

## (Technical Annex – Sections 1-5)

### Part B

## Secretariat for the International Research Consortium on Animal Health (SIRCAH)

### History of Changes

Version	Date	Changes
2.0	15/7/16	<p>Revisions in response to evaluators' comments:</p> <ul style="list-style-type: none"> <li>• Text added to clarify different responsibilities of SIRCAH and the IRC</li> <li>• Draft communications strategy updated with additional media channels and better defined target audience</li> <li>• Delivery date for milestone M1.1 brought forward to month 12</li> <li>• A contingency plan was described for the risk of a partner withdrawing from the SIRCAH consortium</li> <li>• Descriptions were added for a number of tasks</li> <li>• Deliverable D1.1 converted into milestone M1.2</li> </ul>
3.0	29/7/16	<ul style="list-style-type: none"> <li>• Deliverables D2.1, D2.2, D3.2, D4.2 and Milestones M2.1, M2.2, M3.2, M3.3, M5.1, M5.2 involved multiple reports and meetings to be delivered so were expanded with separate Deliverables and Milestones for each</li> <li>• Subcontract costs for audit certificates reclassified as other direct costs and OIE given €3,000 for this</li> <li>• Breakdown of website-related subcontracting added</li> <li>• 'Other direct costs' description added to section 3.4</li> </ul>
4.0	2/8/16	<ul style="list-style-type: none"> <li>• GANTT updated with new milestones</li> </ul>
5.0	4/8/16	<ul style="list-style-type: none"> <li>• L. Dalton at Defra and the IFAH Europe (DISCONTTOOLS) Project Manager are secondments so determined to be in-kind contributions by third parties against payment as per Article 11. Changes reflected in sections 3.4 and 4.2</li> </ul>
6.0	24/8/16	<ul style="list-style-type: none"> <li>• Clarification added to table 4.2 for Defra and IFAH Europe regarding salary costs</li> </ul>
7.0	1/9/16	<ul style="list-style-type: none"> <li>• Inclusion of Defra's 50 person months and value to the project in-kind without payment</li> <li>• Reallocation of person months between the Coordinator and L. Dalton in Table 3.4a due to transfer of tasks</li> <li>• Updated description of L. Dalton's tasks in Section 3.4</li> </ul>
8.0	8/9/16	<ul style="list-style-type: none"> <li>• Role of L. Dalton updated</li> </ul>

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## **1. Excellence**

### **1.1 Objectives**

The overall objective of the Secretariat for the International Research Consortium on Animal Health (SIRCAH) is to facilitate the STAR-IDAZ International Research Consortium on Animal Health (STAR-IDAZ IRC) achieving its objectives by establishing a secretariat to provide organisational and communication support to the STAR-IDAZ IRC and its various members and assisting with the development of focused research roadmaps. This will contribute to accelerating research on animal health and at reinforcing international research cooperation.

The agreed aim of the STAR-IDAZ IRC is to coordinate research at international level to contribute to new and improved animal health strategies for at least 30 priority diseases/infections/issues. The deliverables will include candidate vaccines, diagnostics, therapeutic, procedures and key scientific information/tools to support risk analysis and disease control.

The specific objectives of SIRCAH are:

- Engaging with STAR-IDAZ IRC and the wider research and stakeholder community, building confidence in and support for the STAR-IDAZ IRC objectives and activities.
- Organising meetings of the STAR-IDAZ IRC Executive Committee, Scientific Committee and working groups of researchers on priority topics
- Maintaining the STAR-IDAZ website and databases and keeping all members updated
- Providing secretarial support for STAR-IDAZ IRC
- Assisting the Scientific Committee and Working Groups in organising research gap analysis and development of roadmaps to help with the alignment of research programmes.
- Conducting, upon request, the preparation of any documents required by the STAR-IDAZ IRC committees and working groups, including bibliographic searches and organising literature reviews
- Collecting and disseminating pertinent information and results to the researchers funded by STAR-IDAZ IRC members
- Monitoring progress towards achieving the goals of STAR-IDAZ IRC.

### **1.2 Relation to the work programme**

This proposal relates to “SFS-12-2016: Support for international research on animal health” which it addresses by putting in place procedures to support the activities of the STAR-IDAZ International Research Consortium. STAR-IDAZ brought together programme owners or funding bodies involved in the animal health field from approximately 50 countries, identifying priority topics and developing processes for the sharing of information and initiating the establishment of working groups. STAR-IDAZ partners now move forward as a self-sustaining network under an agreed Memorandum of Understanding. However some of the partners have agreed to a higher level of commitment relating to their continued investment in priority areas, sharing of information and alignment of their research programmes forming an International Research Consortium (IRC) to speed up the delivery of new

disease control strategies and tools. To date, 17 partners from 12 countries with a combined five-year research budget in the region of \$2.5 billion have signed the Letter of Intent to join the IRC and it is hoped that all STAR-IDAZ partners will become involved, either individually or as groups. A Governance Structure and Modus Operandi for the IRC has been agreed, outlining the composition and roles of the Executive Committee, a Scientific Committee, Working Groups and the IRC Secretariat.

The proposed project (SIRCAH) will establish a secretariat for the IRC, as outlined in the agreed IRC Governance Document, and provide resources for a Scientific Committee (SC) and the establishment of Working Groups (WGs) on priority topics. The IRC Secretariat will provide organisational, information, and communication support to STAR-IDAZ IRC and its various members, assist with gap analysis and advise on research programme alignment. This will improve coordination of animal health research at international level so as to contribute to new and improved animal health strategies and tools (such as vaccines, and diagnostics) for at least 30 priority diseases/infections/issues. The project will support the work of the STAR-IDAZ IRC by:

- Organising meetings of the STAR-IDAZ IRC Executive Committee, Scientific Committee and Working Groups
- Maintaining the STAR-IDAZ website and databases and keeping all members updated on activities and developments
- Providing secretarial support for STAR-IDAZ IRC
- Assisting the Scientific Committee and Working Groups with research gap analysis and developing research roadmaps to cover the research gaps identified. Logical Frameworks will also be developed for each topic
- Conducting, upon request, the preparation of any document required by the STAR-IDAZ IRC committees and Working Groups, such as assisting with bibliographic searches or literature reviews
- Advising STAR-IDAZ IRC partners on how their research programmes might be aligned
- Monitoring and communicating the outputs of STAR-IDAZ partners' contributions to the IRC goals
- Collecting and disseminating pertinent information and results to the researchers funded by STAR-IDAZ IRC members
- Developing guidelines for open data and data sharing
- Disseminating results of STAR-IDAZ IRC projects with different means of communication; website, newsletters, communication materials, conferences.

The project will expand the network through identifying and making contact with programme owners/funders in non-STAR-IDAZ partner countries and by assisting current members to coordinate activities with other funders in their own countries. It will work closely with other international stakeholder bodies and help to rationalise areas of overlapping activities.

### **1.3 Concept and methodology, quality of the coordination and support measures**

#### **Concept**

##### **Background**

Animal diseases can cause serious social, economic and environmental damage, impact on animal welfare and in some cases directly threaten human health. An increasing number of the major disease problems or threats faced by the livestock industry are of a global nature. Global challenges need global solutions and these can only be achieved in the required timeframe through a common and coordinated research effort. Research on infectious diseases of animals is poorly funded compared to the human equivalent despite 60% of all human infectious diseases and around 75% of emerging infectious diseases being zoonotic. **However, more could be achieved, even with the current level of investment, through the coordination of this research effort and the sharing of results.** Global research activities need to be more focused and better coordinated through greater international collaboration, to ensure that the national policies and strategies regarding trans-boundary and other animal diseases (including zoonoses), that protect the sustainability of the livestock sector and animal health industries, are underpinned by efficient and effective research.

