

Results of competition: Smart - Round 4 - Proof of market

Total available funding for this competition was £9.4m from the Technology Strategy Board.

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Barnard Microsystems Limited	RPA satcoms = Lightweight, affordable, satellite communications for use on small Remotely Piloted Aircraft	£40,000	£24,000
Project description - provided by applicants			
<p>We are developing small (4 metre wingspan) Remotely Piloted Aircraft (RPA) for use throughout the world in scientific, commercial (oil, gas and mineral exploration and production) and state (border patrol) applications. Many of these applications require the operation of the RPA Beyond Line of Sight (BLOS) in areas with little, or no, telecommunications infrastructure. The International Civil Aviation Organisation, known as ICAO, is drawing up regulations governing the operation of RPA and has coined the phrase "Remotely Piloted Aircraft System" to emphasise the human responsibility for the RPA at all times. To enable RPA to fly BLOS in a remote area requires the use of satellite communications (satcoms). The use of satcoms on an RPA has also been a requirement of our potential customers, including Fugro Airborne Surveys and Sander Geophysics (the largest geophysical survey companies in the world) and oil, gas and mining exploration and production companies.</p> <p>The serious shortcomings we have identified using the lightest airborne satellite data terminal known to us is the heavy weight (3.8kg), the high cost (around \$50,000) and the necessary use of an omnidirectional antenna, that introduces electronic interference in nearby antennas mounted on the RPA. We propose to investigate the nature of the global market and the financial and technical feasibility of developing a lighter and more affordable solution, based on the use of a terrestrial satellite data terminal mounted on a computer-controlled gimbal, to ensure the satcom's terminal antenna, with a 14° beam width, always points towards the geostationary satellite.</p> <p>Our aim, should the market analysis be positive, would be to develop this enabling technology for autonomous systems operating BLOS, to support bidirectional data communications between the RPA and the Ground Control Station (GCS). Another benefit will be environmental, since RPA use less fuel than their manned counterparts per kilometre travelled.</p>			

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
Bloom Agency	Efficient in display advertising for SMEs from algorithms (EIDASa)	£41,675	£25,000
Project description - provided by applicants			
<p>Bloom Agency is a full service, integrated agency with thirteen years' experience of delivering award winning complex data integration and analytics projects. We are one of the few marketing agencies who are capable of handling data at scale and in creative ways. Modern advertising professionals are beginning to use more data and analytics to drive insight, rather than use gut feelings alone. They use data to understand consumer behaviour and identify opportunities. They translate those insights into integrated marketing strategies across channels, with clear and measurable goals. They use advanced analytics to identify the media and audiences that will best reach those goals, and quantify the value of each. They analyse results and optimise to deliver more of what's working and less of what is not, and they do it every day. In short, they use technology and data to turn ideas into results. These approaches have been driven primarily by advertising in the online world. While the world's largest brands have access to data scientists and mathematicians able to write algorithms, or the funds to purchase specialist software which does it for them, SMEs have a significant barrier to the efficient, data-driven use of display advertising. SMEs lack the scale, resources and time, yet are most likely to benefit from well-targeted, display advertising.</p> <p>This 'proof of market' study will evaluate the market, business case and technical feasibility of an SME focused, algorithmically driven display advertising platform.</p>			

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CarbonGenie Ltd	PoM CarbonGenie study - an online 'transport CO2' calculator and solution provider	£39,502	£23,701
Project description - provided by applicants			
<p>CarbonGenie is a 'cleantech' web application that calculates the travel CO2 emission from people travelling to an event or visitor attraction at the point of ticket purchase online. The calculation covers all modes of transport and will measure emissions from all users regardless of their level of interaction. CarbonGenie will provide the opportunity to offset these emissions by the visitor or event/attraction organisation; provide a central point of integration for other low carbon travel providers; provide a new contextual advertising platform and a new income stream for events/attractions.</p> <p>CO2 emissions measurement/reduction is increasingly an important aspect of business, fulfilling mandatory requirements and helping business innovate. However, CO2 measurement of transport has been the least-addressed component despite accounting for 50% of most businesses' footprints and 70% of most events' footprints. Increasing pressure from stakeholders and consumers has meant that organisations and events are having to address this.</p> <p>CarbonGenie is a highly scalable product that integrates into ticketing platforms and bespoke systems, with the potential to impact on literally thousands of businesses and millions of people. 95 million people visited the top 160 UK attractions in 2012 alone, many using online ticketing systems. The benefits of CarbonGenie include cost reduction, income generation for partners, facilitation of the low carbon economy and CO2 emission reduction from travel. Currently supported in kind by Climate KIC and the National Physical Laboratory, CarbonGenie has the resource to undertake in-depth market analysis in order to gain investment for a working prototype and timely launch into the market place.</p>			

