



List of UK organisations looking for partners in Colombia for the Innovate UK Agri-tech Catalyst Colombia Call

Please refer to the call scope and dates here <https://apply-for-innovation-funding.service.gov.uk/competition/133/overview>

KTN produced this database based on information supplied by the organisations listed here and the purpose of such database is informative only so you can identify a suitable partner to work with. KTN is not recommending any institution within this list to partner up with. Therefore, KTN will not be responsible/liable for the background, execution and/or result of the work with the partner of your choosing. If you identified a suitable partner to work with, and require more information please contact Liliya Serazetdinova at KTN (Liliya.serazetdinova@ktn-uk.org) to request an introduction.

Organization name	Agri-tech sub-sector	Area of Work/ Project Idea	Capabilities Offered	Capabilities Required/ What they want from visit	Attending mission to Colombia Y/ N
2Excel Aviation	crops, digital solutions	Remote Sensing with expertise in agriculture	Satellite analytics with specific expertise in spectral analysis; existing connections with UAV and hyperspectral collect in Columbia.	Knowledge of and access to on-the-ground challenges in crop production e.g. disease control.	N
Aadra Systems Ltd	crops, other	Water conservation in Agricultural	To help them save water and improve their yields hence save money.	Agricultural project partner	N



AB5 Consulting	digital solutions, other	innovative solutions in an enabled environment - smart agriculture, weather monitoring, disaster risk alert	project management, solution development and implementation, software development, knowledge of weather, satellite, logistics sectors	project management, software development, service solution	N
ABACO Group	digital solutions, supply chain	Supply chain management, certification, evidence-based systems to better manage and monitor agricultural practices and stock fulfilment.	We developed an evidence-based system that certifies Agri-Food production and offers several tools and apps (Augmented Reality, GPS, automated procedures for data extractions) to monitor procedures via remote control. We offer a platform able to gather all relevant information for Agricultural practices, including satellite imagery and morphology, to better manage land and related practices. Our clients are the producers, bank and insurance companies, Government departments, food industry. Every actor in the supply chain ecosystem can access and share information through our platform.	We are looking for Subject Matter Experts to gain and input their local knowledge. Our project would require services such as satellite imagery and analytical algorithm development (both areas, UK organisations have strong credentials in).	N



Agri-EPI Centre Ltd.	crops, livestock, aquaculture, digital solutions	Agricultural technology	UK agritech centre with wide academic and industrial network	Colombian partners interested in precision technology	N
Agricompas Limited	crops, digital solutions	Agricompas is specialised in agricultural data analytics and provides knowledge and decision support to stakeholders in cropping systems to improve the economic, environmental and technical efficiency of their processes. In Colombia Agricompas leads a three-year project in the IPP2 program organised by the UK Space Agency. This Ecological Production Management Information System (EcoProMIS) uses satellite and UAV earth observation combined with environmental and crop production data to research the impact of crop management on productivity and environmental impact. EcoProMIS	Agricompas would like to conduct a feasibility study to understand how its EcoProMIS platform could be adapted and applied to support sustainable intensification of coffee and cacao production: 1. Research key stakeholders in coffee and cacao value chains and understand their main challenges Through desk research and interviews we will conduct a PESTLE analysis and define political, economical, social, technical, legal and environmental challenges that stakeholders are facing. These are likely to be climate change, economical development in post-conflict regions, preserving biodiversity, productivity improvement for smallholders, women's economic empowerment and promoting gender equality 2. Determine how data and knowledge could support better decisions Sustainable agriculture is a balancing act of improving productivity and profitability while reducing environmental impact, promoting biodiversity and improving social and economical conditions of stakeholders. To facilitate and create this balance we require developing digital agriculture applications with comprehensive data sets, powerful algorithms and near real-time access to knowledge and provision of affordable decision support 3. Develop sustainable offerings that help	During the visit we would like to get a better picture of the Cacao and Coffee value chain and the general (agricultural) situation in Colombia so that we can develop a solid project proposal that meets the competition requirements. In specific we would like to: 1. Discuss with stakeholders in the coffee and cacao value chains and understand their main challenges and opportunities 2. Meet potential (Colombian and UK) collaborators and discuss their roles, capabilities, and objectives 3. Get a better understanding of the political, economical, social, technical, legal and environmental situation in Colombia 4. Establish contacts with the Colombian government and their department of agriculture, the UK embassy and the FCO prosperity fund team If the application were successful Roelof Kramer and Libardo Ochoa would like to participate in the meetings, presentations and discussions, and to share the experiences we have with the EcoProMIS project. The application of our data analytics and decision support services has much potential in a wide range of crops and for Agricompas it is very valuable to promote these and build a wide network in the agricultural cropping systems in Colombia.	Y



		<p>includes farmers collecting data and engaging in outreach programmes, to develop their skills and understanding of how crop management affects productivity, income and sustainability. Smartphones are used to communicate information to and from farmers in the field. The project creates a Management Information System that will be used in oil palm and rice to help farmers adapt to climate change, reduce GHG emissions while improving productivity and profitability. Basic crop knowledge will be freely available through a web interface for the growers while Agricompas will provide commercial decision support to larger growers, processors, traders, financials and the government. This will create a</p>	<p>farmers and particularly female smallholders In order to collect data, share knowledge and provide advice, growers will be involved in outreach programs to train them in using data driven solutions for better production, harvest and logistics</p>		
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		<p>sustainable income to sustain continued development and delivery of knowledge and decision support tools once the project has finished.</p>			
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Agritech World Ltd	crops, supply chain	For more than 50 years, we have been in the business of importing and exporting high quality fruits, commercializing, transporting and selling them in different countries of Latin America, handling up to 75% share in some markets, with large sales volumes, logistics and serving large food distribution chains by creating strong business alliances. We also represent several British Agri-Tech companies in Colombia.	Our company represents already various British Agri-Tech companies in LATAM and we welcome more companies to joining us.	I am very keen to meet more British partners with technologies that reduce the environmental impact of crop, livestock or aquaculture production. Because we are already doing business in Colombia we know the needs of farmer smallholders.	N
Agrosight Limited	crops, digital solutions	Precision Agriculture	Expertise in early disease detection	Research institution in Colombia	N
Anaerotech	other	Research and development on renewable energy and biodegradable resource recovery	Expertise in research and full-scale development of the whole production chain from waste selection and collection to energy and fertiliser utilisation. Leading researcher in the field of anaerobic digestion	Community training and organisation for effective implementation of renewable energy solutions, such as Sena. Also interested on institutions with on-the-ground experience of implementation of agricultural based projects	N