“Global Strategic Alliances for the Coordination of Research on the Major Infectious Diseases of Animals and Zoonoses” (STAR-IDAZ) was an FP7 project which extended the coordination of animal disease research initiated in Europe by the Collaborative Working Group for Animal Health and Welfare Research (CWG AHW) and associated ERA-Nets EMIDA and ANIHWA. The aims of STAR-IDAZ were to strengthen the linkages between and reduce the duplication of global research effort, maximise the efficient use of expertise and resources and accelerate coordinated development of control methods at the international level. To achieve this an international forum of R&D programme owners/managers and international organisations was established to share information, improve collaboration on research activities and work towards common research agendas and coordinated research funding on the major animal diseases affecting livestock production and/or human health. The scope of the project included coordination of research relevant to emerging and major infectious diseases of livestock, including fish and managed bees, and those infections of livestock that carry the risk of disease threat to human health. Diseases of wildlife were also considered where they were identified as reservoirs of infection with emerging and major infectious diseases of humans or production animals.

STAR-IDAZ was successful in establishing, through its global and regional activities, a network of organisations managing research budgets or programmes in approximately 50 countries that are committed to working together. They now continue to collaborate as a self-sustaining network under an agreed Memorandum of Understanding. It has the long-term objective of creating an open network of mutually accessible and complementary research programmes able to respond to regional and global challenges, creating the tools for improved control of the major animal diseases threatening the livestock industries and/or of public health concern by bringing forward joint research programmes. However, much more could be achieved by underpinning its activities with the

resourcing of a secretariat to proactively engage with funders and programme owners to focus resources on prioritised research needs.

The European Commission has funded a range of animal health projects through the various Framework Programmes with the EMIDA and ANIHWA ERA-Nets facilitating collaboration between national research funding agencies of 20 countries in Europe and STAR-IDAZ developed structures for the extension of collaboration to a global level. However, in spite of national and European initiatives, there is still a lack of adequate diagnostics for some diseases, and no or less than ideal vaccines for many conditions including ASF, Brucella suis, PRRSV and FMD as shown by the DISCONTTOOLS databases. It would appear that many of the easy challenges have been addressed and we are left with the more difficult ones.

The G20 Ministry of Agriculture Chief Scientific Advisors (MACS) agreed, at their meeting in Turkey in July 2015, to establish a working group of interested countries focusing on animal diseases, in particular high priority vaccines. The working group will explore the alignment of research priorities and collaboration with the aim of reducing gaps and avoiding duplication. STAR-IDAZ IRC will take this forward with MACS support.

Increasing the number of diagnostic, preventative and therapeutic options requires an improved understanding of host pathogen interaction, including the identification of protective mechanisms. Identification of host and pathogen gene expression at different stages of infection is essential to increase knowledge of pathophysiology of animal disease, to identify potential vaccine candidates and therapeutic targets and discover new biomarkers including ones to determine the efficacy of new vaccines and therapeutics as well as for use as diagnostics. Gap analysis is needed to identify where along the research pipeline, from fundamental to applied science, knowledge gaps exist so that research can be focused in a logical manner. Translation of research results into improved animal disease control strategies, including new or improved diagnostics and vaccines will be accelerated by focusing resources in a coordinated way and the sharing of information/data and samples.

Therefore central to the development of new diseases control strategies and development of the necessary tools is:

- *An improved understanding of the host pathogen interaction: need for identifying pathogen virulence factors and protective antigens and the protective mechanisms operating in the host.*

Next Generation Sequencing (NGS) technologies is accelerating our understanding of disease pathophysiology and of host-pathogen interactions, thus justifying the ambitious goal of STAR-IDAZ IRC. However, the use of these technologies, producing huge amounts of genomic data, will generate challenges in their interpretation, justifying international collaboration to make sense of these data and translate them into relevant results.

- *Identification of biomarkers: need to validate already identified biomarkers and to discover new biomarkers through international studies*

Early and accurate diagnosis is key to disease control, be it exotic trans-boundary disease, or endemic diseases such as mastitis. Biomarkers are also important for identifying correlates of protection when developing vaccines. It is essential to promote international collaborations for the validation/discovery of new diagnostic or other biomarkers, and to interact with regulatory authorities and industrial partners to validate biomarkers and prioritise research on diagnostics.

■ *Facilities for handling highly infectious materials: need to improve access to current expensive facilities*

Handling highly contagious material requires expensive containment facilities for laboratory and animal challenge experiments. Development of a database of available facilities and their current activities will allow improved utilization of these resources.

■ *Data and sample collections: need to optimise resources through the application of International Standard Operating Procedures*

Databases and biobanks constitute a key resource for furthering research. When established, databases should be maintained and their use optimised through exchange of data between interested parties. This exchange can only be efficient if common standards are used, which guarantee the quality of the data/samples, and if common Standard Operating Procedures are implemented.

As well as maximizing the impact of existing investment, it is recognised that a global coordination of efforts is necessary to raise substantial additional investment.

***Improving Coordination through an International Research Consortium***

A workshop organised by the European Commission in October 2015 resulted in the launch of the STAR-IDAZ International Research Consortium (STAR-IDAZ IRC) with the following ambitious objective:

**To coordinate research at international level to contribute to new and improved animal health strategies for at least 30 priority diseases/infections/issues**

**The deliverables of the STAR-IDAZ IRC include :**

- **candidate vaccines, and/or**
- **diagnostics, and/or**
- **therapeutics and other animal health products, and/or**
- **procedures and/or**
- **key scientific information/tools to support risk analysis and disease control**

The STAR-IDAZ IRC consortium will build on the achievements of STAR-IDAZ by providing a framework and resources for coordinating the international research effort with the development of the necessary policies to foster international collaboration. Coordination of animal health research in priority topics at a global level will help avoid duplication, fragmentation, redundancy and gaps in

coverage and therefore ensure that the results from research investment can be rapidly translated to improved disease control strategies, including diagnostics, vaccines and treatments. Several priority areas, listed below, have initially been identified for action where it is hoped coordination of research will help better achieve the overall objectives of STAR-IDAZ IRC.

- Immunology/vaccinology (tools and technologies)
- Diagnostics (tools and technologies)
- Innovative anti-infective approaches, including alternatives to anti-microbial agents
- Influenza
- Bovine Tuberculosis
- Foot and Mouth Disease
- Brucellosis
- African Swine Fever
- Emerging issues
- Vector-borne diseases
- Coronaviruses
- One Health (including food-borne pathogens and AMR)
- Mastitis
- Animal genomics/genetics for animal health
- Foresight
- Epidemiology
- Helminths including anthelmintic resistance
- Porcine Respiratory Disease Complex
- PRRSV

A number of these priorities are crosscutting issues linked to technology development. Working groups for six of the above topics were already active or were established by STAR-IDAZ. SIRCAH will be responsible for establishing working groups for the others and for new priority topics as they are identified.

***National or international research and innovation activities which will be linked with the project***

SIRCAH will provide support to enable the coordination of research funded by national programmes around the world, the EU and the veterinary pharmaceutical industry, so that it identifies and addresses the critical gaps in knowledge and speeds up the development of improved disease control strategies. The success of SIRCAH in supporting STAR-IDAZ IRC in meeting its objectives will therefore depend on the continued funding of relevant research by national and international research programmes. **Partners joining the IRC have a collective five- year research budget in the region of \$2.5 billion for work contributing to the STAR-IDAZ IRC objectives.**

Links already exist or will be established with the following EU-funded projects or initiatives arising out of previous EU funding.

