Funding for Innovation

15\textsuperscript{th} July 2016

Ejaz Qureshi
BDE Collaborative R&D
BEIS

Research at Nottingham Videos
Overview

Introduction and context

Introduction to Innovate UK Collaborative Funding

Regional Funder elevator pitches

Surgery + Workshop

*Housekeeping: No Alarms/Phones on Silent*
8:00 Introduction & background
- Case study NuVision Andy Hopkinson CeO.
8:10 Innovate UK Plans 2016-20- Chris Jones + Derek Allen
8:30 Innovate UK 2016-17 Delivery Plan/Budget
8:45 Latest Funding details and timings
- Manufacturing & Materials
- Emerging and Enabling Technologies
- Health & Life Sciences
- Infrastructure Systems
- Open Programmes
9:30 Making a Winning Application + process changes - Innovate UK
10:00 Support for Innovation, (Elevator pitches)
Knowledge Transfer Partnerships – **Paul Yeomans**
Regional Funds & Support
- Enabling Innovation – **Steve Upcraft**
- Nottingham City Council – Growth Hub **Lewis Stringer**
- EMB-Nottingham2 Business Growth Partnership **Mark Hurdley**
EEN- Business Support + H2020 Funding **Alex Mauser**
Access to Funding & Finance from KTN
TBAT – Grant writing and R&D Tax Credit- **Matt Symonds**
10:30 Surgery session (at Tables)
The Innovation Journey workshop (Paul Yeomans)
11:30 Close
Introduction and context

Future Drivers

Ageing Population

70% of 65-year-olds will require long-term care.

Healthcare Costs

Agriculture & Food Security

Energy Security

Cyber Security

Climate Change

Etc, etc, etc.

Economic and Political Uncertainty and Turbulence are the ‘New Normal’
Which applicants win?

Innovate UK applications financial year 2014/15
Total number of applications 5,788

- **Winners**
  - 1,401
- **Losers**
  - 2,749
- **Shortlisted**
  - 1,358
- **No HEI as a Partner**
  - 49.18%
- **HEI as a Partner**
  - 50.82%

Number of applications that were offered funding.
Number of applications that were offered funding without academic collaboration.
Number of applications that were offered funding with academic collaboration.
Number of projects that merited funding but did not receive funding.
Number of applications received on behalf of external agencies.
(Number of funded vs not funded, not indicated).
Number of applications not meriting funding.
Collaborative R&D

- Innovate UK slide – 2014-2015
- UoN one of the leading HEIs in collaborative R&D with business, funded by Innovate UK

<table>
<thead>
<tr>
<th>CRD</th>
<th>KTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>1st</td>
</tr>
<tr>
<td>University of Sheffield</td>
<td>Queen’s University Belfast</td>
</tr>
<tr>
<td>University of Nottingham</td>
<td>University of Nottingham</td>
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<tr>
<td>University of Strathclyde</td>
<td>University of Manchester</td>
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<tr>
<td>University College London</td>
<td>University of Sheffield</td>
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<tr>
<td>University of Bristol</td>
<td>University of Strathclyde</td>
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<tr>
<td>Imperial College London</td>
<td>University of Bath</td>
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<tr>
<td>Newcastle University</td>
<td>University of Liverpool</td>
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<td>University of Warwick</td>
<td>Newcastle University</td>
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<tr>
<td>University of Southampton</td>
<td>University of Leeds</td>
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<tr>
<td>University of Birmingham</td>
<td>University of Reading</td>
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</tbody>
</table>

CRD = Innovate UK grants for live Collaborative Research & Development
KTP = Innovate UK grants for live Knowledge Transfer Partnerships
Collaborative R&D

- Innovate UK slide – 2015-2016
- UoN one of the leading HEIs in collaborative R&D with business, funded by Innovate UK

How has UoN performed against competitors?
### Funding success – all sources

<table>
<thead>
<tr>
<th>By Sponsor Group</th>
<th>% of Total</th>
<th>Awarded Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK Research Councils</td>
<td>41%</td>
<td>208,929</td>
</tr>
<tr>
<td>UK government</td>
<td>17%</td>
<td>84,432</td>
</tr>
<tr>
<td>Industry and commerce</td>
<td>14%</td>
<td>70,746</td>
</tr>
<tr>
<td>EU government</td>
<td>13%</td>
<td>68,173</td>
</tr>
<tr>
<td>Charities</td>
<td>12%</td>
<td>60,362</td>
</tr>
<tr>
<td>Other</td>
<td>2%</td>
<td>12,429</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>505,070</strong></td>
<td></td>
</tr>
</tbody>
</table>

**By Origin**
Why do universities work with businesses /SMEs?

• Attracts research funding and develops research impact;
• Helps develop and pilot new commercial products and services;
• We want to be part of a thriving local economy;
• To build lasting relationships with business;
• Informs our teaching
• Supports graduate employability;
Why would businesses want to work with us?

They know they have to **innovate**, but they lack capacity, facilities, expertise, or funds.

They are seeking to attract **new talent** into their organisation, either for a short period through a placement or internship, or to employ a graduate.

They are seeking to develop **new skills**.
Curious to learn more?

For further information please contact:
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Business Development Executive
for
Collaborative R&D
BEIS
Tel: 07887450769
ejaz.qureshi@nottingham.ac.uk
Case Study of Nu-Vision

Andy Hopkinson CeO
And
Emily Britchford

8:00 Introduction & background
- Case study NuVision Andy Hopkinson CeO.
8:10 Innovate UK Plans 2016-20- Chris Jones + Derek Allen
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Funding and match-funding requirements

**Worked example: Early Stage Award – £500k total cost project:**

Project costs involving 2 partners (1 SME, 1 University).

<table>
<thead>
<tr>
<th></th>
<th>Total eligible project cost</th>
<th>Maximum % of eligible costs which may be claimed as grant</th>
<th>Agri-Tech Catalyst Grant</th>
<th>Project contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business (SME)</td>
<td>£250,000</td>
<td>55%</td>
<td>£137,500</td>
<td>£112,500</td>
</tr>
<tr>
<td>Research organisation</td>
<td>£250,000*</td>
<td>100%</td>
<td>£250,000</td>
<td>nil**</td>
</tr>
<tr>
<td>Total</td>
<td>£500,000</td>
<td>-</td>
<td>£387,500</td>
<td>£112,500</td>
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</table>

Academics: please note *80% FEC. **20% FEC not to be shown as a contribution
# Feasibility and Collaborative R & D – Reality Check