CABI	crops, digital solutions, supply chain	is an international not-for-profit organization that improves people's lives worldwide by providing information and applying scientific expertise to solve problems in agriculture and the environment.	CABI is an international not-for-profit organization that improves people's lives worldwide by providing information and applying scientific expertise to solve problems in agriculture and the environment. Our approach involves putting information, skills and tools into people's hands. CABI has a centre in São Paulo, Brazil and operates across the whole of South America. The centre supports CABI's global Plantwise programme, and works with partner institutions in Bolivia and Peru to reduce crop losses. It also implements projects related to integrated pest management (IPM), and biological control of invasive weeds and forest pests. Smallholder farmers are encouraged to use IPM approaches to control pests and the centre works to identify practical and reliable methods of pest control, which also protect the environment and the health of the local community.	The trip to Colombia would allow us to make contact with key in-country stakeholders such as agricultural research organisations, government departments (i.e. extension) and commercial companies (agro-chemical dealers, exporters, growers, womens groups). The trip would help us to refine the proposed concepts based on engagement with potential partners and gain a greater understanding of demand from potential users. These visits would initially focus on government agricultural organisations, extension services and commercial organisations involved in production of key crops, however, we would also like to visit organisations which would be able to partner with CABI to assist with ground-truthing surveys to validate models in country. This would enable us to engineer the correct project team for the proposal to ensure effective results. We would like to visit Biopesticide experts within Colombia to propose collaboration for the development of a tool to predict when best to apply the product, or if products are not near market quality, to discuss how CABI can assist in producing a high quality product.	Y
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Camnexus	digital solutions	<p>The project aims to investigate the technical feasibility and explore the commercial potential of implementing a dedicated real-time sensing and telecommunication infrastructure for agriculture sites located in remote areas of low connectivity, limited access and unreliable power and energy supply. The technology is based on LoRaWAN technology, a new wireless solution especially designed to support sensors data communication in remote areas. This technology allows long distance communication (more than 15 km) with low power consumption and low infrastructure costs, allowing sensors' autonomy (battery life) for a year. This technology offers smart solution to monitor key agriculture variables</p>	<p>Camnexus Ltd is a UK company based in Cambridge, startup of the University of Cambridge and associated to the Cambridge University Centre for Global Equality. Camnexus is a technology transfer platform that responds to the technological needs of our clients in developing regions looking for sustainable development through digitalisation and smart transformation in key productive sectors. We provide integrated solutions in ICT and engineering based on our expertise of more than 30 years in Latin America developing local innovation capabilities and transferring technology in telecommunications, energy efficiency, water management, automation and IoT. We differentiate ourselves by our technological expertise and engineering network in developing regions, particularly in Latin America, integrating solutions with cutting-edge technology, but at convenient costs and with a sustainable business model of local integration and local capability building and training. One of our latest development, yet in early-stage R&D, is a Smart Solution for Sensoring in Remote Locations: a dedicated solution for IoT networks, which allows long-distance communication, with low power consumption and a low infrastructure cost. Our expertise and projects have great potential and relevance in areas for agritech, particularly in areas with limited infrastructure, poor and unreliable power and energy supply, as the post-conflict region in Colombia, where we can provide a great impact with our</p>	<p>Based on previous works in Colombia (in collaboration with British Council, Colciencias and Reddi) we have received interest of collaboration of two Colombian organisations with substantial experience and capacity in Colombia agriculture and in technology transfer for economic development. We had already three skype calls with two of them during the last two weeks and a preliminary proposition has been outlined which is described in question B2. There is a potential for consolidating both partners in one proposal, but yet to be defined. Hence the aim of the visit to Colombia. The aim will be to meet with the two partners, to understand the local needs of each of them and of the communities of post-conflict that they work with / or have access to, to identify the main challenges and competences and to align them the technical proposition. Then we will be able to define the project deciding whether a joint-collaboration integrating all the Colombian partners is feasible. The definition of the project will include: definition of the minimum technical, capability, infrastructure and access, identification of the community of the post-conflict area for feasibility, agreement of outcomes, definition of key activities and responsibilities, key contact points and communication strategy.</p>	Y
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		<p>to improve productivity. With this project we aim to validate the communication and sensing technology in such environmental conditions; create local capacity in technology and innovation, by training women of identified communities in the region of Bolivar or Palmira (where our Colombian partners have access). The feasibility study of this remote sensing technology in areas of post-conflict in Colombia, will open the door for many other applications in similar extreme environments (environmental monitoring, medical supply chain support in developing countries).</p>	<p>knowledge and understanding of the local context and of the technology.</p>		
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Canning House	other	Nonprofit membership organisation promoting UK-Latin American and Iberian relationships, particularly business and trade relationships.	A wide number of public and private contacts throughout Latin America and the UK	n/a	N
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<p>Cardiff University</p>	<p>crops, digital solutions, supply chain, food, and other</p>	<p>Our strategy will employ two complementary technologies for crop protection. First a “push-pull” strategy to drive the migration of pest insects out of the farmer’s primary crop (J.Chem.Ecol. 42:689-97). To achieve this, secondary plants of two types must be selected. One produces odours repulsive to the insects, and is sown as intercrops to drive insects away from the primary crop. The second attracts the pest and is planted around the main crop to draw pests away. This methodology has been applied with marked success in Africa with significant reductions in pest infestations and damage, along with secondary benefits eg reduction in weeds. Furthermore, the secondary plants may serve as useful</p>	<p>The Cardiff University team of Dr Colin Berry (Biosciences) and Prof John A. Pickett (Chemistry) have decades of experience working with the control of pest insects using biological pesticides and strategies using pheromones (lure and kill) and attractant/repulsion with secondary plants (push-pull) that also provide additional value to farmers eg as forage crops for animals. JAP has a track record of establishing these strategies in the field, eg in Africa, where significant reductions in pest damage have been measured. Other Cardiff staff have expertise in measuring insect responses to odours (Dr Van Naters) and biodiversity (Dr Orozco Ter Wengel –a Colombian citizen, and South American coordinator, International Union for the Conservation of Nature). These research areas are highly relevant to Colombian agriculture. Pressure to move away from chemical pesticides, within the country and to facilitate export of high-value products free of residues to consumers eg in the UK and EU, requires other, sustainable methods of pest control. The proposed methodology provides the necessary crop protection while also adding value by the provision of secondary crops. The methodologies are adaptable to a range of environments and climatic conditions, including the variations experienced in El Niño/La Niña weather systems.</p>	<p>Experience with the above areas; interests in crop protection (with possible reference to specific crops e.g. coffee); ability to transfer pest control technology to users in the field. The opportunity to visit Colombia will provide the chance to evaluate field conditions first hand in order to formulate an appropriate strategy. Discussions can be held with those in-country to identify specific priority pests, understand their life-cycles and feeding patterns, and become familiar with current local control practices. The capacity of academic and business partners in Colombia to adopt roles within the programme can be assessed. CB speaks good Spanish (level B) and will be able to hold discussions with non-English speakers. It would be beneficial if meetings with likely partners already identified (see below) can be arranged. With assistance from CIAT, it is hoped that other potential partners can be identified and that links between partners can be facilitated based on the local knowledge of CIAT. The identification of the network of participants and mapping their likely roles is key to establishing a robust programme of work. CIAT guidance on how best to work within the Colombian system is also likely to be valuable in avoiding problems in implementation of the project.</p>	<p>Y</p>
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		<p>products eg as animal fodder or, in some cases, as high value crops.</p> <p>Strategy two deploys biological control agents such as Bacillus thuringiensis (Bt) as a pesticide spray to kill residual pest insects on the crop. These highly specific, potent agents have no significant effects on the ecosystem. This makes them excellent sustainable pesticides that are considered compatible with organic production and leave no chemical residues. We will match an appropriate Bt strain to the pest insects and develop application strategies appropriate to the insect and the environmental conditions.</p>			
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<p>Cartama</p>	<p>crops, supply chain, food</p>	<p>Cartama UK is JV between Fresca (UK Company) and Cartama (Colombian company). We are a grower and exporter of Hass Avocados from Colombia. Cartama UK manages the sales & marketing with the avocados being distributed to the major UK retailers, wholesalers and restaurants. Cartama grow avocados from wholly owned farms and also work with a number of small and large scale growers, assisting with growing, post-harvest management, grading, packing and export. We are Colombia's largest grower and exporter of Hass avocados and are responsible for the welfare of a significant number of growers and the surrounding community. The business is projected to significantly grow over the coming years. Both Fresca and Cartama are</p>	<p>Cartama are the only vertically integrated grower in Colombia. We can therefore offer unique skills and services to growers by integrating them into supply chains, creating new supply chains, improving productivity and adopting innovation so that Colombia, as a country, can maximise the land following the war.</p>	<p>We are looking for services and skills to compliment a two pronged approach to winning funding to support the growth of the Colombian Avocado industry: We are looking to increase the yield and ultimately the financial return for growers (small scale growers primarily) through research in nutritional plans to be more efficient with the use of fertilizers and liming all of which will improve the post-harvest quality of fruit. Avocado production in Colombia is relatively new and therefore the research is based on knowledge from Mexico, Peru and Chile. We need to develop specialist knowledge and expertise for the unique climate we have in Colombia. The increased returns will allow for reinvestment in increased growing area, the supporting community and infrastructure. We also see a significant opportunity to maximise financial returns for growers, of all sizes, by industrialising the processing of avocados. Processing avocados would utilise the crops of small scale growers who cannot access export markets, increase returns for varieties grown other than Hass that are not suitable for export markets and deliver a significantly better return on the c.20% of cosmetic grade out, all of which is typically sold on the domestic market for very low values. The processing of avocados could be with high pressure technology, IQF Technology (Individual Quick Frozen) and UV radiation all of which is not a skill set recognised or understood in</p>	<p>N</p>
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		privately owned family businesses.		Colombia.	
Cellular Systems	supply chain, food	Supply chain Food co product valorisation	Supply chain real time remote monitorsCo products access to users	Producers	N