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
Cellular Systems (Grantham) Limited	Predictive testing for Equine Metabolic Syndrome and Laminitis	£46,250	£25,000
Project description - provided by applicants			
<p>Laminitis is a disease of the horse's hoof: at its worst it can lead to death; at its best a prolonged and costly treatment regime with the vet. It is caused by a number of factors: many horses and ponies are predisposed to the condition, however, its development has been connected to diet and changes in metabolism.</p> <p>This is a market research project, into the development and use of a predictive algorithm, which will assist in the early diagnosis of Equine Metabolic Syndrome (EMS), one of the conditions leading to the development of Laminitis. We intend showing that there is a need to predict this disease early for the owners and the veterinary communities and also determine suitable mechanisms of reimbursement for its use. Early diagnosis will lead to healthier horses and ponies and save the horse owner significant sums of money, in veterinarian fees.</p>			

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
Clear Sky Medical Diagnostics Ltd	Clear Sky Medical Diagnostics - Health Economic Assessment for monitoring the side effects of Parkinson's medication and informing treatment	£12,000	£7,200
Project description - provided by applicants			
<p>Parkinson's disease (PD) affects approximately 120,000 people in the UK alone and is projected to increase dramatically over the next decade as people live longer. The most effective form of treatment for PD symptoms is a drug called Levodopa, but approximately 90% of patients who take it for ten years or more develop involuntary movements called dyskinesia. These movements are a major source of disability and severely affect the patient's quality of life with complications of uncontrolled dyskinesia including falls and fractures.</p> <p>Financial implications are significant; Hauser and Pahwa report, "In the year following onset of dyskinesia, overall treatment costs increase by \$7795 and PD-related costs increased by \$4194 pa". Management of dyskinesia is particularly difficult as it may occur many times per day and an accurate method of monitoring is not available. Currently, physicians rely on patients' descriptions or in severe cases patients are admitted to hospital for several days to monitor symptoms and adjust their medication accordingly. Because it is currently difficult to measure dyskinesia accurately, the changes to the patient's medication can often be ineffective.</p> <p>Clear Sky Medical Diagnostics (CSMD) has developed a unique technology, which has a number of advantages over current monitoring approaches, focussing particularly on the speed and objectivity of the measurement. Small-scale clinical trials have taken place, but the economic benefits for the NHS and international health organisations are as yet undocumented. York Health Economic Consortium has been approached in order to set out the potential financial savings, and to also measure the benefit of</p>			

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the technology in terms of QALY (quality adjusted life years), a standard measurement for assessing health technologies based on improvement in patients' wellbeing. Provision of this health economic assessment, alongside the clinical data already in place will allow CSMD to go to market with this technology.

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
Credent Medical limited	Accurate non-invasive blood glucose monitoring device	£40,956	£24,573
Project description - provided by applicants			
<p>Diabetics need to monitor their own blood sugar levels to test for required drugs or dietary change. A diabetic may need 3,000 painful punctures each year. This is inconvenient, poses an infection risk, desensitises fingers, and leads to low compliance in self-management, especially in children and in patients who suffer from depression, which often appears comorbidly with diabetes. This creates physiological complications which frequently require hospitalisation.</p> <p>Credent Medical Ltd will develop an accurate non-invasive blood glucose monitoring device.</p>			