**EPIZONE** European Research Group (ERG) is the international network of veterinary research institutes working on epizootic animal diseases. It plays a key role in research on prevention, detection and control of animal diseases and zoonoses in order to reduce the risks and harm to animal health and the risks to public health in the EU and beyond. The EPIZONE goal is to improve, standardise, and develop (new) diagnostic methods, vaccines, intervention strategies, surveillance, epidemiology studies, and risk analyses.

### **LinkTADS**

Linking Epidemiology and Laboratory Research on Transboundary Animal Diseases and Zoonoses in EU and China - See more at: <http://www.linktads.com/#sthash.MZtGHINw.dpuf>

LinkTADS brings together world-class research institutes and experts in cross-border cooperation with the aim to coordinate research between the EU and China, thus improving scientific excellence in animal health (epidemiology and laboratory).

### **MedVetNet Association**

Med-Vet-Net Association arose out of an FP6 European Network of Excellence for Zoonoses research. The Network officially commenced on 1 September 2004 and was funded for five years by the EU's 6th Framework Programme, within the 'Quality and Safety of Food' Priority Area. It now continues as an association funded by a membership fee. Med-Vet-Net aimed to develop a network of excellence for the integration of veterinary, medical and food scientists, in the field of food safety, at the European Level, in order to improve research on the prevention and control of zoonoses, including food-borne diseases. The Network also aimed to take into account the public health concerns of consumers and other stakeholders throughout the food chain. Many of its members are likely to become partners in the proposed Horizon 2020 European Joint Programme Co-fund on One Health under Societal Challenge 2 (see section on H2020 calls below).

**ProHealth** aims at improving competitiveness and sustainability of modern pig and poultry farming in Europe through the development of an improved understanding of the multi-factorial dimension of animal pathologies linked to the intensification of production and use this to develop, evaluate and disseminate effective control strategies to reduce impact.

**SAPHIR** aims to develop innovative, safe, affordable and effective vaccine strategies effective against endemic pathogens responsible for high economic losses in livestock focusing on pathogens of pigs (Porcine Reproductive and Respiratory Syndrome Virus (PRRSV) and *Mycoplasma hyopneumoniae*), chickens (*Eimeria* and *Clostridium perfringens*) and cattle (Bovine Respiratory Syncytial Virus (BRSV), *Mycoplasma bovis*) through the development of generic vaccine approaches applicable to other pathogens.

**PARAGONE** aims to take a number of promising prototypes subunit parasite vaccines towards commercialisation focusing on Ruminant helminths *Fasciola hepatica*, *Cooperia* spp., *Ostertagia ostertagi*, *Teladorsagia circumcincta* and *Haemonchus contortus* and, the ectoparasitic mites, *Psoroptes ovis* (ruminants) and *Dermanyssus gallinae* (poultry).

**SusAN ERA-Net** (Sustainable Animal Production). This is an ERA-Net Co-fund arising from a Standing Committee on Agriculture Collaborative Working Group. More information can be found at <http://www.era-susan.eu/> and projects on animal health that may be funded under its joint calls.

### **H2020 Calls**

Contact will also be established with the successful consortia under the following calls in the H2020 2016 -17 Work Programmes:

- i) Understanding host-pathogen-environment interactions - Research and Innovation Action (RIA); SFS-14-2016;
- ii) Breeding livestock for resilience and efficiency – RIA; SFS-15-2016-2017;
- iii) Co-fund on "One Health" (zoonoses – emerging threats) - Cofund (European Joint Programme) ; SFS-36-2017. The overall objective is to create a European Joint Programme to deal with zoonotic diseases, with the main emphasis on zoonotic microbial intoxication. This will include natural toxins and the risks associated with domestic and wild life animal reservoirs and their exposure routes towards human infection, including those posed by possible illegal imports of animal products, in order to improve preparedness against future One Health risks. Related emerging threats such as antimicrobial resistance will be addressed. Legal entities participating in the action have to be nominated by Member States or Associated countries and have research funding and/or management responsibilities in the domain of zoonoses, in particular on microbiological safety along the food chain. This €70million initiative will involve €35million from the EC and matching funding from Member States, joining up the programmes at funded institutes and it may be possible for the consortium to join STAR-IDAZ IRC as a programme owner.
- iv) Alternative production systems to address anti-microbial drug usage, animal welfare and the impact on health – RIA; SFS-46-2017; and
- v) Bee health and sustainable pollination – RIA; SFS-16-2017  
and any livestock projects funded under:
- vi) Research and approaches for emerging diseases in plants and terrestrial livestock – RIA; SFS-10-2017 and
- vii) Validation of diagnostic tools for animal and plant health - Innovation Action (IA); SFS-13-2017

**The Innovative Medicines Initiative (IMI)** <http://www.imi.europa.eu/> is Europe's largest public-private initiative aiming to speed up the development of better and safer medicines for human patients. It is a joint **€5 Bn** undertaking between the European Union and the pharmaceutical industry association EFPIA, supporting collaborative research projects and building networks of industrial and academic experts in order to boost pharmaceutical innovation in Europe. Industry defines the problems to be addressed and how much funding (in kind) they will put in and the Commission comes up with their contribution which goes to academia and SMEs. The focus of IMI's Strategic Research Agenda (SRA) for the period 2014 – 24 is on "Delivering the right prevention and treatment for the right patient at the right time" under which they have annual work plans with call for proposals on very specific challenges a few times each year. It is likely that this initiative will be extended to include animal health, or at least One Health aspects of animal health. A preliminary meeting was

held in early July '15 to discuss possible areas relating to animal health that it could be extended into under its current remit and a number of pilot topics have been identified for further discussion (infections and vector-borne diseases (biomarkers/diagnostics, mechanisms of transmission), ii) disease understanding, iii) big data, iv) 3Rs - disruptive paradigm change and v) sustainable business models for areas of low Return on Investment). If this moves forward then IMI will be invited to join STAR-IDAZ IRC.

### **Infrastructure initiative**

Proposals with the acronym BioNet are currently being developed for submission to the Infrastructures(INFAIA) call which will involve over 30 partners including private companies and third countries to build on the success of the NADIR project. This initiative is concerned with networking research activities requiring high bio-containment levels and improving access to the facilities concerned. If funded it will support STAR-IDAZ IRC activities in a critical area relating to trans-boundary and emerging diseases.

**OIE** has been involved as an Associated Partner in STAR-IDAZ, attending consortium and regional network meetings and was active in the Foresight and Programming group that developed a long-term Strategic Research Agenda. The first of OIE's strategic objectives, as stated in its Six Strategic Plan, is "Securing animal health and welfare by appropriate risk management" among the main components of which are listed:

- the continued development of timely, current and scientifically-based standards for animal health, animal welfare and animal production food safety, for terrestrial(including bees and reptiles)and aquatic animals;
- The continued development of timely, current and scientifically-based guidelines and recommendations for the management, control and/or eradication of diseases, including those at the animal-human-environment interface, taking into account economic, social and environmental factors.

Among the particular issues identified as needing to be addressed is the application of new and rapidly evolving technologies related to standards development, including diagnostics and vaccines, and the ability of the OIE to access expertise in these technologies.

To improve collaboration with OIE and strengthen the links between research and the standards in animal health, it is planned that the SIRCAH secretariat will have an office in the OIE Headquarters in Paris.

**DISCONTTOOLS**, an FP7 project concerned with optimisation of public and private funders in a more effective manner to enable new and improved tools to be developed and delivered for the control of the major infectious diseases of animals including zoonoses. This established disease expert groups to develop animal disease/infection databases for 52 diseases, identifying those areas where disease knowledge is deficient and where current tools are lacking, inadequate or could be improved. This

information would then be used to target research and development activities. The databases developed are currently being updated under a EU Member State initiative.