Climate Edge	crops, digital solutions	<p>Climate Edge intend to develop a full climate and pest risk analysis product for application on smallholder farms. During the initial phase, this product will be directed to cooperatives who provide extension technical support to improve the efficiency and accuracy of technical extension staff support to individual smallholder farmers. Initially we will target coffee production, but the product can be scaled to any crop and in any region. At best, cooperatives who provide technical support to smallholder producers will only have capacity to visit individual producers twice or three times a year. This means that technicians have to reply upon snapshots of the farm to evaluate threats to production. This usually results in generic advice being</p>	<p>Climate Edge provides smallholder farmers the information they need to sustainably intensify production, adapt to the devastating impacts of climate change, and reduce pest and disease risks. We achieve this by utilising a combination of remote sensing technology, our own agriculturally focussed weather stations, and agronomic research. Remote sensing allows us analyse the greatest risks to productivity at a landscape level, and allows us to optimise placement of weather stations to provide meaningful decision support to large numbers of farmers. The NEXO, our low cost weather station, has been designed to work in the remote and inaccessible environment of tropical agriculture. We combine sensing data with agronomic research, enabled by our teams biological, environmental and agronomic expertise. This research combines data with practical outputs, such as pest and disease warning, climate smart adaptation support, and cooperative landscape analysis. Climate Edge was founded in 2015 and has already proven the value of our technology through targeted trials in Nicaragua and Honduras.</p>	<p>- Technological partners to improve our satellite data capabilities, to increase the scalability of our approach whilst maintaining low costs.- In-country implementing partners to expand our reach to smallholders.- Research partners to reduce the knowledge gap between climate data and coffee (or other crop) yield and quality models. As a startup and micro-business from the UK, it is often difficult to afford visits to potential new market countries external to funded, collaborative projects. This means that it is often difficult to truly understand user need and demand in these new potential markets, without the bias constraints of the wider project context. I.e. in a project which looks to provide data to smallholder coffee producers, the assumption has been made that the smallholder coffee producers need, or are demanding, more data. During this trip, we intend to meet potential Colombian users which are relevant to the technology we are developing, and truly understand their needs. This will help us target our technology development, and will increase the chance of successful uptake and scale from new users. To help us achieve this, we will bring paper mock ups of our digital products to user test how potential users respond to our proposed technology.</p>	Y
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		<p>provided, and does not allow technicians to provide tailored support. As sensing technologies and communication tools (phones and computers) are becoming more advanced and accessible, there is an opportunity to provide technicians with real-time and historical data sets of farms prior to their visits. Coupled with recommendations based on agronomic research, this will improve the efficiency of technical support, and allow technicians to provide tailored advice to farmers based on their unique microclimate, current management regime, farm size and budget.</p>			
College of Medical Veterinary and Life Sciences	crops, aquaculture	AgriTech and Veterinary	Novel aquaculture and insecticide technology and expertise	Novel aquaculture and insecticide technology and expertise	N



Colombian Coffee CO.	crops, food	Agriculture and Food	<p>In Colombia we have developed close relationships with coffee growers co-operatives and small-scale farmers, including indigenous communities, in a number of areas in Colombia. We also have relationships with local NGOs and government bodies working to support farmers in areas that were badly affected by civil war and are looking to create sustainable livelihoods through coffee and other agricultural products. In the UK, we have experience in awareness raising and educational activities to increase consumer knowledge of the ethical issues raised by coffee and encourage people to spend with awareness. We have access to several retail lines to sell high-quality, ethically sourced coffee, and have the potential to increase substantially.</p>	<p>We are keen to have advice on how to scale-up the approach of our pilot project working with farmers cooperatives in Tolima, that provides training and support on how farmers can increase their livelihoods by growing higher quality varieties of coffee, and increasing their awareness of tastes and market trends in Europe.</p>	N
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<p>Comercializa dora Global Import</p>	<p>Crops, digital technologies</p>	<p>'We are working with around 20 families in the post-conflict area of Cauca Region in two locations Tambo and Corinto. The main objective is to help these families to implement long-terms avocado crops, so they can guarantee long-term income to their families and better living standards. Most of these families are replacing the coca plantations for avocado plantations, other families are regrouping their relatives so they can start over their lives by having a long term avocado crop. In order to achieve a successful project and to improve their living standards, we need to ensure these families produce the best quality avocado, so it can be exported to the United Kingdom thanks to our UK Partner. Hence, we want to add the IOT technology (Internet</p>	<p>Agricultural Engineering; Crop Advising; Social Coordinator; Sales (Local and Export); Financing; Project Management</p>	<p>UK Parnter in IOT Technology</p>	<p>N</p>
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		<p>of Things) through an App by placing sensors in the plantations for measuring environmental variables so appropriate action can be taken when required. This leads to a better crop efficiency, quality product and to mitigate loses via prevention, which means farmers will be able to have a greater revenue for their crops. Additionally, we want to create a "transparent trading" website so the farmers and buyers can find out all pricing breakdown, so it is a fair and transparent for all parties.</p>			
Cranfield University	crops, other	Crop Production / Agroforestry / Plantation Crops	Crop Production / Agroforestry / Plantation Crops / Bio-economic modelling / farmer participation	Organisations in Colombia	Y



Cranfield University	crops, digital solutions, supply chain, food	Postharvest storage Soil science and precision agriculture Big data and remote sensing develop innovations that increase rural income through improved processing or storage	Access to academic experts and facilities including new facilities such as AgriEPI and CHAP Agritech Centres to provide new technologies for precision agriculture, helping to optimise soil management, increase crop production and reduce food waste, big data and remote sensing	Postharvest storage Soil science and precision agriculture Big data and remote sensing	Y
Cranfield University	crops, digital solutions, supply chain, food	Bio-materials for Agricultural production Antimicrobial and anti-fungal materials for agricultural production Natural Polymers, bio-polymers for fertilizer and crop growth	See the information above	Improving Crop Yield, sustainability	Y



<p>Cranfield University</p>	<p>crops, digital solutions, supply chain, food</p>	<p>The Centre I head (CEAI) and represent has two particular strengths; i) around the technology of information gathering and ii) its interpretation in support of effective decision making. The technological development arc, from data acquisition, where sensor and sensor platforms (in field, UAV's and satellite based) are combined of optimal use to incorporating this data into models of crop development and/or natural capital is something we excel at. We seek to offer this technology to our Colombian partners, in helping them develop better decision making for crops (e.g. coffee, rice, maize, cocoa; crops we have experience with in other parts of the world) and the social economic fabric of agricultural production as we integrate this in</p>	<p>Cranfield University is internationally recognized for excellence in engineering and management, and the Centre for Environmental and Agricultural Informatics (CEAI), building on core capabilities in sensor technology, engineering, informatics and management, seeks to apply these capabilities to address a wide range of research challenges in environmental and agricultural sectors. In partnership with two new Centres for Agricultural Innovation at Cranfield, Agri-EPI and CHAP, totals £10m, Cranfield University now has state of the art Agritech facilities including informatics and sensor systems. The facilities will combine our research and development capabilities in agriculture to address the importance of soil resources and sensing and analysis of big-data. CAEI specialises in the development of transformational informatics technology, integrating data gathering and monitoring technologies (sensor tech), data manipulation and interpretation (informatics and data sciences). CAEI includes research on air quality and climate change, soil quality, crop growth and monitoring, natural capital, ecosystem goods and services and on urban systems. In this way. CAEI articulate the benefits and findings from the data collected, providing a whole system approach to agricultural and environmental informatics. CAEI is host to the World Soil Archive (WOSSAC) covering, 329 territories worldwide, for which CU was awarded the Queens Anniversary prize.</p>	<p>Columbia is one of the richest and most biodiverse agri-ecological systems in world, with significant challenges both in terms of agricultural production both also socio-economically. Our interests in working in Colombia is in better understanding how we can leverage the significant capability we have in Agritech, both internally in the University but also through our partnership with the Agritech centres AgriEPI and CHAP in a complex, but highly rich (naturally and agriculturally) system such as that of Colombia. We also are keen to better understand how we can support soil health systems, linking this with our data sets (WOSSAC) but also soil informatics capabilities, to help inform decision makers in Colombia around their soils.</p>	<p>Y</p>
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		<p>capability of understanding the wider value of natural capital. We have commercial experience in developing farmer led decision support systems in the afore mentioned crops. We also intend to leverage the knowhow and sensor technology of Agritech present in AgriEPI, and in soil and crop health present in CHAP, in order to develop effective decision making support platforms for the farming systems present in Colombia.</p>			
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Earlham Institute	crops, other	Genomics, bioinformatics and breeding.	<p>I have experience applying multidisciplinary research for international development. I have worked intensively in Colombia in the last three years with funding from BBSRC and the British Council, and visited the country multiple times. I have a track record in crop genomics, including tropical forages and cash crops, and have previously contributed delivering agritech projects in international consortia. I have a large network of collaborators in Colombia. My group actually coordinates in the UK the UK-Colombia research network "BRIDGE Colombia" (www.bridgecolombia.org), which is a multidisciplinary network of researchers and organisations from the UK and Colombia, including several bodies of the Colombian Government, research centres, and the best Universities in the country.</p>	<p>I am looking for commercial agritech providers and companies with international supply chain with an interest in the application of genomic approaches to inform crop breeding. Ideally in -but not limited to- crops that my group already works with partners in Colombia: forages, beans, and sugarcane. These business would complement our expertise, help in the initial development, develop it further, or be the "end users" of these technologies, directly or through local partners that we can help engaging.</p>	Y
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<p>Earlham Institute</p>	<p>crops, other</p>	<p>We are really interested in developing projects that involve understanding and realising the economic value of the genetic diversity of agricultural crops in Colombia and pathways whereby this genetic variation can be used in the development new crop varieties in Colombia and beyond. We are also interested in developing technologies to access this genetic diversity. Specifically, following the consortium building workshop in London we would focused on specifically coffee disease, surveillance and monitoring and fish breeding and health as possible areas of interest. We will also be interested in engaging further with CIAT to identify area of interest specifically with a horticultural focus, projects exploring</p>	<p>The Earlham institute, formerly the Genome Analysis centre brings together multidisciplinary expertise in biosciences, bioinformatics, high performance computing and statistics to understand complex biological systems in relation to plants, animal and human health. Our research is uniquely enabled by core capability in advanced genomics and single cell analysis and computational platforms. These capability areas enable us to process, store, interpret and integrate data from computational analysis and support our proposed data-intensive research that embraces and confronts modern scientific challenges surrounding data scale and complexity. EI is in a unique position to directly contribute towards government strategies, to meet the growing demand for data-driven biology and to equip the UK scientific community with the knowledge and tools required to realise the value of big data in life sciences over the next 5 years. In Colombia access and understanding in how genomic technologies and big data can be used in the Agritech area will be critical for the growth of the Agritech industry. We are the UK coordinators for Bridge Colombia in the UK, Bridge is a multidisciplinary network of researchers and bodies of the Colombian government. We also co-ordinate the Colombia Grow programme, a £6M RCUK joint initiative with Colombia and the UK, aimed at growing research capacity in agrobiodiversity.</p>	<p>For the visit I will be represent the Earlham Institute and not just my own research area. We are looking for Colombian aggrotech. companies and UK companies with an International supply chain. We are specifically interested in the application of genomic approaches to inform crop and aquaculture production. Our primary aim will be to identify these industrial partners with complementary skills.</p>	<p>Y</p>
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		genetic diversity of beans and potatoes.			
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Energy Markets Global Limited	other	Energy sector consultancy Considerable Colombia experience Colombia trade and investment promotion	Colombia experience Rural energy development experience Post conflict countries economic development initiatives Worldwide consultancy and capacity building experience and expertise	Development of distribution channels (hi tech routes to market for agri products) Rural energy development in post conflict areas in Colombia	N
Environment Systems Ltd	crops, livestock, aquaculture, digital solutions, supply chain	Environment Systems is an environmental and agricultural data consultancy. We are trusted providers of evidence and insight to governments and industry across the world.	We are experts in the use of Earth Observation and GIS for agricultural and environmental applications. We have a wide network of contacts in Colombia.	Agriculture, agronomy, crop modelling, business intelligence.	N



