



Innovate UK

CELEBRATING SUCCESS

SME innovation awards 2015

2015 marks the first Innovate UK SME innovation awards

We launched these awards with a simple aim – to recognise great innovation examples among the projects we have co-funded; examples that demonstrate the impact of innovation and can inspire others.

There are five categories:

- Innovation leading to business transformation
- Innovation leading to new markets
- Innovation leading to productivity improvement
- Innovation attracting investment
- The inspirational innovation award

Read on to discover the winners and the shortlisted companies...

Welcome



It is my great pleasure to introduce the winners and shortlisted companies in Innovate UK's first SME innovation awards.

As the UK's innovation agency, our work is all about generating growth. We have invested over £1.5bn in innovation since 2007, matched by a further £1.5bn of private funding. We have helped over 5,000 businesses large and small to bring ideas closer to commercialisation – support estimated to return around £7.5bn of value to the economy and create an average of 7 new jobs for each company we have helped.

Behind these statistics are many individual journeys of entrepreneurship and perseverance, and inspiring stories of success through innovation. That is what we aim to celebrate through these awards.

We have focused on small and medium companies, which is where so much of the UK's future growth potential lies. Those shortlisted come from a very wide range of industries and sectors, and from right across the UK. Whatever the sector, their project stories bring to life the power of

innovation. Some companies are making a major contribution to productivity. Some have been able to move into entirely new markets, grow their businesses dramatically, or attract major investment following our support. All are inspiring in their way, and some especially so.

There are many more stories we could tell. Our website and YouTube channel highlight other great examples. In the meantime, please take a moment to learn about some of the most impressive and inspiring SME innovation stories to emerge from our work over the past few years. ■

Ruth McKernan
Chief Executive

Innovation leading to business transformation

Innovation projects that have led to the transformation of a business in terms of employment growth, scale-up in turnover or change of direction.



WINNER:
OXIS ENERGY



- Staff numbers increase almost four-fold
- More than £15 million extra investment

Support from Innovate UK has helped Abingdon-based lightweight battery pioneer OXIS Energy grow from a team of just 11 to a company boasting 53 people in 6 years.

OXIS Energy is a world leader in lithium sulphur cell batteries, which are lighter than their lithium-ion equivalents when storing the same amount of energy.

The help has been the catalyst for OXIS Energy to work with a range of partners, a major factor in the company's growth. These partnerships have helped forge commercial relationships and build confidence in its technology in the marketplace.

"We've attracted private investment from South African firm Sasol, who have invested £15 million to date," said CEO Huw W. Hampson Jones. "And digital equipment manufacturer Ricardo has joined our low-carbon vehicles project, which should help us enter the automotive market." ■

IGEOLISE



- Thriving business in 7 countries
- All activities now funded from sales

Successful in 3 Innovate UK competitions, London-based travel time mapping developer iGeolise is now funding all its activities from sales revenues.

Its innovative solution enables web searching by travel time rather than distance, meaning users make more informed decisions.

Following its first project through the Digital Convergence HyperLocal Media competition in 2012, iGeolise was able to include all UK public transport as well as east and west coast US timetables into its platform.

As a result, iGeolise sold its solution to Countrywide plc property search company, just one of the now impressive list of clients that includes Zoopla, JobSite and the Greater London Authority.

"The grant meant we could add all UK public transport timetables into our platform," said CEO Peter Lilley. "With that information included, we won our first client. We now have a thriving business in 7 countries." ■



CYBULA

- Revenue up more than 400%
- First installation orders won

A spin-out from the University of York, Cybula has developed from being a solely research and development based consultancy to one that exploits markets for its own products.

Since 2011, the company has invested intensively in product development, with funding assistance from Innovate UK feasibility studies and collaborative research and development competitions. This has enabled Cybula to increase revenues from £133k in 2011 to £700k in 2014 and expand to employ 15 people from the original four in 2011.

Its feasibility study with Doosan Babcock enabled it to develop software that it could apply to the nuclear power generation sector, which opened up an opportunity with EDF.

“These Innovate UK awards have enabled us to establish a relationship with two new important clients, to win our first orders to install product and to export our services to a client in France,” said CEO Jim Austin. ■



CELL MEDICA

- Expanded into new markets
- Grown from having no office to employing 44 staff in 3 countries

With Innovate UK support since its launch in 2007, Cell Medica has been able to develop new products, improve productivity and attract new investment.