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
EcoGenR8 Limited	Market assessment of innovative finance for low grade waste heat recovery	£41,788	£25,000
Project description - provided by applicants			
<p>Low grade industrial waste heat is widely found in industrial processes, and is recognised as an opportunity for revenue generation and reducing carbon impact. Many industrial plants and processes produce heat at temperatures and quantities where conversion to electricity is viable. This electricity can be used or sold, paying back the investment in the equipment. The water utility and waste treatment market has a number of heat sources that could potentially be relevant for this application. Energy recovery technology is improving, with Organic Rankine Cycle systems in particular developing in recent years. However, energy recovery is not widely adopted in the UK and Europe. The principal barrier to uptake is the length of payback. At three to five years, payback does not merit direct investment by plant operators – but may be viable (if structured correctly) for external investment.</p> <p>The project aims to research the energy recovery technologies available for converting low grade waste heat, and the new technologies in development that may make new, lower temperature and smaller scale energy sources viable. It aims to identify priority industrial applications and engage with heat producers. And the project aims to research potential investors' requirements. Finally, it aims to build a business case for investment in these new technologies by new investors.</p>			

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
Evil27Games Limited	mobIQ	£35,891	£21,534
Project description - provided by applicants			
<p>The mobIQ project will assess the commercial viability and technical practicalities of developing a unique technology to benchmark the quality and characteristics of mobile games, then enable individualised recommendations for mobile games players.</p> <p>Our focus is on using technology to significantly improve the process by which consumers find new mobile games with a high degree of probability that they will like them, continue to use them and thus be more likely to become paying customers of them. The goal is to be able to facilitate the trusted recommendation of good games to the players that would most likely enjoy them on whatever mobile platform and devices they use. If this project is successful, our goal is to ultimately provide what could become the default consumer-facing discovery service of choice for digitally-delivered games on all mobile platforms.</p>			

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Folium Optics Limited	Folium Optics plastic displays - proof of market	£46,424	£25,000
Project description - provided by applicants			
<p>This project will test the market for custom reflective colour plastic displays. The benefits of this novel display technology over current products include:</p> <ul style="list-style-type: none"> • world-leading optical performance for colour reflective displays, giving excellent visibility, particularly in bright ambient light conditions • low power usage – conventional colour displays are emissive (LED, OLED and backlit LCD), whereas the project’s displays just use ambient light. This significantly reduces power consumption, particularly in outdoor, brightly lit applications such as wearable or healthcare devices, where ‘always on’ operation is desired • light-weight, robust, novel shapes and form factors – conventional glass displays are thick, flat, rectangular, and fragile. Making custom display shapes using glass is extremely expensive, whereas with plastic film it is simple, low cost and the displays can be thin and curved • affordable short run capability - digital fabrication will produce short runs of novel plastic displays with low NRE costs. <p>This proof of market project will enable us to test the market for these novel displays.</p>			

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Food Dudes Health Limited	Self-optimising decision support tool for healthy eating in kids	£41,566	£24,939
Project description - provided by applicants			
<p>Diets of young children in the UK and other countries are not ideal, in particular because they contain not enough fruit and vegetables. Food habits developed in early childhood persist in adulthood, thus playing a long-lasting role on our eating behaviours. 30% of children aged between two and 15 are overweight or obese (DoH) with a higher risk of getting type 2 diabetes, heart disease and certain cancers. In the UK, nearly 3 million children are overweight and 1.5 million of these are actually obese. In 2009, there were 3,860 children admitted to hospital for obesity-related conditions, compared with 872 in 2000 (4-fold rise). Health problems associated with being overweight or obese cost the NHS more than £5bn every year (5-6% of total NHS budget).</p> <p>To address this challenge, Food Dudes (FD) have developed the Full Force Programme, an Obesity Prevention/Healthy Eating programme based on state-of-the-art health sciences, cognitive neuroscience, nutritional science and behavioural psychology. Food Dudes Programme has already been successfully taken up by all primary schools in Ireland (more than half a million children) and in the UK by more than 150,000 children. Following this, Food Dudes have identified an opportunity to develop a self-optimising decision support tool to enable the programme to provide tailored advice that self-optimise as more data is collected from the evidence base.</p>			