OIE, CABI and the DISCONTTOOLS project have their disease information material prepared by experts. These experts are likely to also be key participants in the proposed Working Groups. It is, therefore, proposed that these complementary but overlapping activities be linked together where possible to offer efficiency savings.

**CABI** has recently completed the project 'Updating, maintaining and enhancing the Invasive Species Compendium (ISC)', funded by the European Commission's Thematic Programme for Environment and sustainable management of Natural Resources, including energy (ENRTP). This includes a range of animal pathogens and/or their vectors. In total, 118 species datasheets are now covered in the Compendium out of 355 species identified as missing and prioritized for coverage as direct result of these activities.

International activities funded nationally such as the UK government £20 million initiative on Zoonoses and Emerging Livestock Systems (ZELS) exist and information on these needs to be captured.

## **Methodology**

STAR-IDAZ brought together 24 partners from 18 countries world-wide, including many of the major players, with a further 30 countries engaged through regional networks for Europe, Asia and Australasia, the Americas and Africa and the Middle East. Major outputs/outcomes include:

- Research publications and research programmes databases were developed and are available on the STAR-IDAZ website –allowing sharing of information
- Priority diseases/issues identified for collaborative activities at a global level include Influenza, Bovine TB and other mycobacterial diseases, FMD, Salmonella, helminth parasites, Porcine Reproductive and Respiratory Syndrome Virus (PRRSV), Brucellosis, African Swine Fever and Rabies. Collaborative activities are also underway for three cutting issues: Alternatives to Antibiotics, Vaccinology and the Role of Livestock Diseases in Greenhouse gas emissions.

### Highlights on Priority Topics include:

- Following a gap analysis workshop **a Global Research Alliance against Bovine TB (GRAB-TB) has been established.**
- A joint STAR-IDAZ/OFFLU gap analysis meeting was held after which the OFFLU **influenza** research agenda has been updated.
- A global **African Swine Fever Research Alliance** (GARA) was launched in April 2014 following a gap analysis meeting sponsored by STAR-IDAZ and USDA.
- Research gap analysis and prioritisation exercises have been conducted for **Brucellosis** and **PRRS** and research agendas on these topics are being developed.
- Foresight activities have been conducted and a common long-term strategic research agenda has been developed and is available on the STAR-IDAZ website.

The STAR-IDAZ partners who have joined the International Research Consortium have agreed to a continued minimum level of investment in an expanded list of shared priority topics over the next five years, and to work together to deliver agreed targets through the sharing of information and alignment of research activities with their IRC partners. **Central to the success of the IRC is the sharing of information, focusing of research on identified gaps (outcome-driven research) and alignment of research programmes to address these gaps.**

**SIRCAH will support the IRC achieve its objectives through the following activities:**

**Sharing of information:** The STAR-IDAZ publications database will be maintained and complemented from CABI's CAB Abstracts database which provides an up-to date list of references on priority topics and indicating the major research players in each of the priority areas. Major efforts will be expended to have the research programmes database constantly updated and following gap analysis on priority topics, partners will be requested to update spreadsheets indicating which areas they are currently working on or planning new research on. Working Groups will be established for priority topics (diseases or cross cutting issues such as vaccinology), where those linked to STAR-IDAZ do not already exist, for the purpose of identifying research needs/gaps, sharing information and encouraging cooperation and collaboration at the researcher level. A Data Sharing Statement has already been developed by the STAR-IDAZ partners, indicating the commitment of the programme owners and funders to this endeavour. SIRCAH will develop guidelines and policies for IRC projects regarding open data, IP and early engagement with industry.

**Focusing of research on needs:** Outcome-driven research focused on existing knowledge gaps, wherever they are along the research pipeline from fundamental to applied science is essential to expedite the development of new disease control strategies and tools. However, it is first important to establish the desired outcomes, for example what is expected/needed from a vaccine. Working Groups will be established on priority topics and the DISCONTTOOLS gap analysis reports will be considered and expanded or updated as necessary in gap analysis workshops. **Gap analysis, supported by literature reviews, will be conducted for priority topics and the identified gaps, prioritised and aligned using critical path analysis to develop a roadmap for the required outcome.** The commissioned research reviews will be distributed to the Working Groups and could be published in CABI's review journal *CAB Reviews*, which allows open access on request. These reviews will also be available on the STAR-IDAZ website.

**Alignment of research programmes:** Following gap analysis the Scientific Committee, supported by the Secretariat, will provide recommendations to the programme owners and funding bodies related to how current and planned activities could be aligned to speed up the development of the desired outcomes.

The proposed Support Action project (SIRCAH) will facilitate the establishment of the working groups on priority topics as outlined in the STAR-IDAZ Governance document, the development of gap analysis and research roadmaps on priority topics and the sharing of information. The Scientific

Secretariat will act as the “nerve centre” for the IRC organising meetings of the various bodies; managing communications; assisting the Working Groups in running gap analyses; conducting or commissioning literature searches and reviews; advising on alignment of research programmes and monitoring progress against IRC goals.

## **2. Impact**

### **2.1 Expected impacts**

#### ***Impacts as listed in the call topic:***

The project will facilitate and underpin co-operation between the various funding bodies/programme owners and between them and the research communities and thus contribute to the overall aim of STAR-IDAZ - improving coordination of research activities on the major infectious diseases of livestock and zoonoses so as to hasten the delivery of improved control methods. This will be aided by the gap analysis and recommendations relating to alignment of research activities. The project will improve the efficiency and the effectiveness of the research programmes of the IRC, resulting in improved capabilities in controlling infectious animal diseases and zoonoses, which in turn will protect the livestock industries, improve food security, and safeguard human and animal health.

It will also help mobilise and coordinate the global research effort to address the existing and emerging disease challenges, including anti-microbial resistance, and so hasten the delivery of new or improved control tools or strategies.

#### ***Helping to Mobilise and coordinate the global research effort:***

STAR-IDAZ had 26 partners from 18 countries with a further 30 countries involved through regional networks established for the Americas, Asia and Australasia, Europe and Africa and the Middle East. Although not all of the organisations involved in STAR-IDAZ through the regional networks may join the IRC, the proposed project will consolidate and expand this group of research funders and programme owners by involving additional countries and a wider range of funders/programme owners in countries that are already participating. The partners involved in the IRC have indicated that they have a combined five-year budget in the region of \$2.5 billion for work in the area of the STAR-IDAZ IRC objectives. Information will be collected on current and planned activities and, following the development of research roadmaps on priority topics, partners will be advised on alignment of activities.

#### ***Fostering a more focused effort:***

The DISCONTTOOLS project developed product and research gap analysis for a range of diseases, which were further developed by STAR-IDAZ for a number of priority diseases and presented in a manner that facilitated information exchange. Research gaps were also identified for cross cutting issues such as vaccinology. The proposed project will resource efforts to take coordination to a higher level through a) further updating of gap analysis and the development of research roadmaps to deliver expected outcomes for priority topics and b) relating current research activities to the identified research gaps and advising on realignment of effort.

### ***Contributing to improved animal health:***

The partners involved in STAR-IDAZ IRC have agreed to coordinate research at international level to contribute to new and improved animal health strategies for at least 30 priority diseases/infections/issues. STAR-IDAZ IRC involves a range of programme owners/funders operating in all parts of the research pipeline from basic research to product development. Improved coordination of the partners' \$2.5 billion in research funding for the priority topics will reduce duplication, improve knowledge flow between research groups, and increase the ability of researchers to produce the vaccines, diagnostic tests, drugs, and strategies needed to control major animal and zoonotic diseases.