## Timing!!

<table>
<thead>
<tr>
<th>PLANNING &amp; DESIGN</th>
<th>ANNOUNCEMENTS</th>
<th>DEADLINES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day - 200</td>
<td>Day 0</td>
<td>Day 0</td>
</tr>
<tr>
<td>Sandpits</td>
<td>Briefing Event</td>
<td>Day 7-14</td>
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<tr>
<td></td>
<td>Call Opens</td>
<td>Day 15-30</td>
</tr>
<tr>
<td>Influence Shape</td>
<td>Attend &amp; meet partners</td>
<td>Day 31-45</td>
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<tr>
<td>Inform Ideas</td>
<td>Scan web e-alert</td>
<td>Day 45 -55</td>
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<tr>
<td></td>
<td>6 pager Answers to 10 Qs + JeS costing</td>
<td>Day 70-90</td>
</tr>
<tr>
<td></td>
<td>EOI</td>
<td>Full stage</td>
</tr>
<tr>
<td></td>
<td>Result &amp; Feedback scores</td>
<td>Result + possible panel</td>
</tr>
<tr>
<td></td>
<td>Partners meeting for 2nd Stage</td>
<td>Prepare 6 pager + address Feedback Appendixes A,B+C Partner finance forms JeS 6 papers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Await outcome Negotiate Collaborative Agreement Start date</td>
</tr>
</tbody>
</table>
## Feasibility and Collaborative R & D – Reality Check

### Cashflow!!

<table>
<thead>
<tr>
<th>OFFER RECEIVED</th>
<th>Contracts negotiation period</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q12</th>
</tr>
</thead>
<tbody>
<tr>
<td>CASHFLOW</td>
<td></td>
<td>AUDIT 1</td>
<td>1&lt;sup&gt;ST&lt;/sup&gt; PAYMENT</td>
<td>AUDIT 2</td>
<td>2&lt;sup&gt;ND&lt;/sup&gt; PAYMENT</td>
<td>&gt;&gt;&gt;&gt;</td>
</tr>
<tr>
<td>COLLABORATIVE AGREEMENTS</td>
<td>IP BACKGROUND + FOREGROUND AGREEMENTS AND SIGNATURES</td>
<td>DELIVERY Milestones 1</td>
<td>Milestones 2-5</td>
<td>Milestones 6-10</td>
<td>Milestone 11</td>
<td>n</td>
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</tbody>
</table>

**Project Starts**

**Project Ends**
10:30 Surgery session (at Tables)

The Innovation Journey workshop
(Paul Yeomans)

11:30 Close –
Have a great day
NuVision: Concept to Clinic

Dr Andrew Hopkinson, PhD

Founder and CEO - NuVision Biotherapies
Principal Research Fellow - Academic Ophthalmology, University of Nottingham
Incorporated April 2015

nuvision
Biotherapies Limited

UNITED KINGDOM • CHINA • MALAYSIA

mercia fund management

MEDICITY
**Vision:** to become a global leader in the development, delivery and commercialisation of disruptive regenerative therapies.

**Mission:** improve patient care and quality of life through the delivery of high quality, effective, and affordable cutting-edge wound care therapies.
How? did we get from the lab to a commercial environment

Why? did we opt to take this journey

What? is the technology that was brought to the clinic

When? did we decide to commercially spin out
Amniotic membrane practical limitations

- Stored **frozen** at the manufacturer
- Not stocked in hospitals
- Only shipped once ordered per use for **scheduled surgery**
- 48 hour shelf life

**Poor accessibility**
Limited to scheduled surgery
Decreased use
Development pathway

Serendipity discoveries:
• Current amnion storage problem
• Improve amnion processing

2000
PhD
Academic Ophthalmology
Amniotic membrane research

2004
PhD

2005
R&D

2006
R&D

2007
R&D

2008
R&D

2009
2010
2011
2012
2013

PhD
Academic Ophthalmology
Amniotic membrane research

• Basic science research
• Optimised processing
• Concept development
• Further publications
• Attempt at licensing IP
• Commercial awareness
• Military funded - £150k
• NEW Preservation procedure
• Further IP development
• Entrepreneurial interests!
• Biogerminator fund - £10k
• Patent granted - GB2441939
• 1st Hermes Fellowship = £50k
• 2nd Military funding - £208k
• Pre-Clinical validation
• 2nd Hermes Fellowship - £10k
• Prototype development
• 2nd Patent filed
• Explore commercial options…..
Dehydrated amniotic membrane-derived matrix

Improved reliability and quality

Simple and easy use - applied direct dry

Long term room temperature storage

Immediately available in the point of care
HELP FOR WOUNDED SOLDIERS

Pioneering treatment developed in city

By Richard Tresidder and Bryan Hensley

Scientists in Nottingham are developing a way of saving the sight of soldiers injured in battle using the sack that protects babies in the womb.

Remembers at the University of Nottingham and Queen’s Medical Centre say they have found a way of preserving part of what is called the amniotic sack, so it can be transported to battlefield hospitals in places like Afghanistan.

It can then be used to protect the eyes of patients following injuries such as burns to the corneas – which buys time while surgeons decide how to treat the injury.

The sack is taken with the consent of mothers during caesarean section births.

Dr Andrew Hopkinson, from the university, has been looking for ways of preserving the tissue so it can be kept where it is most needed – such as emergency eye clinics.

Currently it is kept frozen in one centre in the UK and has to be shipped and used immediately.

But the discovery by Dr Hopkinson, pictured at the university’s division of ophthalmology and visual sciences, based at the QMC, could change all that.

Amniotic has been used for 30 years in surgery and other fields – particularly the treatment of corneal injuries. But treating the substance causes a huge amount of damage, making it less useful.

Dr Hopkinson and his colleagues have developed a way of processing and preserving the tissue to make it dry.

“It can be stored in the fridge for months, when it is normally only useful for a few days,” he said. “But now it can be transported and be available to injured soldiers.”

Hopkinson is looking at ways of preserving a portion of the umbilical cord from which the amniotic’s comes, which could also be used for treating eye injuries.

Finding solution to worries over drug safety

PLASTICIST solution may be the answer to the problem for the medical industry.

Scientists at the University of Nottingham’s School of Medical Sciences and Plastic Surgery have found a way to make a drug that is less likely to cause side effects.

The solution is to put the drug into a special kind of sealed capsule that controls the release of the drug into the body.

Dr Andrew Hopkinson, from the university’s division of ophthalmology and visual sciences, based at the QMC, said: “We have found a way to make a drug that is less likely to cause side effects.”

Born of great idea that could save an eye on battlefield

Three scientific breakthroughs that could lead to successful businessHere and backing from the News-Telegraph Nottingham Agents Network.

Richard Tresidder reports

It seemed like a piece of the action was being played off the side of the battlefield, where soldiers were being treated for their injuries.

The scene of battle was a mess of mud and blood, with soldiers writhing in pain.

But then, something happened that changed everything.

A handful of soldiers began to recover.

What had happened was that a team of scientists had developed a new treatment for eye injuries, which had been used to save the sight of a soldier who had been injured.

The treatment involved using a special kind of plastic to stop the tears from draining away.

The scientist behind the treatment, Dr Andrew Hopkinson, said: “This is a great idea that could save an eye on battlefield.”