A London-based cellular therapeutics innovator that seeks to develop, manufacture and market immunotherapy treatments for infections and cancer, Cell Medica has grown from a virtual company with no office to one that employs 44 people in three countries.

Successful projects from several funding competitions has meant Cell Medica has expanded into new countries, developed ground-breaking industrial processes and accelerated its journey to market.

“With these key breakthroughs, we were able to present an attractive business case for investors,” said Gregg Sando, founder and CEO. “And in November 2014, we raised £50 million funding, which supports the development and commercialisation of innovative products targeting important areas of unmet medical need.” ■



FIBRE EXTRUSION TECHNOLOGY

- Sales brought forward by 3 years
- Sales 600% higher than forecast

After receiving funding for its Suture Plus project, Leeds-based Fibre Extrusion Technology (FET) has exceeded sales targets and realised 7.5% more added value on those sales. That translates into a 400% return on investment on the Innovate UK grant.

The funding helped FET bring forward sales of a high-strength absorbable yarn for use in medical sutures by up to 3 years.

It also enabled FET to make efficiency gains by adopting some elements of the developed technology. And it allowed FET to harness new skills, boost project management capabilities and kick off a proof-of-concept project.

“We’ve successfully applied know-how developed in the project to improve our present range,” said Richard Slack, managing director, FET. “This has helped us achieve sales of specialist equipment some 600% higher than originally forecast.” ■

Innovation leading to new markets

Innovation leading to SMEs entering new domestic or export markets.



WINNER: COBALT LIGHT SYSTEMS

- Prototype being developed for US market
- Deployed technology in airports

Abingdon-based Cobalt Light Systems is entering new markets and growing its business through technology innovation.

Its Insight100 liquid scanner – more than 380 of which now feature at UK and European airports – was improved through an Innovate UK-funded project, which also led to a prototype – Insight200 – being developed for US airport specifications.

As well as attracting investment from the US Transportation Security Administration, the finished product allowed Cobalt to double its headcount, grow revenue from £2.4 million to £11.6 million and reinvest profits into R&D, opening up new potential markets in the military, emergency services and border agency arenas.

“We successfully deployed our technology in airport security scanners, a first step to enabling relaxation of the hand-luggage liquids ban,” said Craig Tombling, chief operating officer. ■

ASHWOODS AUTOMOTIVE

- Expanded into consumer market
- Interest from usage-based insurers

Devon-based Ashwoods Automotive, which already sells its Lightfoot product to commercial vehicle operators, has expanded into the consumer market with help from Innovate UK.

Its £340,000 Lightfoot Consumer Prototype project saw Ashwoods evolve the product into one suitable for all vehicles and brings an innovative approach to reducing accidents, saving fuel and reducing insurance premiums.

Not only did the project benefit Ashwoods by improving its skillset, expanding its team and introducing it to new contractors and suppliers, its new product attracted significant interest from the growing usage-based insurance market.

“We have reaped benefits from the funding provided by Innovate UK and maximised the opportunities realised by this project,” said Dan Regan, senior applications engineer. ■

ASV



- Market-ready product secures extra sales
- Novel solution developed for National Oceanography Centre

Funding through an SBRI competition enabled Portchester-based ASV to expand, boost sales and develop international interest in its solution.

The manufacturer of unmanned and autonomous marine platforms won funding to develop a long-endurance unmanned surface vehicle for the National Oceanography Centre.

The project enabled ASV to produce a market-ready product for which it has subsequently secured further sales, continue to attract highly skilled engineers and boost press exposure.

“Not only has the SBRI helped ASV to continue to grow, but it also went some way to contribute towards the UK being a major exporter of maritime robotics,” said Dan Hook, managing director of ASV. ■



QUADRALENE

- 70% of sales in new markets
- Now a major force in the infection control industry

Derby-based Quadralene entered into a Knowledge Transfer Partnership (KTP) which enabled it to undergo a significant and highly profitable transformation.

The business had been making large losses due to its focus on automotive markets, but made progress into healthcare through the KTP project to develop the lead product of its Dentisan brand. The knowledge gained enabled it to add further products to its dental portfolio and other healthcare sectors.