SIRCAH will proactively facilitate collaboration on priority topics, developing research road-maps based on gap analysis and recommending how programmes could be realigned. At the same time it will offer a platform for communication between programme owners, the research community and stakeholders. The IRC partners have previously been working together for up to five years, and for longer within Europe. This project will move the existing collaboration to a new level with the Secretariat proactively facilitating a focused, coordinated response to research needs and managing communications between the various players.

### **SIRCAH will therefore reinforce international cooperation in research on animal health and zoonoses:**

#### **■ *Cooperation between funding agencies***

By ensuring a dialogue between funding agencies in the field of AH research, this proposal will contribute to optimizing the use of resources, which are scarce particularly when considering the number of diseases to be covered. Reducing this fragmentation of resources will contribute to optimising the route to improved disease control strategies and tools.

#### **■ *Cooperation between and amongst research groups***

The current proposal will also support the dialogue between research groups to find ways to share data and make them available to the community at large, through the integration of the various national initiatives and the numerous research databases. It will focus research efforts on the current gaps in information so as to reach the STAR-IDAZ IRC goals of contributing to new and improved animal health strategies for at least 30 priority diseases/infections/issues.

#### **■ *Cooperation between research, industry, and regulators***

It is essential to strengthen the links between research, industry and regulators, so that pre-competitive resources are established and maintained with both research grants and industry sponsorship, and for industry to better capitalise on strong academic research results so as to translate these into new disease control strategies.

**By its supporting activities SIRCAH will underpin the timely achievement of STAR-IDAZ IRC goals for the benefit of livestock producers, the animal health industries and animal health and welfare.**

Overall benefits will include:

- ✓ Greater availability of animal disease control tools and improved animal health strategies.

- ✓ General improvements in animal health and welfare, reducing production losses, improving food security and facilitating trade.
- ✓ Efficient deployment of national funds for both national and trans-national (joint) research, including research procurement in response to emergency situations.
- ✓ Improved cost-effectiveness of commissioned research, by creating a consensus on the level of funding that should be directed at given priorities of both nationally and internationally funded programmes.
- ✓ Improved coordination of research priorities suitable for future funding
- ✓ Improved availability of validated and relevant research data for animal health policy makers and the animal health and livestock industries.
- ✓ Improved availability of information on national research capacity, including expertise, in the various areas.
- ✓ Improved consultation with other international policy-makers and animal and human health organisations (e.g. EFSA, ECDC, AU-IBAR, OIE, FAO, and WHO).
- ✓ Faster and more cost effective development of the control tools needed for animal disease

***Barriers and obstacles to achieving impacts:***

- a) Reluctance to share information. STAR-IDAZ partners have agreed a data-sharing policy. Secretariat personnel will work closely with IRC partners, encouraging protection of intellectual property and gaining their confidence in discussing research data and results.
- b) Research budgets are not maintained.
- c) Failure of the animal health industry to take forward the research outputs and develop new products. A number of the animal health companies are IRC partners and trade bodies representing the veterinary pharmaceutical and diagnostic industries will be invited to join the IRC Executive Committee, while regulatory bodies will be represented in the Scientific Committee.
- d) Regulatory requirements make it more difficult to licence new products, especially those based on new technologies. It is proposed that a representative of a regulatory body will participate in the Scientific Committee and this has already been discussed with a regulator.
- e) A reduction in the profitability of livestock enterprises resulting in producers being reluctant to invest in disease control strategies, including use of vaccines. All the projections suggest that there will be increasing demand for livestock products due to an increasing world population and increasing affluence so despite short-term fluctuations the overall trend in prices should be upwards.

**2.2 Measures to maximise impact**

**a) Dissemination and exploitation of results**

SIRCAH is designed to provide support for achieving the IRC goals and as such will not itself generate new research data. A major part of its activities will be concerned with improving communications

within the IRC so as to improve the coordination of research on the priority topics. **The IRC contains representatives of programme owners and funders covering the spectrum from basic to applied science, including industry.** The research results from IRC projects belong to the research groups conducting the research or the funding bodies concerned. Dissemination or exploitation of the research results will be assisted by the internal communication channels established in the STAR-IDAZ IRC. Model collaborative agreements will be drawn up and made available to groups working in related areas who wish to formally collaborate.

An important result of the work of SIRCAH will be the gap analyses, roadmap reports and Logistical Frameworks, advising programme owners on how their research programmes might be realigned and sharing information. **These will provide researchers, funders and other stakeholders with the insight into the gaps in the current knowledge on animal health problems, which they can exploit to develop the vaccines, diagnostics and other tools to control diseases.**

There are two aspects to the dissemination and exploitation of the project outputs – there are those outputs arising directly from SIRCAH and those arising as a result of STAR-IDAZ activities.

Some SIRCAH work packages will lead to outputs that can be used and adapted to disseminate the work of the IRC as well as the direct outputs for the SIRCAH action. Such documentation might support policy briefings for governments and research councils (for example), as well as external stakeholders such as pharmaceutical corporations. Through promoting the work of the IRC members, and the SIRCAH and IRC outputs from the proposed action, interest of the wider research community is expected. The outputs, their expected impact and for whom are detailed in Table 1.

**Table 1 – Outputs, expected impact and target users**

SIRCAH		
Expected output	Expected Impact	Users
Enlarged IRC membership, encompassing most of the STAR-IDAZ members and increase industry involvement	Mobilisation of resources to support research	Programme owners, including industry
Improved communication between IRC partners	Increased collaboration; Sharing of information	STAR-IDAZ IRC partners
Gap analysis and Research roadmaps	Improved focusing/targeting of resources	Programme owners; Researchers preparing project proposals
Logical Frameworks accompanying Research	Improved focus tempered with an increases awareness	STAR-IDAZ IRC, programme owners

Roadmaps	of risks and the development of contingency plans	
(Re)alignment of research programmes	Improved focus of resources and provision of more timely results	Programme owners
Improved coordination of research	Decreased duplication of effort	Programme owners
Increased public trust of science, particularly in the field of animal health	Decreased consumer-driven economic impact of animal crises on the livestock sector	General public
STAR-IDAZ IRC		
Expected output	Expected Impact	Users
Agreed priority topics	Improve collaboration	Programme owners
Identity of key pathogen factors – virulence determinants, including immunomodulators; Immunogens;	Vaccine candidates	Veterinary Pharmaceutical companies
Identity of key host factors – immune response; correlates of protection;	New candidate vaccine; new candidate diagnostics	Pharma companies Diagnostic companies
Genetic markers of resistance	Breeding for resistance	Animal breeding companies and livestock keepers
Key scientific information relating to epidemiology and control	Disease control strategies	Policy holders and the livestock industry
Agreed expectation of new vaccines – e.g. impact on $R_0$	Improved focus on needs	Policy holders and pharma industry

Dissemination activities will be covered by the Communications Strategy.

### **Business plan**

As part of the project a robust business plan will be drawn up by the project coordinator and Luke Dalton in collaboration with project partners. The aim of the plan will be to ensure the sustainability of the SIRCAH beyond the life of the project. The plan will identify the long term objectives, main activities, resources required and potential funders. The business plan will be discussed with IRC members including the main funding bodies.