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
Future Transport Systems Limited	Future Transport Systems - Vehicle to Grid opportunity study	£25,017	£15,000
Project description - provided by applicants			
<p>Vehicle to Grid (V2G) describes the ability to discharge electricity from plug-in electric vehicles (EV) into the grid and often includes discharging into islanded networks, as well as into the wider 'open' grid. In the context of international trends towards smarter/low carbon grid networks, it is predicted by Ricardo, National Grid and others that the mobile electricity storage potential of V2G operation could play a valuable role in grid balancing (reducing demand and providing power to the grid). Providing a grid balancing service will add a new value stream to several cost models, not least that of EVs.</p>			
<p>As part of its strategy to develop and commercialise technologies integrating the new energy and mobility sectors, Future Transport Systems (FTS) has undertaken background research into current V2G technologies and pilots projects. Based on this research FTS (with SSE and other partners) is proceeding with the development of a generic V2G system which will test the fundamentals, including; battery degradation and energy losses, on- and off-board control systems, grid integration, operational control, etc. This study will characterise the market potential for V2G technologies and segment it by technical solutions and types of value offered. This segmentation will define what technical adaptations will need to be made to the generic system to meet a range of niche market needs. The study is innovative in aiming to segment and quantify the potential V2G market so that specific technical adaptations can be developed to provide early adopting niche markets with specifically developed V2G functionality. Identification and prioritisation of these niche market segments will enable FTS to develop robust technical and market development strategies, thereby enabling the ultimate systems to be commercialised as effectively as possible. The study will also identify potential partners and customers with whom FTS can work to develop large-scale pilot projects and commercialise the final system.</p>			

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
GJD Manufacturing Limited	V-TECT outdoor motion detector	£40,620	£24,372
Project description - provided by applicants			
<p>Motion detectors are essential features of alarm systems. Passive infrared sensors detect coarse changes in thermal energy (i.e. moving objects). When used outdoors they are vulnerable to sporadic sensing from changes in the environment (e.g. moving animals, swaying foliage); false alarms are commonplace.</p> <p>GJD Manufacturing Ltd plans to overcome this by developing V-TECT, a smart sensor system with intelligence and optimised control.</p>			

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Green Triangle Studio Ltd	IDEAhaus	£43,035	£25,000
Project description - provided by applicants			
<p>IDEAhaus is a climate resilient, mass customisable housing construction system. It makes a house which is Industrialised, Delightful, Efficient and Adaptable; an IDEAhaus.</p> <p>This project responds to two glaring problems facing UK housing construction: 1. There is a great need for mass affordable housing production in the UK and greater industrialisation could bring better quality, speed and predictability. However, factory-made housing has not provided the variety and flexibility necessary for different site context and programme requirements. 2. There is little recognition of the speed of climate change with flooding and overheating projected to increase massively in the UK. Much new timber frame housing is already suffering overheating and is susceptible to flood damage. Our analysis shows cooling could overtake heating energy demand by 2040.</p> <p>The IDEAhaus system is based around a limited number of components which can be assembled to provide different sized homes. The construction is considered as: Core construction, Additive components, Adaptable services. The INDUSTRIALISATION of the construction allows for standardisation of core components, enhanced manufacturing quality, predictable cost and delivery and economies of scale. It is made DELIGHTFUL with light and airy spaces, individualised room layouts, windows and cladding, excellent thermal comfort and high-quality products with finishing options. In order to be EFFICIENT it uses passive thermal design, renewable energy systems, low-impact materials with minimal waste. It has predictable design times and a quick-to-erect watertight shell. It is made ADAPTABLE by allowing for a flexible layout (to Lifetime Homes), incorporating flood and overheating resistant construction with additive exo-structural options and replaceable cladding, solar panels and services. IDEAhaus illustrates how spatial flexibility, customisable facades, thermal improvements and future adaptability could revolutionise UK housing!</p>			

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Logic Programming Associates Limited	Non-disclosure agreement automation	£40,000	£24,000
Project description - provided by applicants			
Logic Programming Associates (LPA) propose to investigate the viability of a software service which helps people ensure that they have taken the necessary steps to protect their confidential information through the generation, review, management and signing of the appropriate non-disclosure agreements.			