<p>Environment Systems Ltd</p>	<p>crops, livestock, aquaculture, digital solutions, supply chain, food, and other.</p>	<p>Our project idea is to use EO and data driven approaches to generate new evidence to support decision making in post-conflict areas where agriculture is changing (e.g. where new supply chains, with smallholders are being created, or embedded) and where environmentally and socially sustainable solutions are sought. We have identified potential in relation to the growing of palm, which has strong participation by small holders, of which a proportion are female heads of family. Ideas to test and develop with key stakeholders during the trip: • Ecosystems services mapping to evidence how change associated with the palm supply chain (e.g. expansion, membership of certification schemes) affects smallholders and women. This would involve extending</p>	<p>Environment Systems is an environmental and agricultural data company and trusted provider of environmental and agricultural evidence and insight to governments and industry across the world. Our consultancy provides advice and solutions for land management, monitoring and policy. Our data services deliver always-on, accessible data from satellite Earth observation (EO). Our SENCE product provides spatial evidence to implement the ecosystem approach. We have a strong environmental and social ethos, reflected in our work, and supported through our Ethics Policy (staff owned) to ensure our activities comply with our vision. In ‘cloudy’ Colombia, our skills in radar EO are key to obtaining consistent value from the imagery, enabling us to deliver EO-based solutions across the supply chain. This fits with providing evidence to support sustainable intensification, reduce losses, evidence compliance, improve sustainability, reduce poverty, adapt to climate change and increase resilience in the Colombian agri-tech sector. Smallholders are a key to the sector and to delivering sustainable solutions. EO solutions can extend beyond crop monitoring and underpin an ecosystems approach to identifying risks and opportunities for smallholders, and in particular for women, by factoring in their particular situation and needs in a changing and complex agricultural landscape.</p>	<p>Through EO4cultivar we have met many organisations in agriculture/environment and public/private sectors in Colombia and we seek to expand this network in relation to the palm supply chain. Environment Systems, through EO4cultivar, currently operates in the regions of Magdalena and Boyacá and has a number of Spanish speakers in the team. We understand the crops, supply chains and geography of large parts of the country.</p> <p>During the trip we seek to develop our understanding and relationships in:</p> <ul style="list-style-type: none"> • The activity and role of palm growing in post conflict areas and any particular considerations arising in the supply chain, especially that concern smallholders / sustainable production. • The role of smallholders and especially women smallholders in the supply chain, associated issues, challenges and opportunities and their experience of gaining certification status; • Existing certification schemes (e.g. RSPO) and emerging schemes (e.g. RSPO NEXT) and their evidencing requirements. • The Colombian governments zero deforestation commitment in palm oil, including how it will be run (IDEAM, MADR, MINICIT and/or MADS) and what information they require for compliance and monitoring purposes; • Palm growing and processing to 	<p>Y</p>
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		<p>current techniques to map and assess defined opportunities and risks (e.g. associated with equality of opportunity) associated with change, so appropriate solutions are implemented; • Developing EO derived monitoring systems to demonstrate compliance with Colombian zero deforestation commitment. • Improving range and quality of data for certification (e.g. areas designated for biodiversity / cultural importance) to inform the way growers can expand sustainably; • Improving the accuracy and cost-effectiveness of information generation; • Ensuring outputs can be readily integrated and inform future monitoring / schemes designed to support smallholder inclusion in supply</p>		<p>understand the agricultural challenges (land suitability, climate-related risks, pests and disease) and supply chain challenges (certification, markets, public relations).</p>	
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<p>Farming Data</p>	<p>digital solutions, supply chain</p>	<p>We are interested in developing a disruptive trading platform that enables easy commodity trading for smallholder farmers, and collects and performs data analytics on the collected big data related to smallholder trading in Colombia. We aim to bring transformative insights from data analytics to the hands of disempowered smallholder farmers so that they are better integrated into supply chains, connect to buyers more efficiently, and ultimately earn a higher income for their households. The innovation of our digital trading platform is designed so that it is accessible to smallholders with basic mobile phones or low-cost smartphones. Our model has been validated by local partners in East</p>	<p>The members of our company have a combination of skills and expertise in agriculture, computer coding, data analytics, and strategic planning. We have strong technical skills in developing algorithms in the context of modelling crop diseases and also have experience with the staple crop cassava, related to post-harvest deterioration and disease spread in sub-Saharan Africa. Cassava is an important crop for smallholder farmers in terms of subsistence and income. Importantly, we have years of experience surveying different communities, including low-income communities. We have designed, conducted, and analysed economic and sociological surveys that would be required to complete a successful pilot in the region and prepare our product for launch. We have also explored the feasibility of our technology and business model in the East African agritech sector for smallholder farmers and so there is potential relevance and credibility in the Colombian agricultural market dominated by smallholder farming. We believe these experiences, along with our work in the agricultural and tech sectors, positions us to empower smallholder communities across Colombia and give them the tools necessary to find markets, negotiate trade deals, and increase household income, thereby ending the cycle of poverty for smallholders, their families, and their communities.</p>	<p>We hope to better understand Colombian agriculture on-the-ground, including their crop varieties and value chain processes, and overall infrastructure for commodity transportation, mobile network accessibility, and (digital) payment processes. This will help us narrow down the market regions within Colombia that are most receptive to our technology and pinpoint bottlenecks in existing value chains that Farming Data Ltd. would need to overcome. We would also like to gain helpful contacts in this ecosystem who could share their understanding of potential Colombian markets, including players further upstream in the value chain (e.g., post-harvest processors and wholesalers), field extension service providers, and others (e.g., microfinance providers and solar panel providers). Finding facts about the crucial steps in existing value chains and how it works from end-to-end during our visit to Colombia would be very beneficial to our company as we tailor our software-as-a-service to the local context. That way, we can integrate our trading platform more efficiently into existing supply chains for better uptake in the markets. We can also better identify early adopters of our platform and the best marketing strategy for them to adopt and transition to our technology.</p>	<p>Y</p>
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		<p>African countries, where smallholder farming is also predominant. There is scope for our company to tailor our software-as-a-service to the Colombian agriculture context through this Catalyst programme. The project that we have in mind is to conduct a market feasibility study for the identification of precise viable market segments in Colombia, improve the platform and its algorithms, and tailor the platform interface and processes to the end-user. We are also interested in improving female smallholders' digital and financial inclusion, and our project plans will have indicators in place to evaluate this.</p>			