## **b) Communication**

A **Data Sharing Statement** and **Communications Strategy** have already been developed by STAR-IDAZ and will be redeveloped and updated to meet the needs of the IRC. In particular the communication strategy will be expanded into a detailed plan covering internal and external communication outlining the target audiences, key messages and communication channels. The focus will be on 'strategic communication' in which the project selects the targets, audience and message, then clarifies them, before deciding on the most appropriate media to use; the plan will provide details of **who** (audience) will receive **what** (message), **how** (communications channels) and **when** (implementation and time planner). The communication plan will therefore contain the following elements: identification and classification of main target audiences, media and key messages, communication channels, implementation plan and timeline, roles and responsibilities of partners. The plan will also stipulate the conditions for ensuring proper dissemination of the generated knowledge, related to confidentiality, publication and use of the knowledge.

The comprehensive Communication Plan will be developed in Month 6 to ensure effective communication within the IRC itself and with the relevant stakeholders to ensure all interested parties are well informed on the development of SIRCAH. Communication activities are included in WPs 4 and 5. The STAR-IDAZ website will be modified at the beginning of the project in WP4. It will provide a general presentation of the project, its objectives and activities as well as other dissemination materials such as a project flyer. Moreover, it will provide news, events and links from/to the websites of all consortium partners of the project and links with other related projects, standards and policies. The web site will be regularly updated. In addition to external communications, the website will provide a platform for internal communications and document storage for the IRC.

### ***Internal Communication within SIRCAH***

The project will just have five partners who have been working together closely over a number of years. Each will have a very clear understanding of their specific roles and their relation to others in the overall project and will function as a single team. Weekly team meetings of SIRCAH will ensure good communication between partners.

### ***Internal Communication with STAR-IDAZ IRC***

In order to address knowledge and experience sharing among participants, an internal communication strategy will be developed so as to achieve a common understanding of the scope of the research, common goals, and how programmes might be realigned. To ensure that the communication between Consortium partners is being done in a consistent manner, a reporting and information sharing structure will be set up, especially relating to events and publications.

This internal communication plan will ensure that no unnecessary duplication of research activities occurs. It will also ensure that all members are regularly updated on developments within other members' research programmes, especially in relation to specific activities that may be important to furthering their own.

To facilitate internal communication and effectively manage and deliver the overall project on time and to budget, achieving all set deliverables and milestones, Luke Dalton will be responsible for coordinating a number of regular reports and meetings. All consortium members will also utilise their own internal communications vehicles (i.e. newsletters, intranet sites, email announcements, etc.) to disseminate relevant information.

**Communication to the EU**

The Project Coordinator will be the single contact point between the project and the EC, and will liaise with EC Project Officers to ensure the EC is in receipt of all required information on the due date. Luke Dalton will ensure that plans are in place for timely preparation and circulation of project reports and meetings. Luke will also be responsible for coordinating communication within the IRC consortium.

**External Communication**

The activities of the project will be communicated to the wider stakeholder community and the general public to increase interest in the STAR-IDAZ IRC initiative and in science generally. This is also an important part of the advocacy activities designed to mobilise additional or new funding for the research areas.

**Draft External Communication Plan**

<p><b>PURPOSE</b></p> <p>To document how information will be disseminated to, and received from, all stakeholders in IRC and the SIRCAH project outputs will be exploited.</p> <ul style="list-style-type: none"> <li>• It identifies the means/medium and frequency of communication between the different parties.</li> <li>• It provides a framework for coordinating communications and engagement throughout the life of SIRCAH</li> </ul>
<p><b>OBJECTIVES</b></p> <ul style="list-style-type: none"> <li>• Increase stakeholder awareness of IRC research activities so as to facilitate the exchange of information.</li> <li>• Recruitment of additional Animal Health Research funding organisations or research programme managers from countries not currently involved to STAR-IDAZ activities at either the regional or global level.</li> <li>• Maximise engagement with and the involvement of the research community in specific activities relating to the coordination of current and future research efforts.</li> </ul>
<p><b>STAKEHOLDER GROUPS (WHO)</b></p> <ol style="list-style-type: none"> <li>1. Research institutes, including university departments and government laboratories, conducting research on animal diseases and zoonoses.</li> <li>2. Non-IRC Animal Health R&amp;D programme owners and managers.</li> <li>3. Animal Health Policy departments and agencies.</li> <li>4. International organisations including animal and public health bodies e.g. OIE, FAO.</li> <li>5. Animal Health Industry.</li> <li>6. Animal Health professional bodies e.g. FVE.</li> </ol>

7. Livestock Industry Sector bodies.
8. Other European and international research initiatives on Animal Health, zoonoses and related topics e.g. Technology Platforms, ERA-NETs and NoE.

COMMUNICATION MECHANISMS (HOW)	STAKEHOLDER GROUPS (WHO)							
	1	2	3	4	5	6	7	8
Website	•	•	•	•	•	•	•	•
Social media	•	•	•	•	•	•	•	•
Webinars	•	•	•	•	•	•	•	•
Written reports/documents (including E-reports)	•	•	•	•	•	•	•	•
Talks	•				•	•	•	•
Letters/emails	•	•	•	•	•	•	•	•
E-Newsletters	•	•	•	•	•	•	•	•
Press notices	•	•	•	•	•	•	•	•
Participating in/ attending external meetings	•	•	•	•	•	•	•	•

WHAT	HOW & WHEN & WHO	WHY
Project publicity	<p><b>Website:</b> Continuous (1-8)</p> <p><b>Talks:</b> Twice per year or as requested (1,5,6,7,8)</p> <p><b>E-Newsletters:</b> Quarterly (1-8)</p> <p><b>Press notices:</b> As required (1-8)</p> <p><b>Participating in/attending meetings:</b> As required (1-8)</p> <p><b>Social media:</b> A twitter account will be opened and will post regular updates on IRC activities and items of interest to the animal health community such as conferences etc. (1-8)</p> <p><b>Webinars:</b> As required (1-8)</p>	Increase visibility of the project and hence enlarging the number of interested parties; increase public awareness about science progresses in the field of AH
Project outputs including reports, research gap analyses and roadmaps (including methodology)	<p><b>Written reports (including E-reports):</b> As per the work plan (1-8)</p> <p><b>Website:</b> Continuous(1-8)</p>	Increase stakeholder awareness of IRC research activities and identified research gaps and roadmaps; Improve focusing/targeting of resources
Agendas/minutes of meetings	<p><b>Website:</b> As required (1-8)</p> <p><b>Written reports/documents (including E-reports):</b> As required (1-8)</p>	Increase awareness about project progresses toward IRC members

Coordinated Research calls	<b>Website:</b> As required (1-8) <b>Talks:</b> As requested (1,5,6,7,8) <b>E-Newsletters:</b> As required (1-8) <b>Press notices:</b> As required (1-8)	Deliver focussed research results to target emerging issues
Questionnaires	<b>Website:</b> As required (1-8) <b>Written reports/documents (including E-reports):</b> As required (1-8)	Collect relevant information so as to perform gap analyses
Response to queries	<b>Letters/emails:</b> As required (1-8)	Provide timely answers to researchers, improving general trust in the IRC and creating networking connection and collaborations
Reports of meetings (including presentations)	<b>Website:</b> As required (1-8) <b>Written reports/documents (including E-reports):</b> As per the work plan (1-8)	Increase awareness about project progresses toward IRC members and other stakeholders
Stakeholder opinions	<b>Talks:</b> As required (1,5,6,7,8) <b>Letters/emails:</b> As required (1-8) <b>Participating in/attending meetings:</b> As required (1-8)	Heighten the stakeholders' sense of ownership of the outcomes and their desire for continued involvement, both being requisites for the uptake of the strategic choices emerging from the project
<b>ROLES AND RESPONSIBILITIES OF KEY INDIVIDUALS</b> Responsible for ensuring communication is adequate / appropriate and timely <ul style="list-style-type: none"> <li>• Luke Dalton</li> <li>• SIRCAH Coordinator</li> <li>• Work Package 4 Leader</li> </ul>		