With lots of invention in a damaged eye, the soldier is relieved to have retained all its beneficial properties.

In the battle of the mind, it is often said that the best weapon is knowledge.

And that is exactly what the scientist behind the treatment, Dr Andrew Hopkinson, has done.

He has come back because he is determined to help others.

And it is a testament to his ability that he has been able to develop such a groundbreaking treatment.

As he said: “This is a great idea that could save an eye on battlefield.”

If only the war could be won through such invention, it would be a great victory for humanity.”

Will the eyes have it? Dreams are in lap of the Angels

Will the eyes have it? Dreams are in lap of the Angels

At the university in Trent Building are (from left, Dr Andrew Hopkinson, Dr Brian Hensley, Dr Bryan Tresidder and Dr Brian Tresidder)
Licence IP

?  

Create a spinout
Clinical expertise

Research expertise

Business expertise

Professor Dua

Nottingham University Hospital
NHS Trust

Nottingham City Council
Current progress

Innovate UK
Technology Strategy Board

Innovation board funding


• Due diligence period
• Business plan
• Kick start funding
• Business acumen!!!

Company setup

Manufacturing set up

Regulatory approval

Commercial and clinical Launch

Feasibility study

Innovate UK Technology Strategy Board
Clinical Achievements

- Used to treat >150 animal patients
- Distributing to 40 veterinary practices in UK and Europe
- Approved, the HTA, for human application 20th March 2016
- Already stocked and used in 4 UK hospital
- Used in 20 human patients
- 18 further UK centres in the process of setting up Omnigen use
- Exporting to 6 different countries
Case: #0006
Species: Cat
Patient Details: Female
Clinical background: deep stromal ulcer (descemetocele) most likely stemming from a sequestrum (a)
Treatment details: Omnigen 80 3 layer **graft**, covered by Omnigen 500 **patch**

Ulcer was cleaned. 3 layers of Omnigen were placed in the ulcer epithelial side up (b). Sutured all layers together (c). Cornea surface was cleared of scare tissue (e) and a patch epithelium side down was placed to protect the graft (f). Patch was held in place by conjunctival sutures. Good scaffold support provide for vascularization. Eye was tectonically sound.

Outcome: None
Complications: None
Comments: None

(g- 6 week follow up)
Case: #0008
Species: Equine
Patient Details: 8 yr old Female

Clinical background: Ocular discomfort noted on the 2\textsuperscript{nd} of January. Vet called out 2 days later, diagnosed ruptured cornea with iris prolapse. Referred to the University of Liverpool for surgical repair.

Treatment details: Omnigen multilayer plug (unknown how many layers).
Amnion used to “plug” the corneal defect with a conjunctival pedicle flap placed on top to provide structural support and vascularization. Epithelial side up. Stitched to defect with one stay suture without cutting, and then cut to shape as suturing progressed.

Outcome: Eye was unexpectedly saved. Not possible to directly observed the amnion as hidden under pedicle graft.

Complications: No undesired effects noted.
Comments: None

Presentation 3 week 11 weeks
Pre-op post-op
“Damn, Toto! We’re back in Kansas!”
Thank you!

Questions?

hopkinson@nu-vision.co.uk

@NuVisBio

www.nu-vision.co.uk
UK innovation support
Nottingham – July 15th 2016

Dr Chris Jones
Lead Technologist - Biosciences
Regional Manager for East Midlands and SE Midlands
chris.jones@innovateuk.gov.uk

Derek Allen
Lead Technologist – Infrastructure Systems
derek.allen@innovateuk.gov.uk

Innovate UK
Agenda

• Introduction to Innovate UK
• Our new simplified structure and competitions
• Delivery plan 2016-17
• Exemplar Competitions
  • Infrastructure Systems
  • Biomedical Catalyst
  • Open
• Connect & regional agenda
• Processes & General Points
• Questions!
Innovate UK
The UK’s innovation agency

- Up to £13.1bn return to the economy
- 7,600 organisations supported
- Up to £7.30 of GVA for every £1 invested

Helped to create 55,000 jobs

> 7 jobs created for every business invested in
5-point plan

1. Working with the research community and across Government to turn scientific excellence into economic impact

2. Accelerating UK economic growth, nurturing small, high-growth companies with strong productivity and export success

3. Building on innovation excellence throughout the UK, investing locally in areas of strength

4. Developing Catapults within a national innovation network

5. Evolving our funding models; helping public funding go further
Financial spend 2016-17

- £157 million
- £150 million
- £117 million
- £71 million
- £66 million

- Emerging and Enabling Technologies 15%
- Health and Life Sciences 27%
- Infrastructure Systems 27%
- Manufacturing and Materials 24%
- Open Programme 13%
“Whether you have a small or large business or are involved in any way in innovation, this plan will explain how we are working this year to accelerate its pace - and ultimately increase UK productivity and growth.”

*Dr Ruth McKernan CBE, Chief Executive*
Our budget

- Emerging and Enabling Technologies: 15%
- Infrastructure Systems: 27%
- Open Programme: 13%
- Manufacturing and Materials: 24%
- Health and Life Sciences: 21%

£561m
Core budget for 2016/17

£137 million
£86 million
£71 million
£150 million
£117 million
Important changes

This year we are:

- aligning our programmes into simpler sector groupings
- changing our competitions to be simpler and broader
- introducing an online application system – the Innovation Funding Service
- piloting new innovation finance products
- enhancing our innovation networks - nationally & regionally
Previous team structure.....

Commitments in priority areas, during 2014-15

- Space applications £20m
- Energy £82m
- Built environment £13m
- Agriculture and food £46m
- Urban living £63m
- Transport £70m
- Health and care £80m
- High value manufacturing £72m
- Digital economy £42m
- Advanced materials
- Biosciences
- Enabling technologies £20m
- Electronics, sensors and photonics
- ICT
- Emerging technologies & industries £16m
- Resource efficiency £13m
- Developing new opportunities £150k
Sector focus to accelerate growth

Emerging and Enabling Technologies
Identifying and investing in technologies and capabilities that will lead to the new products, processes and services of tomorrow

- Earth Observation
- Internet of Things
- Data
- Cyber Security
- User Experience (strategy)
- Emerging Tech & Industries
- Robotics & AS
- Electronics, Sensors and Photonics
- Design (strategy)
- Creative Economy (strategy)

Health and Life Sciences
Focused on agriculture and food and healthcare, underpinned by bioscience and medical research and enabled by engineering and physical sciences

- Advanced Therapies
- Precision Medicine
- Medicines Technology
- Bioscience
- Agri Productivity
- Enhanced Food Quality

Infrastructure Systems
Optimising transport and energy systems and integrating them with other systems such as health and digital in an urban context

- Connected Transport
- Urban Living
- Infrastructure
- Energy Systems
- Nuclear
- Offshore Renewable Energy