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
Medical Wireless Sensing Limited	Non-intrusive sensing for quantitative food analysis	£21,360	£12,800
Project description - provided by applicants			
<p>The recent food scandals involving horsemeat in European beef products and Chinese milk contaminated with melamine highlighted the increased consumer awareness in food purity, the importance of food integrity and the need for frequent analytical tests in the food supply chain. There is an increasing demand for novel monitoring methods that could provide fast, large-scale, and in situ quality controls. For example, a major challenge in this area is the identification of the botanical origin of vegetable oils, and mainly the detection of the presence of the ethically dubious palm oils in oil blends.</p> <p>The goal of this project is to develop a commercial and market strategy surrounding a new methodology for non-intrusive food sensing based on microwave technology, which uses low-power radio waves to determine the material properties of a substance. The proposed FoodWise device will ensure that consumers, UK government bodies and reference laboratories will be employing cutting-edge yet practical methodologies with respect to food production, processing, analysis, and contamination detection.</p>			

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Nano Products Limited	Novel lateral flow diagnostics	£40,600	£24,360
Project description - provided by applicants			
<p>Lateral flow diagnostics are used for the specific qualitative or semi-quantitative detection of many analytes including blood proteins, mycotoxins, viral pathogens and bacterial toxins. When used as a clinical diagnostic, urine, saliva, serum, plasma, whole blood and exudates can all be used as specimens. Microporous nitrocellulose membranes are used as the substrate upon which immunocomplexes are formed to indicate the presence/absence of an analyte in a liquid sample.</p> <p>Nano Products Ltd proposes a new approach to the manufacture of lateral flow assays.</p>			

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OnMyMobile (a trading name of YTKO Ltd)	MeshDex – a web-based collaborative discovery environment	£41,591	£24,954
Project description - provided by applicants			
<p>MeshDex is a new and innovative way of locating content online, which tackles limitations of current search technologies, by the process being treated as essentially a social rather than individual activity. As such, MeshDex overcomes issues with the ever-increasing wealth of information for any given subject or area of interest via a passive crowd-sourcing approach that globally shares the effort spent by users in locating, reviewing and qualifying sources. In essence becoming a “found once found for all” (FOFFA) system. At its heart is a web-based Collaborative Discovery Environment (CDE) through which users can locate and organise sources of information around one or more areas of interest whether they appear on the web or not. With all sources being connected via an inventive cloud-based indexing/tagging process, which overcomes terminology and language differences, users can discover or be alerted to relevant content found and registered into MeshDex by others (even across subject, area of interest or language boundaries).</p> <p>Through its inherent collaborative capabilities MeshDex will be able to deliver benefits to many kinds and groups of web users, including researchers and practitioners in many fields such as health and medicine.</p>			

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R.E. Bowers & Freeman Limited	Advanced tooling technology for the aerospace fastener industry	£57,088	£25,000
Project description - provided by applicants			
R.E. Bowers & Freeman would like to further research and investigate the aerospace fastener manufacture market. The project aims to test and evaluate whether or not their newly proposed method of producing master hobs and subsequent punches for aerospace fastener manufacture would provide tooling with advanced wear properties, whilst enabling reduced overall punch manufacturing costs and added production benefits for the fastener manufacture.			

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Rotite Technologies Ltd (Mechanical connection and coupling technology	£41,364	£24,818
Project description - provided by applicants			
Rotite Ltd has developed a new mechanical connection and coupling technology. It is based upon a low-profile, helicoidal dovetail. This means that the two surfaces dovetail together and can be rotated against one another until the required tightness is achieved. The connection is high strength and allows transfer of very high axial loads with a minimal axial translation. As this is a platform technology, Rotite requires Technology Strategy Board grant funding to assess the market potential of the initial target markets and end use applications.			