### 3. Implementation

#### 3.1 Work plan – Work packages and deliverables

The tasks of the project will be split in five Work packages which will all start immediately in the first month and, with the exception of WP 1, go on until the end of the project. The work packages reflect the main objectives of SIRCAH:

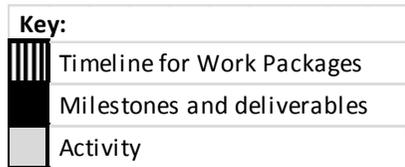
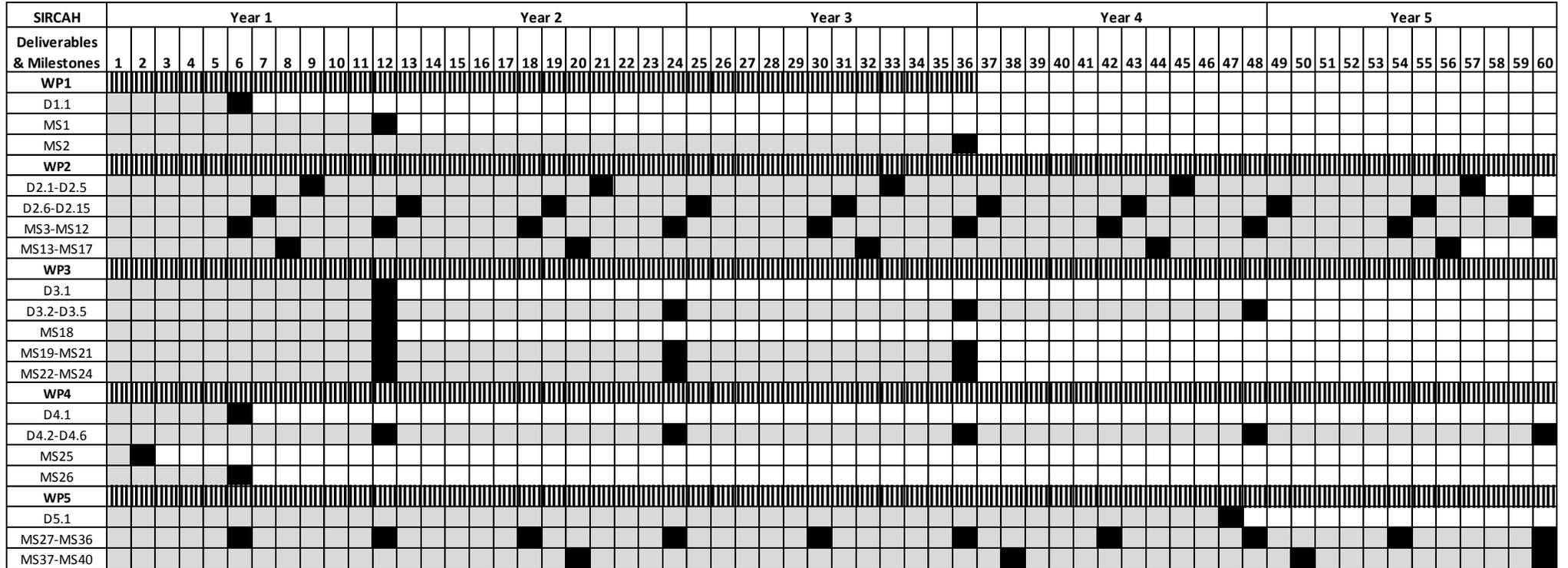
WP1 is concerned with promoting STAR-IDAZ IRC activities, expanding the influence of the network and engaging with other international activities. This will involve identifying and engaging with organisations with significant budgets for the research areas covered by the IRC in countries that are not currently involved in STAR-IDAZ or the IRC and also working with partner organisations to engage with other programme owners/funders in countries currently involved. Links will be established with other stake holder organisations, including WHO and FAO, and related initiatives such as the One Health Platform to identify how their activities can be integrated with those of SIRCAH. Both OIE, CABI and the DISCONTTOOLS project have their disease groups or disease experts conducting complementary activities which are needed for WP3 so the possibility of integrating SIRCAH needs

with these activities will be explored. WP2 will support the work of the STAR-IDAZ IRC consortium by organising meetings of the STAR-IDAZ IRC Executive Committee, the Scientific Committee, keeping all members updated and providing secretarial support for the consortium, the Scientific Committee and the Working Groups. It will make sure that the STAR-IDAZ IRC Consortium can work properly and smoothly. WP3's aim is to support advancing research on animal health by facilitating exchange of information through establishing guidelines relating to open data and IP; identifying major research gaps and developing research roadmaps to improve the focus of research activities; collecting and diffusing pertinent information and results to the researchers of STAR-IDAZ IRC supported projects; enable and implement cooperation with other stakeholders and other FP7 and H2020 projects and monitor progress against STAR-IDAZ IRC targets. Dissemination of results of STAR-IDAZ IRC projects will be assured by WP4 with different means of communication. This work package will be in charge of managing the STAR-IDAZ website, producing newsletters and other communication materials including a logo and brochures. The fifth WP will be dedicated to the management of the SIRCAH project itself in order to ensure its smooth running and that all actions are in compliance with Horizon 2020 rules and the Grant Agreement.

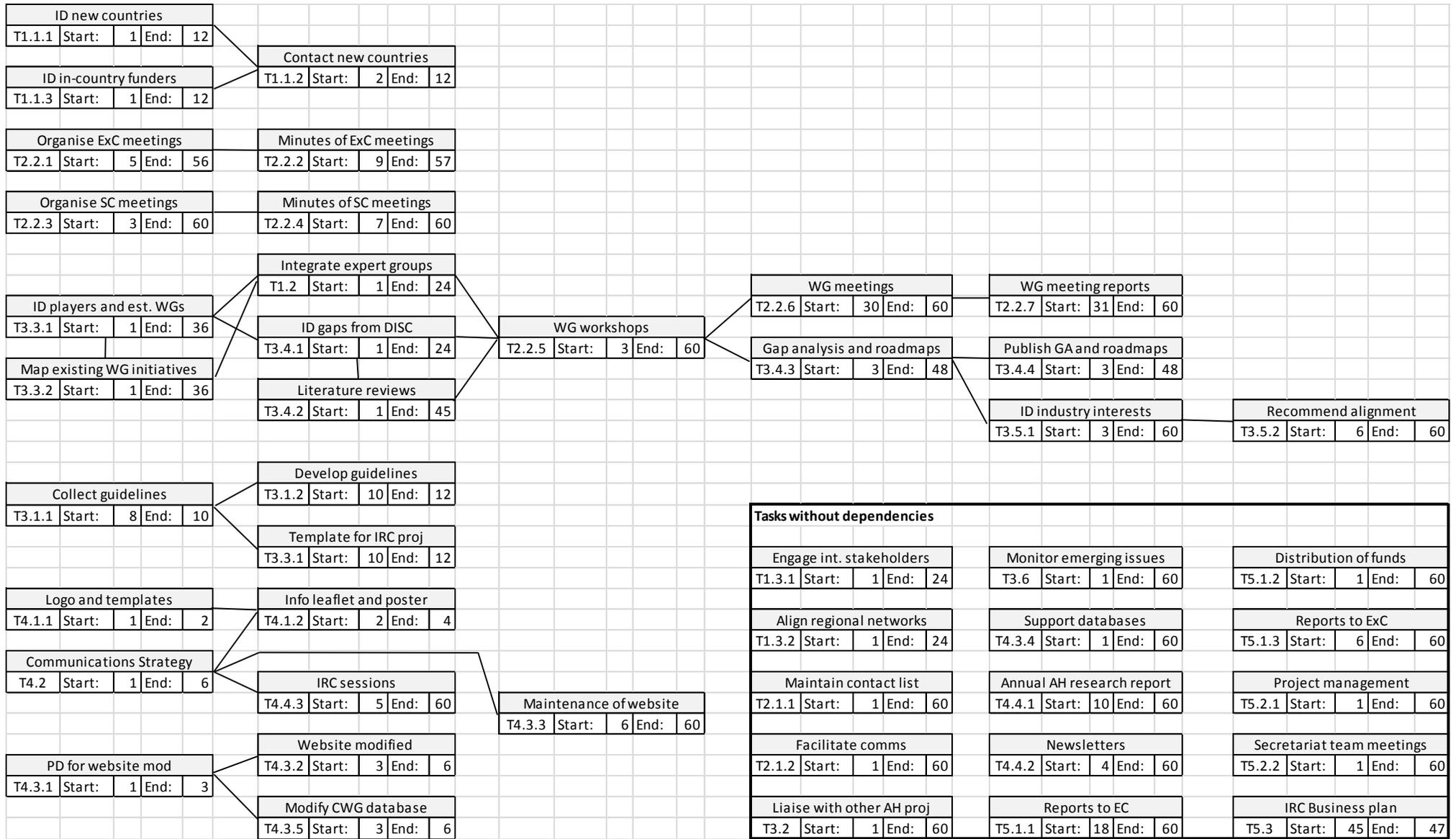
The five partners will be involved to some extent in all four Work Packages which will enable close interconnection between the WPs and efficient communication between all personnel involved. Due to the nature of the project this simple structure of the work plan also provides the necessary flexibility in case of changes in the work or needs of the STAR-IDAZ IRC Consortium. Its small structure will also allow SIRCAH to react quickly to upcoming demands of STAR-IDAZ IRC and adjust working plans accordingly.