Manufacturing and Materials
Advancing manufacturing readiness so R&D and technology developments increase productivity and capture value in the UK

- Digital Manufacturing
- Early Stage Manufacturing
- Manufacturing Readiness
- Resource efficiency
- Advanced Materials
### Sector Activity Summary

<table>
<thead>
<tr>
<th>Manufacturing and Materials</th>
<th>Health and Life Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td>We will:</td>
<td>We will:</td>
</tr>
<tr>
<td>• Run two broad Manufacturing and Materials competitions during the year</td>
<td>• Run two broad Health and Life Sciences competitions during the year</td>
</tr>
<tr>
<td>• Continue investing in the High Value Manufacturing Catapult, including the new National Formulation Centre and Graphene Centre</td>
<td>• Run competitions aligned to the development of new technologies for manufacturing cell therapy products</td>
</tr>
<tr>
<td>• Run an Additive Manufacturing competition</td>
<td>• Continue to fund the Cell and Gene Therapy Catapult</td>
</tr>
<tr>
<td>• Run a Manufacturing Readiness competition focusing on later-stage innovation</td>
<td>• Aim to complete the Cell and Gene Therapy Catapult Manufacturing Centre in Stevenage</td>
</tr>
<tr>
<td>• Run a Connected and Autonomous Vehicles (C-CAV) 2016 competition</td>
<td>• Complete the establishment of the Precision Medicine and Medicines Discovery Catapults</td>
</tr>
<tr>
<td>• Continue our delivery partnership with the Advanced Propulsion Centre and Aerospace Technology Institute</td>
<td>• Open the new Precision Medicine Catapult headquarters in Cambridge</td>
</tr>
<tr>
<td></td>
<td>• Continue funding the agri-tech centres as part of industrial strategy</td>
</tr>
</tbody>
</table>
### Emerging and Enabling Technologies

We will:
- Run two broad Emerging and Enabling Technologies competitions during the year
- Run a funding competition in Quantum Technologies
- Continue to invest in the Digital and Satellite Applications Catapults
- Establish the Compound Semiconductors Catapult
- Continue to invest in Innovation and Knowledge Centres
- Run an entrepreneur mission on the theme of space
- Provide funding support for the Open Data Institute, Tech City and Tech North
- Deliver space programmes in partnership with the European Space Agency

### Infrastructure Systems

We will:
- Run two broad Infrastructure Systems competitions during the year
- Establish the Energy Systems Catapult facility in Birmingham
- Continue to invest in the Future Cities, Transport Systems and Offshore Renewable Energy Catapults
- Conduct a Future Cities entrepreneur mission to India, aligned with the Newton Fund
- Run a Cities Integrated by Design competition
- Deliver the Energy Research Accelerator
- Continue the OLEV Integrated Delivery Programme 13 (IDP13)

### Open Programme

We will:
- Run two ‘open’ funding competitions per year for applications from any sector
- Run open knowledge transfer competitions through the year
- Run an open ‘growth and scale’ competition in Q3
Funding: simpler competitions

• Two broad competitions for funding in each **sector group** this year; each open to a much wider range of applications than previously

• An ‘**open**’ funding programme – with two rounds per year - for applications from any technology area or sector

• Competitions and programmes run in **partnership** with other public sector organisations

• Knowledge Transfer Partnerships (5 calls per year 2016-17)
Funding: simpler competitions

• Two broad competitions for funding in each sector group this year; each open to a much wider range of applications than previously
• An ‘open’ funding programme – with two rounds per year - for applications from any technology area or sector
• Competitions and programmes run in partnership with other public sector organisations
• Knowledge Transfer Partnerships (5 calls per year 2016-17)
New simplified Innovate UK competitions

<table>
<thead>
<tr>
<th>Category</th>
<th>Expected open date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing and Materials</td>
<td>9 May 2016 (&amp; Nov 2016*)</td>
</tr>
<tr>
<td></td>
<td>Reg closes 6/7 applications close 13/7</td>
</tr>
<tr>
<td>Open</td>
<td>6 Jun 2016 (&amp; Dec 2016*)</td>
</tr>
<tr>
<td>Infrastructure Systems</td>
<td>4 Jul 2016 (&amp; Jan 2017*)</td>
</tr>
<tr>
<td>Health and Life Sciences</td>
<td>12 Sep 2016 (&amp; Feb 2017*)</td>
</tr>
<tr>
<td>Emerging and Enabling Technologies</td>
<td>3 Oct 2016 (&amp; March 2017*)</td>
</tr>
</tbody>
</table>

* To be confirmed

We will also run competitions in partnership with other organisations. For all competitions see the Delivery Plan or www.innovateuk.gov.uk
ALL open and some forthcoming competitions on website
https://www.gov.uk/government/collections/innovation-grants-for-business-apply-for-funding

Current Open Calls (11/07/16)

Live funding competitions

- **Funding competition: low emission freight and logistics trial**
  - 11 July 2016
  - Notice

- **Funding competition: commercialisation of quantum technologies**
  - 7 July 2016
  - Notice

- **Funding competition: first of a kind deployment of innovation**
  - 6 July 2016
  - Notice

- **Funding competition: Biomedical Catalyst 2016**
  - 4 July 2016
  - Notice

- **Funding competition: innovation in infrastructure systems**
  - 5 July 2016
  - Notice

- **SBRI funding competition: automatic threat detection of firearms**
  - 8 July 2016
  - Notice

- **Funding competition: APC6 - accelerating the drive to low carbon propulsion**
  - 8 July 2016
  - Notice

- **SBRI funding competition: Mobuoy Road waste remediation**
  - 1 July 2016
  - Notice

- **Innovate UK: Open funding competition**
  - 4 July 2016
  - Notice

- **infocus funding award: women in innovation**
  - 7 July 2016
  - Notice

- **Funding competition: connected digital additive manufacturing**
  - 27 June 2016
  - Notice

- **Funding competition: manufacturing and materials**
  - 7 July 2016
  - Notice

- **Funding competition: agri-food innovation in Turkey**
  - 27 June 2016
  - Notice

- **Funding competition: Energy Catalyst round 4**
  - 8 July 2016
  - Notice

- **Knowledge Transfer Partnerships: what they are and how to apply**
  - 8 July 2016
  - Detailed guide

- **Funding competition: Aerospace Technology Institute R&T programme**
  - 27 June 2016
  - Notice
ALL open and some forthcoming competitions on website
https://www.gov.uk/government/collections/innovation-grants-for-business-apply-for-funding

Current Open Calls in Innovate Plan (11/07/16)