Biocleanse Ultra – developed as a result of the partnership – is a surface cleaning product that propelled Dentisan into the UK market leadership. The company now exports to 64 countries and has virtually doubled in size. Some 70% of its current sales are now generated from healthcare markets that the company has entered.

Andrew Corley, managing director, said: “The KTP was the catalyst. It gave us our lead product, transforming us from a manufacturer of car shampoos to an international force in the infection control industry.” ■



FUEL3D

- Expanded into consumer and professional markets
- Developed technology to wider healthcare markets

SBRI Healthcare funding enabled Oxford’s Fuel3D to expand and apply its technology to a range of different markets.

An award of £100,000 enabled production its 3D wound measurement system prototype, while a second meant it could produce an improved system in large numbers and move into full production. A third SBRI healthcare contract allowed it to develop the technology for a range of applications and adoption in the NHS and international healthcare markets.

It has since applied the technology to the broader 3D market and now brings the benefits to consumers, professionals and businesses with its SCANIFY handheld 3D scanner.

“The system is attracting interest from around the world,” said Stuart Mead, CEO. “Innovate UK saw the potential of the technology when no-one else did.” ■



SKY MEDICAL TECHNOLOGY

- Clearance for entry into US market
- Negotiating with distributors in 40 overseas markets

The Biomedical Catalyst enabled High Wycombe and Daresbury-based Sky Medical Technology demonstrate first patient evidence in reducing the risk of deep vein thrombosis (DVT) and attract millions of external funding.

Its gekko™ device has since secured National Institute of Clinical Excellence (NICE) guidance recommending its use to the NHS, which led to US Food and Drug Administration clearance for entry into the US market as well.

Since its first Innovate UK grant, Sky Medical Technology has grown headcount from 2 to 24, which it expects to grow to 120.

CEO Bernard Ross said: “The credibility of the NICE guidance and NHS adoption has enabled us to secure long-term relationships with distributors in China, Australia, Canada, New Zealand and Turkey. We’re currently in negotiations with distributors in 40 further overseas markets.” ■

Innovation leading to productivity improvement.

Process or product innovation that has led to increased labour productivity.



WINNER: **ENDOMAGNETICS**

- Removes need for radioactive tracers in cancer treatment
- Simplifies and speeds up procedures

The Future Health Mission paved the way for Cambridge-based Endomag to enter the US health market with its radiation-free cancer staging system.

It received a grant for a collaborative R&D project to develop a safe and convenient alternative to traditional cancer treatment in 2009 and secured a CE mark for its Sentimag device. Today, Sentimag and companion tracer Sienna+ have treated more than 7,500 breast cancer patients. It is also undergoing US clinical trials.

Chief executive Eric Mayes said: “Without Innovate UK it would never have got off the ground. But it wasn’t just the money that helped. We were invited on a mission to California and formed a relationship with the University that now leads our US pivotal trial.” ■

NQUIRING MINDS

- Brings together data sets to improve productivity
- Recognised as one of top 15 smart cities pioneers

Following Future Cities Solutions SBRI competition wins, Southampton’s nquiringminds has achieved notable successes with its open data platforms.

The company was awarded a total of £1.1 m to create an open data platform that brings together disparate local authority data sets to improve productivity.

One of these was its GP heat map, which allows both the general public and strategic decision makers to see the consequence of time and policy changes on GPs in Hampshire.

“Our integrated future city modelling work was selected as one of the 16 Open Data Champions by the Cabinet Office for setting the standard in open data and transparency,” said Nicholas Allott, CEO. “And we’ve since been recognised by Cisco as one of the top 15 international pioneers for smart cities and internet of things.” ■



V-CONNECT

- Solution brings efficiency gains across healthcare
- 45% reduction in A&E attendances

Shingley-based v-connect brings efficiency and quality benefits to health and social care through two-way video.

Its service provides audio-visual and data connectivity, providing support, coaching, education and reassurance across a large range of care use cases.

Thanks to close collaboration with health and care providers during several SBRI projects, new models of care that reduce traditional activity have been delivered. An example is in remote support for respiratory disease patients, where there was a 45% reduction in A&E attendances, 9% reduction in length of stay and 50% reduction in bed days.