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Seactive	Airloop	£56,406	£25,000
Project description - provided by applicants			
<p>Chris Hodge Commercial (CHC) supplies and modifies commercial trucks. We export to over 20 different countries throughout the world, not only supplying vehicles to regular haulage companies but also to aid organisations, charity concerns and World Bank-sponsored projects. We regularly modify standard vehicles to create unique ‘customer specials’ including horse boxes, mobile classrooms, race support vehicles and outside catering units for the film and entertainment industry. We provide a full advisory service to companies on both vehicle procurement and disposal and have a notable consultation client list which includes major blue chip companies.</p> <p>CHC has created a marine technology venture - ‘Seactive’. Travelling in high-speed boats is uncomfortable even in relatively low sea states, and the shock and vibration generated can lead to well-documented back, hip, neck, knee and kidney problems. Seactive has previously developed a highly innovative suspended deck system for the protection of crewmembers of high-speed boats that significantly improves their comfort and safety. These systems have been through extensive sea trials and proved to be very effective and reliable. The original Seactive concept suspends the whole cockpit area as one and uses standard fit seats. This is a great system but not designed to be retrofitted to existing craft. Seactive has identified a need for the application of its technology to individual seating units that could be retrofitted to a number of different vessels quickly and cheaply. Currently, suspended seats can be heavy, expensive and in many cases only partially affected and in some do not work at all.</p> <p>Seactive has developed a concept for creating a simple but effective seat suspension system. The composite seat is also a spring, and its formed area is the shape of a ‘dog bone’ with thicker ends and a narrower seat area.</p>			

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SimPrints Technology Limited	SimPrints Technology Ltd.	£25,000	£15,000
Project description - provided by applicants			
<p>The ability to accurately and reliably identify patients is an essential step in providing quality healthcare in emerging markets. The past 10 years have seen a wave of clever mobile health applications developed by governments and non-governmental organisations (NGOs) around the world, helping to provide medical care to vulnerable communities. These applications have benefited from the rapid expansion of mobile phone technology worldwide. Africa, for example, now has more mobile phone subscribers (648m) than either the U.S. or Europe (World Bank 2011). Benefiting from recent technological innovations, mobile health (mHealth) tools are able to improve patient care, facilitating tasks ranging from running diagnostic decision trees to monitoring drug stocks. Despite this huge potential, patient identification and authentication remains a key bottleneck in expanding the reach of mobile healthcare. Matching patients digitally to health records is difficult in the absence of a national health number, formal government-issued ID or fixed address. These challenges are intensified in conflict or disaster regions—according to the UNHCR (2012), more than 45.2 million people have been forcibly displaced globally. As a consequence, many government agencies and NGOs find their ability to deliver healthcare seriously impeded.</p>			
<p>SimPrints provides a solution to this problem by linking patients to health records through a single unique identifier: their fingerprint. A person’s fingerprint is a biometric ID that’s completely unique to them and - unlike typical paper records - cannot be faked or lost. While expensive mobile biometric scanners like the iPhone 5S (Apple Inc) are penetrating developed markets, these systems are far too expensive for mass production in emerging markets. Leveraging research from the University of Cambridge, SimPrints is developing a novel scanner that works with existing mHealth applications to provide users with biometric tools at a considerably reduced cost.</p>			

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
The Dearman Engine Company Limited	The Dearman Engine Market: Proof of market in India	£41,650	£24,750
Project description - provided by applicants			
<p>Up to 20% of the diesel consumed by a refrigerated truck is used for refrigeration, causing CO2 emissions of up to 50 tonnes per year per truck for cooling alone. Diesel-powered truck refrigeration also emits emissions including NOx. If cold chains continue to grow on a business-as-usual model in the developed world alone (10% year on year), the air pollution, health, climate and financial impacts would be enormous. But if developing countries follow the same carbon and diesel intensive model, multiplied by their own population and economic growth, the impact on air, health, climate, as well as financial damage, will be unmanageable. It is vital they do not follow the path taken by developed economies. In India, cold chain investment is expected to total up to \$10bn over the next five years. Non-grocery industries built on cold chains such as chilled pharmaceuticals and convenience food are also growing rapidly; 15% and 34% pa respectively. A new and sustainable cold chain for refrigerated storage and transport is seen as an imperative.</p> <p>Liquid air technologies have the potential to create a market which provides a clean solution. The Dearman Engine Company is harnessing liquid air to deliver cleaner (zero emission) and cheaper transport refrigeration. A Dearman engine refrigeration system will be fitted in a commercial vehicle for demonstration in 2014, moving to field trials and low volume manufacture by 2015. Through grants and tax relief, the Indian government has designated the cold chain a 'sunrise sector'. This presents a major commercial opportunity for the Dearman engine; also delivering economic, environmental and societal impact. This project has four core stages: 1. Research - market analysis, development of the business case and identification routes/barriers to market and commercialisation; 2. Market discussion - including hosting a cold chain seminar in Chennai, India; 3. Reporting and roadmap for delivery; 4. Dissemination and engagement.</p>			