<table>
<thead>
<tr>
<th>Title</th>
<th>Date</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding competition: commercialisation of quantum technologies</td>
<td>7 July 2016</td>
<td>Notice</td>
</tr>
<tr>
<td>Funding competition: first of a kind deployment of innovation</td>
<td>6 July 2016</td>
<td>Notice</td>
</tr>
<tr>
<td>Funding competition: Biomedical Catalyst 2016</td>
<td>4 July 2016</td>
<td>Notice</td>
</tr>
<tr>
<td>Funding competition: innovation in infrastructure systems</td>
<td>5 July 2016</td>
<td>Notice</td>
</tr>
<tr>
<td>Innovate UK: Open funding competition</td>
<td>4 July 2016</td>
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</tr>
<tr>
<td>Funding competition: connected digital additive manufacturing</td>
<td>27 June 2016</td>
<td>Notice</td>
</tr>
<tr>
<td>Funding competition: manufacturing and materials</td>
<td>7 July 2016</td>
<td>Notice</td>
</tr>
<tr>
<td>Knowledge Transfer Partnerships: what they are and how to apply</td>
<td>8 July 2016</td>
<td>Detailed guide</td>
</tr>
</tbody>
</table>
ALL open and some forthcoming competitions on website

https://www.gov.uk/government/collections/innovation-grants-for-business-apply-for-funding

Current Open Calls funded by other agencies (11/07/16)

<table>
<thead>
<tr>
<th>Competition Title</th>
<th>Date</th>
<th>Notice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding competition: low emission freight and logistics trial</td>
<td>11 July 2016</td>
<td>Notice</td>
</tr>
<tr>
<td>SBRI funding competition: automatic threat detection of firearms</td>
<td>8 July 2016</td>
<td>Notice</td>
</tr>
<tr>
<td>Funding competition: APC6 - accelerating the drive to low carbon propulsion</td>
<td>8 July 2016</td>
<td>Notice</td>
</tr>
<tr>
<td>SBRI funding competition: Mobuoy Road waste remediation</td>
<td>1 July 2016</td>
<td>Notice</td>
</tr>
<tr>
<td>Funding competition: agri-food innovation in Turkey</td>
<td>27 June 2016</td>
<td>Notice</td>
</tr>
<tr>
<td>Funding competition: Energy Catalyst round 4</td>
<td>8 July 2016</td>
<td>Notice</td>
</tr>
<tr>
<td>Funding competition: Aerospace Technology Institute R&amp;T programme</td>
<td>27 June 2016</td>
<td>Notice</td>
</tr>
</tbody>
</table>
Competition Briefing - Infrastructure Systems

Innovate UK
The Competitions

• We have two competition offerings for companies.

• The competitions have the same scope.

**Competition 1**
The first of the competitions is a grant competition, focusing on lower technology readiness levels including testing.

**Competition 2**
To help overcome barriers to the first commercial deployment of innovation, the first of a kind competition will award contracts to test first deployment in a real world environment.
What this competition is about

COMPETITION AIMS AND SCOPE
Competition aims

• To accelerate and broaden innovation which drives UK business growth in Infrastructure Systems

• Bring forward business-led innovative solutions for affordable, sustainable and secure energy, connected transport, urban living, and resilience of infrastructure to environmental and social pressures.

• Integrate and optimise different infrastructure systems and thereby offer step changes in additional performance, capacity, adaptability, functionality, productivity and resilience.

• Drive step changes in growth, productivity and/or drive export opportunities for Small and Medium Enterprises.
Competition scope – the ‘must haves’

• To be in scope, a project must *clearly demonstrate step change innovation(s)* in one or more of the following areas:
  – Energy Systems
  – Civil Nuclear Fission
  – Offshore Wind
  – Connected Transport
  – Urban Living
  – Smart, Resilient, Sustainable Integrated Infrastructure

• You must show how your proposal will enable a step change in business growth, productivity and/or drive export opportunities for at least one UK SME involved in the project.
<table>
<thead>
<tr>
<th>Competition Theme</th>
<th>Working definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Systems</td>
<td>Innovations in the ability to match energy supply and demand that will drive step-change improvements in value proposition, energy affordability, security, and environmental sustainability.</td>
</tr>
<tr>
<td>Nuclear Fission</td>
<td>Innovations that lead to significant cost reduction, improved asset integrity and supply chain development for current and future UK and global civil nuclear markets.</td>
</tr>
<tr>
<td>Offshore Wind</td>
<td>Innovations that, when deployed, will substantially reduce the cost of energy from offshore wind.</td>
</tr>
<tr>
<td>Connected Transport</td>
<td>Improving the transport infrastructure through innovative system design, connecting people and goods through intermodal transport whilst optimising efficiency, and reducing societal costs.</td>
</tr>
<tr>
<td>Urban Living</td>
<td>Citizen-centric solutions to meet the changing needs of cities and urban areas, that integrate multiple urban infrastructure systems to provide a step change improvements in costs and user experience. These systems include “hard” systems such as energy, transport, waste, water, communication, and “soft” systems such as data, security, sensors, “social” systems including law and justice, health, social care, education, and “environmental” systems.</td>
</tr>
<tr>
<td>Smart, Resilient Sustainable Integrated Infrastructure</td>
<td>Innovations that could lead to a step-change improvement in the integration of energy, transport and urban systems with each other, and with other infrastructure systems: to deliver additional intelligence, air quality, functionality, productivity, security, flexibility, capacity, and/or lifetime performance. to lower the risk of failure, to reduce costs and/or CO₂ emissions. Innovations could include cross-cutting solutions such as digital, sensors, or autonomous systems, and may include supply chain development projects.</td>
</tr>
</tbody>
</table>
Out of scope

- Innovations that focus exclusively on one of the following themes are **not** priorities for this call and are out of scope:
  - With the exception of civil nuclear fission and offshore wind, innovations in technologies for the purpose of generating only one of electric power, motive power, light, heat or cooling.
  - Energy end-use efficiency, for example in domestic appliances, industrial processes, vehicles, or building fabric.
  - Single transport modes or propulsion systems (e.g. Cars, Rail, or Marine).
  - Fossil fuels (exploration, appraisal, production, processing, transport, distribution or end use).
  - Minor incremental innovations that are unlikely to drive UK economic growth, UK SME growth, or where there is no pressing case for Innovate UK intervention.
COMPETITION 1
Project details

• All projects must be led by a UK-based business and must be carried out in the UK.
• Include at least one UK-based Small or Medium Enterprise (SME).
• Last between 3 and 36 months, with total project eligible costs between £25,000 and £5 million.
  – If project costs are less than £100,000 then an SME can work alone on the project or with partners.
  – If the project costs are £100,000 or more then the project must include at least two partners working collaboratively.
• Meet the descriptions of Feasibility Study, Industrial Research or Experimental Development.
Funding allocation

There is up to £15 million to fund innovation projects in this competition. We currently expect to distribute this as follows:

- Up to £5 million for projects lasting up to one year
- Up to £5 million for projects lasting up to 2 years
- Up to £5 million for projects lasting up to 3 years

For technical feasibility studies and industrial research, you could receive up to:

- 70% of your eligible project costs if you are a small business
- 60% if you are a medium-sized business
- 50% if you are a large business
- RTOs (including Universities, Research Institutes, Not-For-Profits, Catapults, and Local Authorities) can receive up to 100% of eligible costs (80% of Full Economic Costs), with their contributions capped at 30% of project size.