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Fishgen Ltd	aquaculture	<p>Tilapia is already cultured in Colombia, but current stocks are inbred and slow growing and Fishgen's core expertise can alleviate these problems. Fishgen's aim is to work with a Colombian organisation to supply improved genetic stocks (YY male technology) and to offer training for the local aquaculture industry, so promoting the social and economic development of the community in general, but especially to increase the role of women in aquaculture, particularly in poor, post-conflict areas. Tilapia is relatively easily cultured in backyard farms and small village enterprises and provides valuable food security as well as income to the smallholders and farms. Fishgen's YY male technology</p>	<p>Fishgen, a spin-out company set up by Swansea University in 1996, to commercialise the university's aquaculture research from 1980 onwards. Our directors and shareholders are world class experts in aquaculture, specialising in genetic improvement of commercially important farmed fish. Our main commercial focus is tilapia, a tropical freshwater fish (second most highly farmed fish species in the world after carps). Fishgen has exported its YY Supermale Technology and genetically improved tilapia to thousands of clients in over 50 countries. Fishgen has also worked with the UK government (DFID) and British Council to fund long term aquaculture projects in the Philippines (over 10 years), India (10 years), Thailand (5 years) and South Africa (10 years), to provide food security, jobs and wealth creation in these countries. Several of these projects are continuing today, many years after grant funding finished. Fishgen and our partners also have expertise in fish nutrition including live feed culture, biofloc technologies, recirculation technology (RAS), ornamental fish production, aquaponics and fish waste utilisation as fertilisers for crop plants. Fishgen and its partners worldwide, have a very broad experience of working in developing countries on most aspects of aquaculture and want to use our expertise in Colombia.</p>	<p>The main reason for visiting Colombia is to meet with the partner organisation we are already working with (Kristoph Van Houten Romer Foundation), and to visit some of their aquaculture facilities and to see what aspects of Fishgen's expertise can offer maximum benefits. Fishgen can offer training and technology transfer to Colombia through this organisation and any others with a similar remit. In April 2017 at Repelon Aquaculture Station, Colombia's National Aquaculture and Fisheries Authority (AUNAP) director general, Otto Polanco Rengifo, presented the progress made by the Kristoph Van Houten Romer Foundation to contribute to the development of marine and freshwater aquaculture in Colombia, to meet the needs of the sector, and generate knowledge to establish the effectiveness of new technology. According to Sergio Gomez, director of the Office of Knowledge and Information Generation (OGCI), it is intended to promote aquaculture at the domestic level and increase fish production in Colombia, delivering inputs to people engaged in aquaculture. "We will seek to replicate these successful experiences to all regions of the country," he said. Fishgen hopes to secure long term collaboration projects in Colombia as a result of the visit.</p>	Y
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		<p>produces all male tilapia fry without the use of hormones making it a safer, greener and more sustainable industry. The Kristoph Van Houten Romer Foundation in Córdoba supports these aims and has existing facilities for aquaculture research and training and has expressed a strong interest in being involved as a partner with Fishgen in this project. They work mainly in the North East but the Foundation's work could easily be replicated throughout Colombia.</p>			
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<p>Fruto del Espiritu CIC</p>	<p>crops, supply chain, food</p>	<p>We want to: 1) explore possibilities for innovation in fruit-processing technology ie. (a) methods to retain nutrients in fruit pulp; (b) possibilities of blending with coconut water sourced from post-conflict regions - for a RTD drink. 2. We also want to partner with UK experts to introduce new insights & techniques in (a) reduction of chemical pesticides (b) irrigation/drainage to reduce the impact of El Nino/La Nina (c) alternatives/solutions to deforestation (i.e. cutting down las guadhuas to use as stakes) with 3 smallholder associations comprising farms from which our fruit is sourced or could be sourced, to increase farm yields and productivity. Our proposal would be to work with our existing Colombian Media/Content partner to make</p>	<p>Our company imports, re-packs or bottles (new product development), markets and sells processed Colombia exotic fruit products, specialising in Lulo, Mora and Maracuya. These fruits are generally grown by associations of smallholder farmers, so by increasing their sales volumes, the company is making a social impact. In particular we have pioneered lulo, a quintessentially Colombian fruit - see 5min video at https://www.berraquera.co.uk/venture/berraquera-lulo-video/ Lulo overlaps the altitude where coca is grown and has potential as an alternative crop. We have also piloted imports of smallholder produced dried fruit, including uchuva and (yellow) pitaya, which are also typically Colombian and the drying & packing process creates employment for displaced women who have arrived in Bogota. Our most important clients currently are a UK-wide, 54-venue restaurant chain and an ethical ice cream maker.</p>	<p>Firstly, meet the Manager of Shared Value, Programa Hit Social directly and to identify in detail how UK pesticide/irrigation experts could catalyse their progress with agri-tech. We would like to visit the smallholders with him and a visiting expert on pesticide reduction, such as Colin Berry, Cardiff School of Biosciences, Duygu Dikicioglu of Department of Chemical Engineering and Biotechnology and other possible experts in soft fruit (John Hutton), to develop the R&D on biological and natural alternatives to chemical pesticides. Also to visit with an expert in irrigation/drainage to review how to minimise the impact of El Nino y La Nina. I would like to hold meetings with the Lulo & Mora farmers and second-level organisation that replicates good practice for associations in post-conflict areas. Also to visit the and coconut-producing company in Valle del Cauca (near CIAT) to investigate the feasibility of their coconut water being aseptically packed at the fruit factory.</p>	<p>Y</p>
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		<p>short videos of the new technical innovations (which could be sent by Whatsapp to farmers in conflict regions), as well as open up the opportunity of the communities we sell direct to in the UK, to make micro-investments into a rotating fund for the smallholders to design & implement the pesticide reduction/irrigation & drainage improvements, farm by farm. At the end, we would like to arrange a Farmer-teaches-Farmer event, where the farmers benefitted share the learnings with representatives of associations from the post-conflict regions. In the same town as two of the farmers' associations for the pilot, a secondary-level association, which arranges visits from smallholders from other parts of Colombia, South America and other continents. This</p>			
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		<p>secondary-level organisation has already held a Colombia-Colombian interchange event, sharing their learnings, with mayors from many post-conflict regions.</p>			
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Harper Adams University	crops, livestock, digital solutions	Harper Adams is part of the AgriEPI centre and we are one of the UK leading organisations in terms of agricultural engineering.	I am lecturer in agri data analysis, so my expertise are related to statistics, data analysis, machine learning and spatial statistics.	Experience working in the coffee sector, not just technical skills.	N
Imperial College London	digital solutions, other	- Robotics and automation- Grasping and dexterous manipulation- Novel manipulators and hands	- Analysis, design, and implementation of robotic systems that can purposefully perform physical changes to the world around us under diversity and uncertainty.- Understanding of Colombian idiosyncrasy and culture. I was born and raised in Colombia.	Companies with interest in inclusive growth in the agri-tech sector through the use of robotic systems and artificial intelligence.	N
International Coffee Organization	crops, supply chain	The International Coffee Organization (ICO) is the main intergovernmental organization for coffee, bringing together exporting and importing Governments to tackle the challenges facing the world coffee sector through international cooperation.	Deep knowledge and information on the Colombian coffee sector and strong links with stakeholders of the Colombian coffee sector	Expertise in new technologies relevant for the coffee/agricultural sector that can help with the management of production costs and that allow to support the welfare of farmers and the empowerment of women in the sector	N



