the exploitation of the excellence in its science, technology and R&D base.

MATRIX has provided a 10-year roadmap to help foster the growth of Northern Ireland's high technology sectors in face of increasing competition within high value global markets. The recommendations are designed to stimulate indigenous high technology companies, to develop new products, processes and markets, open new business opportunities in new markets, create a 'knowledge base' from which export potential can be exploited and to create a knowledge based ecosystem. Greater efficiency, cost-savings and productivity will also be achieved through the sharing of knowledge and experience across sectors.

After carrying out a unique analysis of strengths and weaknesses across the full range of science and technology sectors, the findings of this 'Technology Capabilities & Market Opportunities Study' were mapped against actual and potential commercialisation opportunities through a horizon-scanning programme to assist MATRIX and DETI assess how well NI is performing across the R&D, science and technology spectrum and how it is responding to current market opportunities.

Building on this foundation has been the work of the five HORIZON Panels. Their proposals are presented as part of the main recommendations in the overarching MATRIX report and also as separate volumes in their own right. The Horizon Panels have identified strategic market opportunities over the next 10 years in five key sectors: Agrifood, ICT, Life & Health Sciences, Advanced Engineering

(Transport) and Advanced Materials.

The MATRIX panel next took the five Horizon reports and explored them for cross-sectoral opportunities and common or recurring issues. It became apparent that there are a range of possibilities - some quite significant - which could be developed from improved cross-sectoral thinking and interaction. It also became apparent that there were common problems or themes emerging from across the whole technology exploitation base.

As a result of this work the overarching report sets out a further small set of high level recommendations designed to effect change in the culture of the whole NI high-technology economy over the medium to long term.

The key recommendation is the creation of a series of cross-sectoral and cross-disciplinary 'communities' pitched not at sectoral issues but at clearly identified emerging future market opportunities. These communities should be led by business and this would represent a major step forward for the NI economy, encouraging high tech business to lead the agenda and not simply to follow what academia (via its research) or government (via the Innovation Strategy) are setting out.

The Minister for Enterprise, Trade & Investment has welcomed the Report and is supportive of the organisation's work. Over the coming months, MATRIX will work with DETI, and wider government departments, but also academia in the industry and sectoral bodies, as it seeks to implement strategic recommendations.

## GET IN TOUCH

For further information about MATRIX please contact:

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The current MATRIX Panel comprises:

**Professor Damien McDonnell OBE**  
Former CEO, Defence Diversification Agency (DDA).

**Colin Elliott**  
Vice-President Bombardier Aerospace

**Albert Sherrard, OBE**  
Management Consultant and Chair of BioBusiness NI

**Professor Jim McLaughlin**  
Director Sensor Technology & Devices Ltd & Professor Advanced Functional Materials, University of Ulster

**Dr Clare Passmore**  
Freelance Research Advisor

**Dr Bryan Keating**  
Non-executive Chair of Andor Technology and Invest NI board member

**Ed Vernon**  
Chief Executive of Synetics Ltd and Invest NI board member

**Professor Bernie Hannigan**  
Pro-Vice Chancellor Research & Innovation, University of Ulster

**Professor Gerry McCormac**  
Pro-Vice Chancellor Research & Development, Queen's University Belfast

**Frank Bryan**  
Chairman of the Economic Development Forum (EDF) Innovation Group

### NEWS IN BRIEF

## QUB, UU WIN NEW FUNDING

Queen's University and University of Ulster has received an additional £15 million investment to support their world-leading research in areas such as medicine, healthcare, telecommunications, food science and energy. The funding, awarded from the Department for Employment and Learning under the Cross-Border Research and Development Funding Programme, supports projects which will place Ireland, North and South, in the forefront of global research.