For experimental development projects, which are nearer to market, you could receive up to:

- 45% of your eligible project costs if you are a small business
- 35% if you are a medium-sized business
- 25% if you are a large business
- Research and Technology Organisations (RTOs, including Universities, Research Institutes, Not-For-Profits, Catapults, and Local Authorities) can receive up to 100% of eligible costs (80% of Full Economic Costs), with their contributions capped at 30% of project size.

Your project could include work packages that cut across two of the above research categories. The costs of each work package should be calculated separately and added to derive a total project cost.

International partners are very welcome but are not eligible for Innovate UK grant-funding contribution.
Key dates

**Competition opens**
- Monday 4th July 2016

**Brokering Events**
- Thursday 7th July 2016 (Glasgow)
- Tuesday 12th July 2016 (London)
- Tuesday 19th July 2016 (Bristol)
- Thursday 21st July 2016 (Manchester)

**Briefing event**
- Tuesday 12th July 2016

**Registration deadline**
- Noon Wednesday 14th September 2016

**Application deadline**
- Noon Wednesday 21st September 2016
For questions on scope please contact

SUPPORT@INNOVATEUK.GOV.UK

Or contact
0300 321 4357
COMPETITION 2
First Of A Kind Deployment (FOAK)

• This competition is designed to help overcome barriers to the first real deployment of a solution
  – Aimed at later stage of development
  – Focus on proving an innovative product or service in a real world situation
  – The areas for Aims and Scope are the same as for the main competition
  – It is one-off competition to help inform future non-grant funding
  – Winners will be awarded contracts rather than grants (uses PCP structure)
  – An SME and an end customer will need to be involved
• The Project is in 2 phases:
  – Phase 1 is to develop a repeatable financing and business case for the innovation. It will be a 3 month contract worth up to £50,000 with a total of up to £1 million available
  – Phase 2 will be a demonstration that the innovation delivers the expected outcomes when integrated in complex real-world applications. It will be a contract worth between £250,000 and £5 million with a total of up to £18 million available
  – Phase 2 is only open to Phase 1 winners, and the deployment must be complete within 1 year
• The competition opens on 18 July 2016 and closes on 31 August 2016
For questions on scope please contact

SUPPORT@INNOVATEUK.GOV.UK

Or contact
0300 321 4357
Biomedical Catalyst
2016
For innovative solutions to health & care challenges
Innovate UK
July 2016
Biomedical Catalyst 2016 up to £10m

For innovative solutions to health & care challenges

Scope: Innovative ideas from any sector or discipline that demonstrate the potential to provide significant positive healthcare and economic impact

disease prevention and proactive management of health and chronic conditions

earlier and better detection and diagnosis of disease leading to better patient outcomes

tailored treatments that either change the underlying disease or offer potential cures
Key Points...

- Up to £8m for Early Stage Awards (up to 24 Months):
  - Test a well-developed concept and show its effectiveness in a relevant environment
  - Projects must start by 1 January 2017 and end by 1 January 2019
  - Total project costs of £200,000 to £1.5 million

- Up to £2m for Technical Feasibility Studies (up to 12 Months):
  - Explore and test the commercial potential of early-stage ideas
  - Projects must start by 1 January 2017 and end by 1 January 2018
  - Maximum project cost is £200,000

Key Dates:

<table>
<thead>
<tr>
<th>Competition opens</th>
<th>4 July 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Briefing event for applicants</td>
<td>12 July 2016</td>
</tr>
<tr>
<td>Registration deadline</td>
<td>7 September 2016</td>
</tr>
<tr>
<td>Application deadline</td>
<td>14 September 2016</td>
</tr>
</tbody>
</table>

Details available at: https://www.gov.uk/government/organisations/organisations/innovate-uk
Open Competition (Smart)

Innovate UK
Open Competition

The competition is open to the best business-led ideas or concepts. These can be drawn from any technology, engineering or industrial area. To be in scope, a proposal must:

demonstrate innovation leading to novel, new products, processes or services
articulate a clear and anticipated growth impact for the business(s) leading to a significant return on investment (ROI)

Priority will be given to proposals that are likely to lead to sustainable gains in productivity and/or access to new overseas markets through export led business growth.

<table>
<thead>
<tr>
<th>Dates and deadlines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competition opens</td>
</tr>
<tr>
<td>Briefing webinar recording</td>
</tr>
<tr>
<td>Register for briefing webinar</td>
</tr>
<tr>
<td>Register for briefing webinar</td>
</tr>
<tr>
<td>Registration deadline</td>
</tr>
<tr>
<td>Application deadline</td>
</tr>
</tbody>
</table>
Open Competition

There is up to £15 million of funding available from Innovate UK, for research and development projects that tackle the technical challenges described in the brief for this competition.

Stream 1: Projects with eligible costs of up to £100,000 and 12 months or less in duration. There is up to £5 million of funding available for these types of project.

Stream 2: Projects with eligible costs of up to £1 million and between 12 and 36 months in duration. There is up to £10 million of funding available for these types of project.

<table>
<thead>
<tr>
<th>Applicant business size</th>
<th>Feasibility studies/Proof of market</th>
<th>Industrial research</th>
<th>Experimental development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro/small</td>
<td>70%</td>
<td>70%</td>
<td>45%</td>
</tr>
<tr>
<td>Medium</td>
<td>60%</td>
<td>60%</td>
<td>35%</td>
</tr>
<tr>
<td>Large</td>
<td>50%</td>
<td>50%</td>
<td>25%</td>
</tr>
</tbody>
</table>
For questions on scope please contact

SUPPORT@INNOVATEUK.GOV.UK

Or contact
0300 321 4357
Knowledge Transfer Partnerships (KTP)

The KTP scheme helps businesses to innovate and grow by linking them with a university and a graduate to work on a specific project. Each KTP is a three-way partnership between a business, an academic institution and a graduate. The academic institution employs the recently-qualified graduate who works at the company. The graduate, known as the ‘associate’, brings new skills and knowledge to the business.

A KTP can last between 12 and 36 months depending on the project and the needs of the business. It is part-funded by a grant.

2016/17 close dates for submission are:
6 July 2016
7 September 2016
2 November 2016
18 January 2017
8 March 2017
Our network of Catapult centres is located throughout the UK in areas of strategic importance to their sectors.

To innovate, we need open centres where academia and business can get together and drive forward great ideas into manufactured products. And that’s what the Catapults are delivering for us.

Juergen Maier, Chief Executive, Siemens UK
Strengthening networks

- Businesses grow **by connecting**: with academics, government, new partners and funding opportunities

- **Connecting** support from the Knowledge Transfer Network (KTN) and Enterprise Europe Network (EEN)
Innovate UK’s developing regional strategy
Our developing regional strategy

“We also plan to ... identify opportunities for investment related to each of our sector groups and according to regional strengths.”