“Remote support can offer reassurance to patients and increase their quality of life and care,” said Adam Hoare managing director. “The real benefits come at scale and can help underpin care integration through a single point of access into the home.” ■



ROTITE TECHNOLOGIES

- New fastener revolutionises industrial assembly lines
- Working with automotive and aerospace partners

Manchester's Rotite Technologies secured a £278k contract and attracted considerable external investment for its rotary interlocking fastening system after Innovate UK Smart funding.

The fastening and joining innovator now works with partners and end-users in the automotive and aerospace sectors.

Thanks to the successful completion of both projects, Rotite has embarked upon an 18-month project with Airbus Group, Safran Aircelle, Sigmatex, the University of Manchester and EJOT UK to develop fastenings for composite technology.

“The technology is simple to understand and has the potential to revolutionise assembly lines, robotics and just about every industrial production line that involves fastening or joining of parts,” said managing director Stuart Burns. “Our proof of concept work with Innovate UK brought us considerable technological credibility among industry partners.” ■



ZOO DIGITAL GROUP

- Automates creative and production processes
- Substantial savings for clients

Thanks to collaborative R&D funding, ZOO Digital Group has grown revenues by 20% and expects more in the coming years.

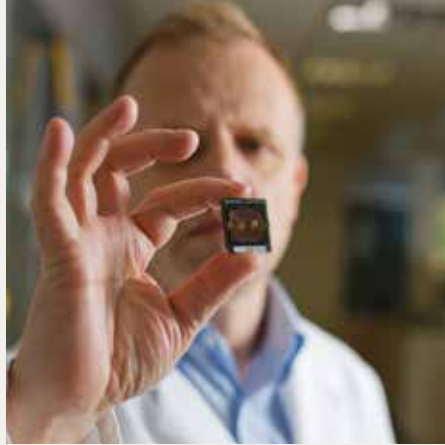
The Sheffield-based innovator developed unique software to enable digital media assets to be maintained with their metadata persistently and robustly. It allows clients – including five major Hollywood studios and BBC Worldwide – to automate aspects of the creative and production processes and achieve substantial savings.

Since launch, ZOO has grown its US and European client base from its production facilities in Sheffield and Los Angeles.

“Following completion, we used the new technology to make rapid inroads into this large and established market with a unique and competitively differentiated range of software and services,” said CEO Stuart Green. ■

Innovation attracting investment

Where SMEs demonstrating innovation have attracted significant new investment as a result.



WINNER:
DISCUVA



- **Multi-million partnership secured**
- **Award attracted £1.1 million of private investment**

Cambridge-based Discuva attracted significant investment to develop new antibiotics after winning £1.6 million from the Biomedical Catalyst in 2012.

The award helped it to attract a further £1.1 million in private investment to get the business moving, while its work so impressed pharmaceutical giant Roche that it has entered into a multi-million-dollar partnership with Discuva.

This includes an upfront payment of \$16 million and further payments of up to \$175 million per product, dependent on hitting milestones.

“Releasing us from the shackles of poor funding meant we could finish development and fully resource the research on a sensible number of potential drugs,” said chief executive David Williams. “This led to signing the preclinical antibiotic collaboration and put us in a position as one of the world’s most innovative and productive antibiotic companies.” ■

ATLAS GENETICS

- **More than £30 million investment attracted**
- **Venture capital and investment from blue-chip companies**

Following a £1 million collaborative R&D grant, Atlas Genetics attracted more than £30 million in investment.

Formed as a spin-out from the University of Bath, the Trowbridge-based company worked with Public Health England, Randox Ltd and TTP to develop a system that diagnoses chlamydia and gonorrhoea.

Thanks to financing, the network of partners and the due diligence carried out by Innovate UK, Atlas Genetics attracted venture capital and investment from blue-chip companies including: Novartis Venture Funds, J&J Development Corp, LSP, BB Biotech and Consort Medical.