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Tiller Software Limited	LatentLeads	£41,910	£25,000
Project description - provided by applicants			
<p>LatentLeads is an innovative lead generation software platform, which seeks to solve a significant core problem in the B2B sales and marketing sector by providing warm and hot leads based on real-time analysis of social media, forums and blogs. It will use new complex big data frameworks, text mining and natural language processing algorithms to provide semantic meaning to otherwise disparate information around the web, allowing potential customers for businesses to be identified and targeted more accurately.</p> <p>LatentLeads is particularly aimed at competitive sales markets where purchasing decisions need to be made relatively quickly - and it will aid the decision making process, where the purchaser might not know all the suppliers well.</p>			

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Participant organisation names	Project title	Proposed project costs	Proposed project grant
Trak-Rap Limited	Automated stretch wrapping system for small heat sensitive and aerosols	£40,665	£24,399
Project description - provided by applicants			
<p>Shrink wrapping is widely used as secondary packaging to unitise individual items into a larger unit load. However, there are some issues associated with the use of shrink wrapping, particularly for aerosols. Of all packaging machines, shrink wrappers are one of the heaviest energy users. The process requires running the pack through a heat tunnel at temperatures over 220°C to shrink the polyethylene film onto the product.</p> <p>The opportunity for Trak-Rap is the development of an automated wrapping system that uses virtually no heat and uses thin, linear low-density polyethylene, recyclable “stretch” film to secure the pack. It provides a cost-effective wrapping solution for small, heat-sensitive products like aerosols without the need of collated trays. It will thus provide an alternative to shrink wrapping by offering the same benefits but with considerable energy and cost savings. It will reduce heat and energy requirements by 95% and reduce the use of plastic materials by > 60%. It will eliminate the risk of explosion during the wrapping process of aerosols (at no time the products will be exposed to heat), simplify HSE requirements, lower insurance premiums, reduce the amount of safety equipment and reduce product changeover times (one size of film fits all packs) as well as packaging costs.</p>			

Results of competition: Smart - Round 4 - Proof of market

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Uni-Researchplus Limited	Semantic Search Engine	£39,150	£23,490
Project description - provided by applicants			
<p>In the Arabic world, English is the second language of choice by scholars and businesspeople alike, and student support officers from the UAE cite research skills and language as major barriers to the education and progress of Middle Eastern students. There are a number of search engines that can be used for research, such as Google and Bing, that are owned and managed by large organisations with enormous resources at their disposal; however, they're focused on the mass market and at present do not serve the niche we have identified. Currently, searches conducted by students require a manual intervention so that queries raised are then actioned by an individual at the backend. Our solution is to provide a semantic search engine tailored for this market that provides a full Arabic translation of the extract or abstract of the retrieved document.</p>			

Results of competition: Smart - Round 4 - Proof of market

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Vitamins Design Limited	Magic Light	£41,700	£25,000
Project description - provided by applicants			
<p>This project will investigate a new technology that enables users to conveniently move or resize beam(s) of light by a simple hand movement, interacting directly with the beam itself, meeting the user's specific lighting configuration at any given time. The technology will also have a level of intelligence, enabling it to learn from past experience, undertaking repeat actions quicker, and adding to the potential impact and future use of the innovation.</p> <p>This 'proof of market' investigation aims to identify the market potential for the technology, and establish whether this idea is most relevant for individual consumers on the high street, to business or other sectors. It will identify the best approach to take with design and technology refinements in order to meet the market needs and maximise the commercial and technological potential.</p>			