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isardSAT Ltd.	digital solutions, other	Satellite-based technology that could be relevant to agri-tech	Earth observation capabilities Management of consortium	Representation of 'in-situ' part of the project	N
JallMak Energy Ltd	other	Electrical Engineering with interest on green energy projects	Research	Bionergy projects	N
MDC LTD	crops, digital solutions	Earth observations applications; Statistical analysis and data; processing; remote sensing applications in precision agriculture, forestry; monitoring of environment and urban planning	Processing of surface and satellite data, image processing and visualisation, retrieval of vegetation variables (temperature, water content, evapotranspiration, gross primary production, vegetation type, indexes, crop health), from satellite observations with applications in improved, crop productivity, planned irrigation, decreased deforestation, monitoring of environmental changes, forestry, resources, air and water pollution, model simulation	farmers interested to use remote sensing	N



Micron	other	We are export manufacturer of agricultural equipment specialising in tools to improve productivity and safety for farmers in tropical and semi tropical areas	International experience on manufacture and introduction of innovative technologies to improve crop protection, productivity and safety for small holder farmers.	Access to growers and research facilities within Colombia within coffee and other sectors	N
NCPF / Harper Adams University	crops, livestock, digital solutions, other	The NCPF is Harper Adams University's commercial research and development arm. It has extensive experience of working with commercial partners to develop agricultural technological products. These include mechatronic, robotic, digital and software systems. It also has considerable experience of working with overseas partners in China, India, USA, Australia, NZ, Africa, and other countries.	Project management, design, prototyping, product test and development, business and economic skills amongst others.	We already have identified potential Colombian partners and are seeking a suitable UK manufacturing partner.	N



<p>NIAB (National Institute for Agricultural Botany)</p>	<p>Crops, Digital Technologies, Supply Chain</p>	<p>NIAB, with support of Agrimetrics have recently automated, and made digitally available a range of decision support tools for potato producers and the supply chain. These tools are focussed on helping make better decisions during the potato season, including how to manage crops for increased marketable yield and applying water according to crop need. The tools also allow growers and the supply chain to collect robust metrics on crop performance in order to make more informed decisions over management in future years. We are seeking to develop a project to adapt these tools for use in the Colombian context to improve supply chain and farmer profitability. Developing the tools, and providing additional features suitable for the local context will allow a</p>	<p>NIAB and its potato agronomy centre NIAB CUF are an industry led applied research group in the UK who have an unrivalled understanding of growth and development of the potato crop. We use this understanding to help growers and commercial organisations such as PepsiCo and Lamb Weston to optimise management strategies for potatoes. NIAB is working with Agrimetrics, the worlds first big data centre of excellence for the agri-food industry. Agrimetrics has pioneered the use of new web technologies specifically for the agrifood sector – enabling its 'data platform' to connect disparate data and convert it into valuable insights to drive sustainable productivity and empower others to solve global food challenges. Agrimetrics aim to provide data and tools to agrifood businesses, researchers and policy-makers to help solve the global challenges of economically, ethically and environmentally sustainable food production.</p>	<p>We are seeking commercial partners across the potato supply chain who have an interest in working with us to develop digital decision tools, based on our existing products that are suitable for the Colombian context.</p>	<p>N</p>
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		<p>scaling of best practice agronomic advice through digital tools for growers, and a risk management tool for the supply chain. Projects are likely to include including optimisation of the tools for the varieties used and developing an appropriate front-end interface suitable for the local context.</p>			
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<p>Nova Extraction</p>	<p>other</p>	<p>We are a chemical engineering start-up that designed proprietary equipment / process to extract valuable chemicals from natural material. Our process uses the most clean-tech method, co2 extraction, that avoids use of chemical solvents and vast amount of fresh water. In addition, we designed our machinery to work completely off the grid and to be mobile. To operate they only need fuel (any liquid fuel with potential to use solid fuel too) and some water for cooling. Equipment is designed for harsh climates and for industrial work cycle e.g. 24/7. It is easy to fix and low maintenance cost.</p>	<p>We offer our technology that can be used either as a pilot to commercialize some of existing research on co2 extraction. We plan to engage with research groups in Colombian universities in Bogota, Cali, Bucaramanga, and Palmira where there are existing skills. We also offer technology on larger scale to be implemented commercially in food processing waste industry or horticulture. We are open for collaboration opportunities and knowledge exchange.</p>	<p>We are looking for UK project lead that would be happy to collaborate with us as grant receiving partners or contractors. We assume that the project should be focused on horticulture, food processing, coffee/cacao industry efficiency etc. We are looking to make connections with Colombian food processing industry and Colombian co2 research groups. Because we are pre-revenue start-up we will require operational help, we don't have our own cash flows yet but we are certain that we can deliver technology.</p>	<p>N</p>
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ocarrt.com	digital solutions, other	ai blockchain AR vr genome and bio & nano technology 3d printing connected future city home work play	coordination and project management and over technological and patent and ip	various of the above	N
Remote Sensing Applications Consultants Ltd	digital solutions	Agricultural applications of satellite remote sensing, with special focus on use of new Sentinel radar and optical satellites	Specialism in agricultural mapping and crop monitoring using satellite radar data	Agricultural user with crop monitoring or precision agricultural requirements	N
Satellite Applications Catapult	digital solutions	Space, Agri-Tech, Earth Observation, Satellite Communication, Data Analytics	Market familiarity, space technologies, data analysis	Agronomy, Crop Science	



<p>SusConnect Ltd</p>	<p>crops, digital solutions, supply chain, other</p>	<p>The project will facilitate capacity building at the community level, and integrate the principles of sustainability/circular economy and provenance of selected agri-food commodities (e.g. coffee), with climate smart technologies. These factors will be employed to build capacity in the post conflict regions, facilitate increased productivity and mitigate against the impacts of climate change, which are all key challenges in the Colombian agri-food sector. A key factor in the provision of provenance will be the utilisation of blockchain technology. Blockchain offers significant potential to enhance the effectiveness of tracing agri-food commodities along the supply chain, improve welfare, and enable 'smart' applications (e.g. smart contracts). It</p>	<p>SusConnect has expertise in three key areas, namely: (1) the embedding of the principles of sustainability/circular economy into the agri-food value chain to enhance productivity and profitability, particularly for coffee and wines and spirits, (2) provision of provenance/traceability services for commodities across the value chain (including the use of blockchain technology in conjunction with partners), and (3) facilitation of direct trade (e.g. through eCommerce). We have worked closely with co-operatives in Brazil, Peru, Costa Rica and India (e.g. for rice, coffee, wine and pulses). We are working with the Climate Change, Agriculture and Food Security (CCAFS) team in Latin America to build capacity and provide training, particularly for females in agri-food. Agri-food supply chains in Colombia are generally inefficient, with several layers of middle men. More opportunities for direct trade are therefore needed. Productivity is lower than for the rest of Latin America. Thus there is a need to ensure a higher level of sustainability in production as a means of mitigating against the impacts of climate change and ultimately increasing profitability. While there are various large sectoral agencies for various agri-commodities (e.g. coffee), around 75% of farmers (including those displaced post the conflicts), are not engaged with these. The use of co-ops could serve to build capacity and ensure long-term viability.</p>	<p>The visit to Colombia will serve to see first hand the challenges faced by different industries in the agri-food sector, and to meet with decision-makers and female stakeholders in the displaced communities. For example: (1) meetings have been organised with colleagues from the Latin American team of Climate Change, Agriculture and Food Security (CCAFS); (2) visits to CCAFS's Climate Smart Village in Cauca, Colombia, to get an understanding of the development and operation of the villages; (3) meetings with (female) farmers working in the Village; and (4) with key decision-makers in the sector (e.g. with the FAO, Ecohabitats and the Met Service in Colombia - IDEAM). Thus the visit will serve as a scoping exercise to understand the current situation in the agri-food sector, and provide networking opportunities with stakeholders along the value chain with a particular focus on female farmers/producers.</p>	<p>Y</p>
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		<p>could also serve to shorten the supply chains, and facilitate due diligence and direct trade.</p> <p>Capacity building and ultimately long term viability beyond the project funding will be facilitated through the utilisation/development of co-operatives and provision of (ongoing) training opportunities.</p> <p>Capacity building initiatives have been shown to be vital for facilitating food security, community development and agri-food productivity, particularly for female farmers.</p>			
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Swansea University	other	I am the director of a spin off from Swansea University focused in the transformation of agroindustrial residues into energy, chemicals and nanomaterials, additionally, as Colombian i have knowledge about the country and the necessities of this post conflict zones in waste management and energy production	We have a novel technology to couple energy and novel materials production from agroindustrial wastes	For the Colombian member, we would like to have regional government, companies involved in waste management logistics, and social companies	N
Tecrea Limited	livestock	livestock health, food security including aquaculture	antimicrobial formulation vaccine delivery technology	understanding of the local disease challenges and capacity to test intervention strategies which we are developing	N