Dr Ruth McKernan CBE, Chief Executive
Application Process

• All competitions require registration usually a week before close so DO register!

• Website can get busy or your connection fails so try not to leave until last minute
Application Form

The structure is as follows:

- application details
- summary of proposed project
- public description of the project
- gateway question: scope

- question 1: need or challenge
- question 2: approach and innovation
- question 3: team and resources
- question 4: market awareness
- question 5: outcomes and route to market
- question 6: wider impacts
- question 7: project management
- question 8: risks
- question 9: additionality
- question 10: costs and value for money
- other funding from public sector bodies
- finance summary table
General Advice

- Read the call & notes VERY carefully. Then read it again!
- Scope is critical so if in any doubt get guidance from the competition line
- It's going to get more competitive so value for money and impact will be more important
- We will look at the company and its track record on delivery on past grants
- The SME must derive a direct benefit

- Keep checking the website, things can move quickly
- Line your collaborations up – and get them moving
- KTN can help find collaborators and advise on applications

- For ‘nationally significant’ projects lobby long term and all around the project – get stakeholders behind you.
Find out more

www.innovateuk.gov.uk

Questions?
Transferring knowledge
Transforming businesses
Knowledge Transfer Partnerships is Europe’s leading programme helping businesses to improve their competitiveness, productivity and performance through the better use of knowledge, technology and skills that reside within the UK knowledge base.
Project Features

- Project length 1-3 years
- Associates recruited by KB and Business partners
- Employed by KB partner
- Project located at business premises with business supervisor
- KB Supervisor spends ~ half day per week at business premises
### Project Criteria

- Strategic relevance to the business
- Stimulating and challenging for the academic team
- Intellectually challenging for the Associate
- Sound business case
- Clear knowledge transfer
- Clear additionality
- Benefits likely to accrue
## Business benefits

### Benefits per project:

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase in annual profit before tax</td>
<td>~£270,000k</td>
</tr>
<tr>
<td>Investment in plant and machinery</td>
<td>~£165,905k</td>
</tr>
<tr>
<td>New jobs created</td>
<td>3</td>
</tr>
<tr>
<td>Business staff trained</td>
<td>14</td>
</tr>
<tr>
<td>New research projects initiated</td>
<td>3</td>
</tr>
<tr>
<td>Commercial benefits from application of IP</td>
<td>~26%</td>
</tr>
</tbody>
</table>
Recent partners
Associate benefits

Why be a KTP associate?

- Directly use your degree.
- Work on a challenging commercial driven, academically relevant project
- Gain experience of the commercial world
- Fast track your career
- Jointly publish with academic colleagues and the company
- Long term employability
  - It’s a key driver of the scheme
  - Dedicated training budget
  - Workplan specifically includes commercial development
  - 75% of Associates offered full time posts.
Academic benefits

• Research Income
• Strategic relationship with business
• Impact case studies.
• Academic incentive payments
• Teaching materials, case studies
• New research themes
• Commercial relevance
• Staff development
Key concerns for business:

- Who owns the IP?
- Will I have to pay to licence it?
- Will the Uni make unreasonable demands?

Every agreement is different. But Universities by and large are sensible because:

- They don’t do commercialisation well.
- Their main income is from research and teaching.
- They are rewarded by government for collaboration
- In most cases its not worth the hassle

When there isn't pre-existing protected IP from the Uni, the standard model is for the company to have free use of arising IP. With the University retaining its right to research the area in future.
Any questions?

Paul Yeomans
ktp@nottingham.ac.uk
@ktpnottingham
www.facebook.co.uk/uonktp
Steve Upcraft

Lead on SME Engagement for the University of Nottingham
Director of the Enabling Innovation Programme
**Enabling Innovation – the headlines...**

- A collaborative programme between:
  - Nottingham Trent University
  - University of Derby
  - University of Nottingham

- £20.3m programme over 3 years, part funded by the EU
- Innovation support for over 2000 SME’s in the D2N2 area
- Involves 160 university staff covering 27 specialist areas
- www.enablinginnovation.org.uk
What services are on offer...

- Sustainable Engineering
- Chemistry
- Manufacturing
- Student Placements
- Computer Science
- Aerospace
- Linguistic Profiling
- Events & Workshops
- Management & Leadership
- Student Enterprise
- Digital Tools
- Innovation Evidence
- Innovation Vouchers
- Innovation Growth Programme
- Food & Drink
- Product & Process Design
- Materials & Engineering
- Legal Advice
- Knowledge Exchange
- Languages

European Union
European Regional Development Fund
NOTTINGHAM TREN'T UNIVERSITY
UNIVERSITY OF DERBY
UNITED KINGDOM • CHINA • MALAYSIA
What activities are on offer...

- In-depth innovation support offering unprecedented access to university expertise and resources
- Workshops and events designed to help businesses innovate, explore new ideas and unlock their growth potential
- Leadership and management development programmes
- Student / Graduate placements in SME’s
Growth Hub Update – A BREXIT Free Zone
Lewis Stringer
The best in the world are always receptive to advice
What is a Growth Hub?

- National initiative – joint LEP / City Council delivery
- Make businesses aware of support available and get them using it
- The “twice as likely” rule
- Communication: website, helpline, face-to-face
- Advice and brokerage: we know our stuff!
- Intelligence gathering: listening
- It’s free – you’ve already paid!
December 2014 – May 2016:
• Enquiries: 2,378
• Engagements: 1,822
• Nottingham City: 650

Independent survey February 2016:
• 80% rated our service Excellent or Good
• 90% would recommend us
• 60% have now taken positive action

"The Growth Hub is seriously badass" Neil Rostance (Fat Free Media)
So what could we do for you?

- Advice and support for Growth – you’ll hear much more today
- Nottingham Jobs Hub
- Support for Innovation (£20m)
- Bespoke Growth Coaching
- And there’s much more including regular information on events and opportunities
The Enterprise Europe Network

Alex Mauser, Operations Manager, CUE Ltd
The world’s largest support network for SMEs with international ambitions

3,000 local experts at your service
- 600+ locations
- In more than 60 countries worldwide
- 85% client satisfaction rate

Get tailored business advice
- We respond to 10,000+ enquiries from SMEs per month
- We help SMEs access finance and funding

Take your innovative ideas to commercial success
- More than 13,000 SMEs per year benefit from our tech audits and business reviews
- We offer specialised support for high potential, innovative SMEs

Make the international connections you need to grow
- We’ve brought 1.7 million+ SMEs to our events
- We set up 70,000 targeted business meetings every year
- We connect 7,000 SMEs every month

SMEs using our services grow faster. Find your local branch now.