“These investments have enabled us to complete the full development of the system, CE mark the instruments, complete a manufacturing line for cartridges, generate substantial clinical data and provide employment for more than 40 people in the UK,” said chief executive John Clarkson. ■



SNAP FASHION

- Investment from Time Inc. to broaden reach
- Landed Cisco British Innovation Gateway award

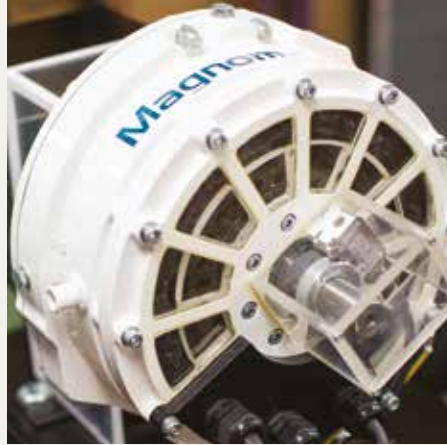
Snap Fashion was awarded a £1 million 'Re-imagining the High Street' SBRI contract to fund its innovative search tool and attracted investment from Time Inc. as a result.

Based in London, the company also landed the \$175,000 Cisco British Innovation Gateway award.

Founder and chief executive Jenny Griffiths developed the search engine, website and app following a Launchpad competition.

The SBRI contract funds further development of Snap InStore, used in fitting rooms to search a retailer's range based on what the customer has tried on. The Time Inc. investment will be used to broaden Snap Fashion's marketing reach and push the boundaries of computer vision.

"The investment Time Inc. has made will allow both companies to flourish in a competitive landscape," said Jenny. ■



MAGNOMATICS

- Now backed by £4.5 million venture capital investment
- Orders from global manufacturers

Sheffield-based Magnomatics attracted considerable venture capital investment and interest in its fuel-efficient power transmission system and has grown its team by 17 people.

Its MAGSPLIT device – essentially a gearbox without gears in which there is no physical contact between the moving parts – was refined during a two-year collaborative R&D project with Ford Motor Company. A second-generation was developed through a subsequent Smart-supported project.

Further collaboration with Volvo Group followed and the company now has orders from three global manufacturers. It is also developing marine, rail, aerospace and renewable energy products.

"Innovate UK support made the difference, between Volvo working with us or not," said product manager David Black. "Where Innovate UK was really important was in turning mere interest into 'Yes, we want to work with you.'" ■



TOKAMAK ENERGY

- Raised £10 million in private investment since first grant
- Now invests £3 million a year in R&D

Abingdon-based Tokamak Energy has grown from a three-person team to a company employing 16 full-time staff that invests more than £3 million a year on research and development.

After 3 Smart grants from Innovate UK, the fusion energy pioneer has raised significant private investment and demonstrated two prototypes.

It expects its solution, based on compact spherical tokamaks enabled using high temperature superconductor (HTS) magnets, will deliver fusion energy gain within 5 years, first electricity in 10 years and a 100MWe power plant within 15 years.

Dr David Kingham, chief executive, said: "Since our first grant in 2010, we have raised £10m in private investment. We want to prove we can turn the UK's scientific lead in fusion into commercial success." ■

Inspirational innovation award

The most inspiring overall example of innovation.



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POLYPHOTONIX



- Potential to save NHS £1 billion a year
- Prevents a common cause of blindness

PolyPhotonix developed a treatment for a common cause of blindness thanks to an SBRI contract with the NHS that has the potential to save more than £1 billion a year on adoption.

The Noctura 400 sleep mask will revolutionise the treatment for macular eye diseases and is designed to stop the progression of diabetic retinopathy. It works by reducing the eye’s oxygen demand at night, preventing hypoxia and the compromised blood vessel proliferation in the retina that can result.

Since 2009, County Durham-based PolyPhotonix has worked with the Centre for Process Innovation (CPI) and a number of universities to develop the device and manage clinical trials.

CEO Richard Kirk said: “We wouldn’t be here without Innovate UK. The development has been supported by Knowledge Transfer Partnerships and SBRI Healthcare is supporting our clinical trials and NHS programmes.” ■

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Inspirational Innovation Award



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Find out more

View the latest competitions we are running to encourage further innovation at:

<https://interact.innovateuk.org>

For general information about Innovate UK, visit:

www.innovateuk.gov.uk

To see more examples of success stories, see:

<https://www.gov.uk/government/collections/innovate-uk-case-studies>

Check out interviews with successful companies at:

https://www.youtube.com/channel/UC1b_aUzptvSaal89zzB2o3g

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