<p>The Colombian Coffee Company</p>	<p>crops, supply chain, other</p>	<p>I am the Director of a social enterprise that supports small-scale coffee farmers and growers' co-operatives to improve livelihoods and living standards. We provide training and support on how to improve procedures in growing, roasting and storage, and also advice on testing and evaluating product quality, and facilitate access to the UK market for high-quality coffee. We also work to support smallholders returning to their lands after the civil war to restart coffee production and offer support on increasing crop quality and access to UK markets.</p>	<p>In Colombia we have developed close relationships with coffee growers co-operatives and small-scale farmers, including indigenous communities, in a number of areas in Colombia. We also have relationships with local NGOs and government bodies working to support farmers in areas that were badly affected by civil war and are looking to create sustainable livelihoods through coffee and other agricultural products. In the UK, we have experience in awareness raising and educational activities to increase consumer knowledge of the ethical issues raised by coffee and encourage people to spend with awareness. We have access to several retail lines to sell high-quality coffee varieties, ethically sourced coffee, and have the potential to increase substantially. We have a shop in Borough Market, London and a coffee roastery nearby in Flat Iron Square,</p>	<p>We are keen to have advice on how to scale-up the approach of our pilot project working with farmers' cooperatives in Tolima, Cauca and Nariño that provides training and support on how farmers can increase their livelihoods by growing higher quality varieties of coffee, and increasing their awareness of tastes and market trade in Europe.</p>	<p>N</p>
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<p>The James Hutton Institute</p>	<p>crops</p>	<p>Sustainable intensification of agriculture, soil health, pests and disease</p>	<p>My organisation has a long track record in academic-industry collaborations. Many of us have previously worked in South America. We have significant critical mass in soil science (c. 70 scientists), sustainable agricultural production (c. 100 scientists) and integrated pest management (c. 80 scientists) who have experience working in various agricultural systems in Africa, Asia, Europe and the Americas. We offer skills, expertise and knowledge associated with these areas and state-of-the-art facilities that support our research activities.</p>	<p>At this moment, not exactly sure of the focus of our application. This would become clear by attending the brokerage event.</p>	<p>N</p>
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The James Hutton Institute	crops	Large capability in system agriculture at a range of scales from small (family) farms to global players. Also lead on several EU projects dealing with women in agriculture and the barrier to the uptake of innovation in agriculture. Allied with this is significant engagement across the agri-food and drink supply chain with industry	All sustainable crop-based agricultural skills from lab to large scale farming including agronomy, genetics/genomic, biochemistry and food/drink quality, resources use efficiency etc. Allied to this leading socio-economic expertise on barrier to innovation uptake, the development of women in (rural) agriculture etc. as well as economics in agriculture.	On the ground farming operation and cooperatives and exagri-extension organisation to facilitate innovation translation and embedding on these farms	N
Tropic Biosciences	crops, other	We are interested in developing more sustainable and resistant strains of coffee.	We utilize cutting-edge genome editing technologies in developing high-performing commercial varieties of tropical crops, benefiting growers, processors and consumers.	Field trials / Access to female smallholders in colombia	N



<p>University of Bath</p>	<p>crops, livestock, aquaculture, digital solutions, supply chain</p>	<p>I will be representing the University of Bath and its broad based of academics researching in life sciences, engineering and management. My background is in sustainable supply chain management in the agricultural sector especially engaging with smallholders in Colombia.</p>	<p>The University can offer a broad base of top academics in the areas of:- Supply chain management - Digital Innovation- Process and engineering optimisation</p>	<p>I am looking for an industry partner in projects around:- Supply chain management - Digital Innovation- Process and engineering optimisation</p>	<p>N</p>
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<p>University of Cambridge</p>	<p>crops, digital solutions</p>	<p>I work on the metabolic networks and metabolic signals sent by fungal systems and how fungal drug resistance mechanisms work in plant pathogens. I am interested in developing a sensor for early detection of pathogenic fungal infection of agricultural plants, during the dormant stage before any sign of disease shows. Because there is no way of capturing early stage disease when there are no visible signs, the current practice focuses on preventive action to employ excessive chemical fungicide application throughout plant growth cycle, which turns out to be expensive as well as extremely harmful for the environment. A targeted sensor would reduce the costs of farming; especially important for smallholder farmers, and it will</p>	<p>My expertise is on understanding metabolism and metabolic networks. I will be able to identify and detect potential chemical signals that the fungi release into their habitat to communicate with other cells (via a mechanism called quorum sensing). This will allow us to come up with candidate chemical compounds produced and secreted by the cells (i.e. metabolites), which can be used to detect their presence even when their pathogenic activity on the plant cannot be visually identified.</p>	<p>I am looking for an expert in developing sensors to detect specific metabolites released by pathogenic fungi during their dormant stage, and a partner with agricultural/plant science infrastructure to develop and test the sensor mechanism on crops/infections that are significant for Colombia.</p>	<p>N</p>
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		reduce the chemical burden on the environment; particularly on soil and underground waters.			
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<p>University of Edinburgh</p>	<p>livestock, other</p>	<p>We would like to develop and modify an existing bio economic model (developed with colleagues in EMBRAPA, Brazil) for use in Colombia to target pasture restoration strategies. Agritech funding will allow us to build a user platform for this model so that it can be used by private and public sector stakeholders. We need to scope the user needs including how the government of Colombia intends to implement its restoration planning with private sector partners. In essence this model will allow spatial planning of pasture restoration considering financial and economic costs and benefits. We have previously scoped this issue with CIAT and we know that there is a capacity gap to move the sector forward in terms of productive grasslands. What we</p>	<p>The University of Edinburgh offers a broad range of technical research and innovation skills in sustainable agriculture including livestock, crop and soils systems. We also offer skills in economic appraisal and the development of agricultural and food systems and supply chains. Increasing the production of Colombian livestock and increased sector productivity is a stated policy objective (Ministry of Agriculture, NPD, FEDEGAN, CORPOICA, World Bank), In this project we are specifically interested in pasture management in Colombia. Grassland degradation compromises the profitability of Colombian livestock production, and pasture restoration/rehabilitation is a stated policy priority for sustainable agricultural intensification (SAI). CORPOICA estimates that around 50% of pastures are degraded in some of the most productive regions of the country. The bottom line is that livestock production will be emissions intensive until this situation is reversed. Rehabilitation increases sector productivity and carbon sequestration into the soil and can potentially avoid deforestation, thereby reducing emissions intensity (EI) of livestock products, but only at increased investment cost per unit of area. It is important to compare the full costs and benefits of restoration to optimize restoration planning. To address a similar problem in Brazil (in collaboration with EMBRAPA), we previously developed a multi-period linear programming (LP) model for</p>	<p>The aim of the visit will be to explore partnerships for the development and use of a model to evaluate pasture restoration plans. We have previously discussed the scope for restoration planning with CIAT and there are other industry bodies (e.g. COPOICA and FEDEGAN) with whom we might explore collaborative approaches to model/product development, ownership and use. We would hope to develop a good network of project partners (i.e model users) and a plan for a first round fundable project to pilot model development and pilot use with a farmers group. As part of the visit, I intend to maintain an open mind with a view to capitalising on other agri-tech opportunities in the areas of soil management, land use change and genetic improvement. I will be canvassing input and contacts from UoE colleagues ahead of any planned visit.</p>	<p>Y</p>
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		<p>now need to do is develop the model for Colombian systems and to identify how it could be made most useful for different industry stakeholders (including the providers of agricultural finance). This idea combines private sector productivity objectives with national goals on land sparing and sustainable development (e.g. avoided deforestation and reduced greenhouse gas emissions).</p>	<p>grazing beef production planning to represent a range of typical stocking and finishing beef farms (De Oliveira Silva et al 2017). This model can be used for similar multi-scale analysis of pasture based (or pasture +legume) and intensive silvopastoral systems (ISS) in Colombia. The main objectives of this project will be to introduce the model to Colombian stakeholders and to formalise a platform for its use by the livestock industry. There is currently no similar capability in Colombia.</p>		
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<p>University of Hertfordshire</p>	<p>crops</p>	<p>I am a Research Fellow in Systems Biology for Food and Disease at University of Hertfordshire (UH). My area of expertise is Plant Molecular Biology, especially focused in elucidating the genetic pathways regulating seed development and/or germination as well as the physiological plant responses to abiotic stresses during these phases of the plant life cycle.</p>	<p>I could contribute to the aims of the event preparing an innovative and ambitious pump priming proposal that will inform breeding strategies to improve the resilience of tropical forages and, therefore, contribute to food security and welfare of Colombia and wider. My approach to team working is to maximize the logical match of complementary skills among team members to forge a collaboration or proposal capable to successfully cover interdisciplinary research fields. Here, I would envisage a proposal where one side might have the technical expertise to exploiting the potential of disciplines such as genetics, molecular biology, bio-imaging and mathematical modelling and computing, and the other the access to data, samples or resources of tropical crops accessions to be breeding for improvement. I can provide a team working advantage relying on my chance to better communicate with both sides as a native Spanish speaker developing my research career in the UK.</p>	<p>The identification of genes, transcriptional networks, and genetic variances among superior and stress resistant tropical crops germplasm, could be a starting point to forge a mutually beneficial partnership of a truly interdisciplinary proposal.</p>	<p>N</p>
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University of Leeds	crops	I am an agronomist with expertise on soil science, specializing in crop, soil and climate modelling, with focus on sustainable agricultural production under climate change.	I have crop, soil and climate modelling expertise, with research experience in climate-smart agriculture, soil health and global warming mitigation.	I am looking for partners with in-depth knowledge of local production systems, agricultural practices and socio-economic aspects.	N
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<p>University of Leicester</p>	<p>crops</p>	<p>The first opportunity identified is for building a participatory plant breeding programme in Colombia, involving in particular women small holders in evaluation and trials of new crops and crop varieties in small-scale trials, and enabling evaluation and exploitation of landraces with appropriate benefit sharing. By giving these women opportunities, we hope that they will become involved in the value-chain of improved varieties, being centres for demonstration sites for improved varieties and associated technology for growing, selling seed or plants into local and regional communities, feeding back data on crop performance and their own requirements, and becoming involved in breeding processes.</p>	<p>My genetics laboratory has extensive experience in measuring and exploiting diversity in plant breeding, covering a range of commodity and high-value crops. We also have extensive understanding of adding value to crops and defining breeding targets for improvement, including in sustainability in ecosystems and through the supply chain. We have worked with crops providing all the 'seven Fs' of farming: food, feed, fuel, fibres, flowers, pharmaceuticals, and fun (the latter encompassing land use for tourism and sporting opportunities). Our research studies biodiversity, conservation and ecosystem services approaches in the wild environment. In the post-conflict environment of Colombia, we believe that collaborations will enable advanced science-based approaches to be made available and accessible to individual farmers and smallholders and through cooperatives, to add value and opportunities to farmers. The exciting Agri-tech Catalyst call, including networking opportunities and ability to work with appropriate partners, enables us to move our work from the academic sphere towards application to assist sustainable economic development in Colombia.</p>	<p>The visit would firstly enable us to enhance our collaborations with CIAT. In particular, the Catalyst project will enable some of the results from our current 12 month Newton-Caldas BBSRC programme on forage grass diversity to gain a novel pathway to exploitation of our results with studies of genetic diversity and varietal improvement. Thus the 'risk' of not making appropriate contacts and being unable to implement a participatory plant breeding network in Colombia is minimal. Furthermore, though, we would hope that the programme will enable us to identify and work with new partners for enhancing the economic development opportunities in Colombia, ranging from women smallholders, through IT providers, to export-lead natural product and food processing companies. We have knowledge of food safety, purity and origin regulations related to UK/EU import, and administrative processes for introduction of new food products (ACNFP), and contacts with UK high-value importers, distributors and packers, in regional and national contexts.</p>	<p>Y</p>
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		<p>Our initial partner would be CIAT (in particular forage breeder Dr Valheria Castiblanco). During the partnership building phase, we would hope to also identify software/IT developers (both UK and Colombian, including those with mobile phone app development capabilities) and farmers' organizations (Colombian). We would also be looking for high-value export partners (Colombian and UK) to involve in the collaboration, to develop the market and export potential of high-value agricultural products, ranging from spices and flavourings, to processed food and fibres, based around small-scale and local production.</p>			
University of Liverpool	supply chain, other	Agri-Food supply chain systems	Modelling, simulation and optimisation of Agri-Food systems decision-making	Agri-tech related partners. Industry base related challenges	N