www.een.ec.europa.eu

Innovate UK
1. Information and Advisory Services

- National Enquiry Gateway
- Information and advice on EU policy affecting SMEs
- SME feedback, panels and consultations
- Info and training events in each region
  www.enterprise-europe.co.uk
2. Make international connections

…to reach new markets, access and commercialise new technology, find partners for research and innovation projects

- Publication and targeted dissemination of international partnership profiles
- A rich and varied programme of international brokerage events and company missions
- 17 International Sector Groups acting on your behalf
NMBP Brokerage Event – June 15th

- 150 participants from 10 countries represented
- Official launch of NMBP programme in UK
- 260 bilateral meetings organised
- Exclusive opportunity for developing winning consortia
- Delivered in cooperation with Innovate UK and KTN
3. Bring your Innovations to Market

- Recognise your potential and help you find national and international partners
- Provide advice and support on key topics such IP management, access to finance and improved use of digital technology
- Offer Innovate 2 Succeed service to help you innovate more effectively and grow: Develop your innovation strategy, apply new management techniques, work on developing critical resources in the business
- Help H2020 SME Instrument beneficiaries access free innovation coaching to ensure SME Instrument project delivers growth and economic benefits
- Training events to develop the necessary entrepreneurial skills for successful innovation

Innovate UK
Contact details/more info

• Contact **National Enquiry Gateway** and arrange a meeting with one of our regional advisers: contact@enterprise-europe.co.uk: Tel: 0300 123 3066

• Use the website: www.enterprise-europe.co.uk

• Contact directly:
  
  een-midlands@coventry.ac.uk
  
  amauser@cad.coventry.ac.uk
N2 Business Growth Fund

Innovation Funding Breakfast Seminar

University of Nottingham

15th July 2016
The N2 Business Growth Fund

• Provides **grant support** to businesses in Nottingham and Nottinghamshire. Grants available from £20,000 to £250,000 funding up to 20% of project costs.

• To support ‘capital investment’ projects such as purchase of new equipment, premises, upgrades to existing premises and infrastructure. Some R&D/Product Development/Innovation projects can also be supported.

• Applications welcome from across most sectors. However, Priority Sectors are as follows:
  
  o Manufacturing
  o Clean Tech
  o Digital Content
  o Life Sciences

• Retail, Leisure & Hospitality ineligible.

• Available to cover projects with an end date prior to 31\textsuperscript{st} December 2018.
The Programme So Far...

• Approved £1.8million grant requests from businesses across Nottingham and Nottinghamshire.

• Contracted to create 207 new jobs, safeguarding a further 66 positions.

• Leveraged £9million private sector investment across the region.

• Businesses supported from an array of sectors including Healthcare, Energy, Media Production and Software.

• A further £3million grants available for businesses to access.

• Open for applications
The Application Process

- Expression of Interest
- Full Application
- Investment Panel Presentation
- Due Diligence
- Grant Offer

Minimum 4 to 6 Weeks Process

Account Managers available to support the application process

Programme Website: www.n2businessgrowthfund.co.uk
Programme Contact Points

Mark Hurdley
Head of Funded Programmes
Tel: 07776 173093
Email: Mark.Hurdley@embltd.co.uk

Jo Murphy
Project Manager
Tel: 0115 74 84782
Email: Jo.Murphy@Nottingham.ac.uk

Programme Website: www.n2businessgrowthfund.co.uk
UK/EU Grant Funding Landscape

Grants are available for R&D projects from feasibility studies through to prototype development.

**UK Grants**
- Innovate UK – Open Programme
- Innovate UK Catalysts
- Innovate UK – Themed competitions
- Local Funding – LEP/RGF

**EU Grants**
- Eurostars - SME
- Horizon 2020 – SME Instrument
- Horizon 2020
- FTI

Increasing: grant value, complexity, administration
R&D Tax Credits – Overview

WHAT ARE R&D TAX CREDITS?

Applies an uplift to your R&D costs (PAYE, materials, Subcon) which can be used to offset Corporation Tax or claim money back from the HMRC.

IN A NUT SHELL

For every £100 an SME spends on R&D your tax bill can be reduced by £46 if you make a profit or get a £33 cash back if you make a loss!
“Innovation distinguishes between a leader and a follower.”

Steve Jobs
The business world
How does Innovation work?
Four types of Innovation:

- Product Innovation
- Process Innovation
- Position Innovation
- Paradigm Innovation

(Joe Tidd and John Bessant *Managing Innovation: Integrating Technological, Market and Organizational Change* 2009)
Our experience
Why the University?

• They have a challenge that they can’t overcome
  o In house R&D
  o External commercial provider, consultants and contractors

• They know that the problem/opportunity is significant
Three key drivers.

1. Opportunistic
2. Defensive
3. Strategic Plan
• Founded in 1985
  – Fabrication, mechanical and electrical engineering: services to the UK mining industry
• Project looked at turning waste into methane
• Created a unique innovative product
• Transformed the way the company operates.
• Created a unique innovative product
• Unrivalled due to footprint, costs and flexibility
• Collaborating with Arla and University
• Working in the research funding world.
• Opened up entirely new markets
• Changed the way the business operates.
• Created a spin out company
• Now moving from farms to other markets.
• Campden BRI Innovation Champion at the Food and Drink iNet Innovation Awards 2012
• Shortlisted for *Engineering Excellence & Outstanding KTP Partnership* awards
• £30,000 Shell innovation fund
• £400,000 in grant funding support
• MD spoken at House of Lords representing SMEs
Company X: Defensive

- 50 year old business
- Construction Industry
- Legislative Changes
- Core ingredient outlawed
• Founded in the 1940s
• Traditionally a manufacturer of cleaning products
• The first significant interaction with a University
• KTP looked at developing anti-bacterial sporicidal agents
• This would enable the company to target medical markets.
• Bioclear – biofilm remover for Dental Unit Water Lines
• Company created a new business Dentisan
• Established own-brand premium infection control solutions.
• Overseas sales up by 70% in year one with an additional 50% expected in the following year
• Medilink East Midlands Export Achievement Award.
• KTP Outstanding Business Impact award
• Regional Winners HSBC Business Thinking Awards
• MD one of only five businesses to take part in CBI/KPMG round table in London
• Exhibited in main entrance at BIS, London
• Do you have a long term innovation strategy?
Ask questions
The journey – starting out

Our questions:

• What does the business do and what is its future strategy?
• Financial position
• Competitive position – what are they good at? What are competitors better at? What would they like to be better at?
• What does the future of the industry look like?
• Will they adapt in the future?
• What is it that they lack?
• Do we have the expertise to help?
• What is the route to market/scale of impact?
Unknown unknowns.
• 120 or so Universities in the UK
• All have dedicated business facing staff
• Network of KTP advisors – not well publicised but very useful!
• City council, sector specific support staff
• As well as all of the other more well known sources: Chamber, CBI, IoD, FSB, Growth Coaches etc...
• Start a dialog.
Thank You

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