University of Nottingham	crops, livestock	We are a major research centre for Agrifood and a Vet school We also have expertise in women's businesses and cooperatives development and empowerment	ODA country expertise across Agrifood technology applications in crops and livestock management to increase profitability and reduce waste	An understanding of the Colombian rural market opportunities	N
University of Reading	crops	I am a crop geneticist with significant experience using genomic technologies for crop improvement including in the tropics, where my main interests are in disease-resistant and climate-smart grain legumes. I am Director of the Crop and Environment Laboratory - a cutting edge controlled environment and glasshouse facility used to develop climate-smart crops.	Excellent growth facilities capable of reproducing any present or future terrestrial environment. Quantitative genetics and high throughput field phenotyping skills.	Ability to conduct research and demonstration trials in smallholdings on a regional/national scale. Player in agricultural supply chain in Columbia, particularly seed/nursery stock.	Y



<p>University of Reading</p>	<p>crops</p>	<p>The proposal involves novel approaches to the problem of cadmium (Cd) within cocoa. New EU regulations will soon reduce the permissible level of Cd in cocoa, a serious threat to exports of cocoa beans from regions, such as parts of Colombia, where levels of Cd may approach or exceed the permissible threshold. There is a low-Cd programme already underway in Colombia, and recently (March 2018) they hosted an international conference (https://es.slideshare.net/CIAT/tag/cdfree). At Reading we have developed methods for testing growth of cacao plants under high-Cd conditions, identified genetic differences between selected clones in their response to Cd, identified candidate genes linked to this trait, and obtained preliminary evidence</p>	<p>The School of Agriculture at the University of Reading is one of the leading agriculture departments in universities world wide, with expertise in both practical agriculture and socio-economic aspects of agriculture globally. Of particular relevance to the current call is its longstanding expertise in tropical agriculture, most particularly in cacao. The university maintains, with international support, the International Cocoa Quarantine Centre (http://www.icgd.reading.ac.uk/icqc/), which holds about 400 genetically diverse clones. This material is available for distribution globally, and also is used within Reading for a range of projects linked to climate change, disease, insect resistance and heavy metal (cadmium) tolerance. In terms of technical expertise the department has modern plant growth facilities in the form of an extensive set of controlled environment cabinets, as well as glasshouses suitable for the growth of tropical crops. We also have modern laboratories for genetic and molecular biology studies. This collective expertise is of specific relevance to the Colombian Agritech sector, as it enables research to be conducted on Colombian crops in appropriate climatic conditions.</p>	<p>I would hope to identify partners in the cocoa industry who have access to plants growing in areas where there is an existing or potential risk from high-Cd soils, which consequently lead to high-Cd levels in the harvested beans. These partners would be need to have available a sufficient number of trees that could be used in a controlled trial of application of approved non-toxic chemical compounds. The levels of Cd in the leaves and beans from such trees would be assessed. The value to the University of Reading would be to develop a productive relationship, in which the outputs of experimental methodologies could be rapidly and effectively applied in a realistic agricultural context to solve an immediate problem. Such examples of route to impact have many longer-term benefits in increasing the reputation of the University.</p>	<p>Y</p>
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		<p>that application of selected chemicals can reduce the accumulation of Cd in leaves. This latter aspect that will form the foundation of the (early stage) proposal. We intend to use genetically diverse clones from Reading to test the efficacy of this approach in controlled environments here, in conjunction with partners in Colombia who can conduct field tests using the same approach. Such a low-cost strategy, if successful, can then be used more broadly, particularly in areas with a high-Cd problem, where the threat of losing the export market is most severe.</p>			
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University of Surrey	other	Microbial systems for treatment of agricultural waste, wastewaters and production of Bioenergy	Microbial community analysis, electrogenic bacteria, microbial fuel cells, microbial electrosynthesis	Engineering aspects of bioelectricity generation	N
VedasII / Swansea University	crops, livestock	Primary crop and livestock production	Network of Colombian innovators Established collaborations Experience with local and international funding Facilitate understanding of Colombian scientific model Resources for international accompaniment	Primary crop: soil, cropping systems, equipment etc. Livestock monitoring and control crop pests: biosensors and monitoring devices Health and welfare of female farmers Sustainable agriculture: waste management	N
Velcourt	crops	Crop production, Field trials, Precision Ag, Farm management	Applied technology, Drone technology, Field trials design and data analysis, Crop Production, Farm management,	Colombian partners for collaboration.	N
Wiles Agriculture	crops, livestock, other	Many years working for major multi national organisation in South America. Previously managed multi partner projects in Colombia	detailed knowledge of Colombian agri sector, many years experience working in Colombia, fluent Spanish and Portuguese speaker. Project management skills.	Access to Colombian partners, meeting potential collaborators.	N



<p>York Cocoa House</p>	<p>crops, food</p>	<p>We are a chocolate based business that has been working with Colombian cocoa and chocolate products over the last 8 years. In March 2018 the business opened our chocolate manufacturing centre working with a range of Cocoa ingredients, but primarily Colombian cocoa ingredients. The company has been working with ProColombia, UNODC and Swiss Contact amongst other organisations to develop sustainable Colombian supply chains over the past 2 years to be integrated into our own sourcing model.</p>	<p>We have a chocolate manufacturing centre in York working with sustainable and traceable cocoa ingredients, we are able to offer processing, production, education and distribution skills as well as product analysis of raw cocoa ingredients through to finished chocolate products with our cocoa analysis protocols and taste panel services.</p>	<p>Logistics and local geographical and navigation skills - the ability to meet and develop relationships with producers working with quality materials and enable these to reach a sustainable and valued route to market. Analytical skills - he support to analyse the qualities of the Cocoa and the topography in Colombia to support the differentiation of quality material rather than bringing samples to the UK.</p>	<p>N</p>
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