*Timing of the different work packages and their components*

**Figure 1 –GANTT Chart**



**Figure 2 – PERT Chart showing dependencies between tasks**



### 3.2 Management structure and procedures

#### Internal Management

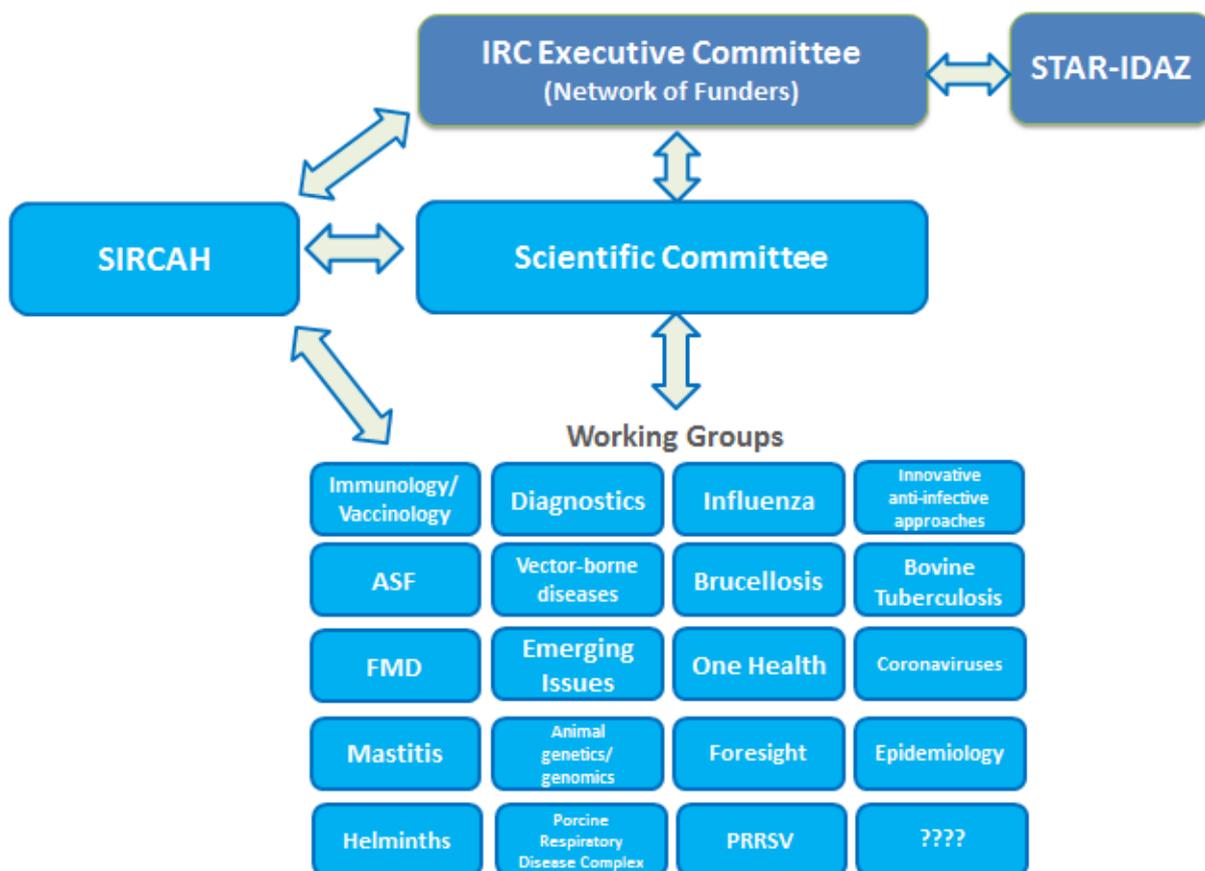
SIRCAH has just five partners but those working on the project will function as a single team meeting weekly via teleconferences. All Work Packages (WPs) are led by the Project Coordinator except for WP4 which will be led by CABI. The various partners have identified tasks in the WPs that they will contribute to. The agreed STAR-IDAZ IRC Governance document states that the IRC Secretariat reports to the Executive Committee for its work plan with the STAR-IDAZ Chairperson overseeing its activities.

In line with the STAR-IDAZ Memorandum of Understanding, the current STAR-IDAZ Chairperson, who leads the SIRCAH Consortium, will be replaced as STAR-IDAZ Chairperson later this year by a candidate from another continent.

#### External management

The external management will be built on the STAR-IDAZ IRC standing committees. STAR-IDAZ IRC will be governed through (1) an Executive Committee, (2) a Scientific Committee and (3) a number of Working Groups.

Figure 3 - STAR-IDAZ IRC Governance Structure



### **(1) The Executive Committee**

The Executive Committee adopts STAR-IDAZ IRC policies and guidelines, coordinate research funding strategies to address identified research priorities e.g. as proposed by the Scientific Committee, monitor progress and provide updates to funding bodies, review and accept new members (i.e. research funding bodies), decide the composition of Scientific Committee, agree on a communication strategy that ensure timely and correct dissemination regarding STAR-IDAZ IRC objectives and progress made, provide a forum for resolution of any conflicts.

The STAR-IDAZ IRC Executive Committee is composed of one representative per funding body, one representative from each group of funders (small funders) and the chair of the Scientific Committee.

**The Executive Committee will serve as a Steering Committee for the SIRCAH project**, as the project's main objective is to provide organizational and communication support to the STAR-IDAZ IRC consortium.

SIRCAH will submit to the STAR-IDAZ IRC Executive Committee its work plan, its annual activity reports and any communication before release. It will be up to the STAR-IDAZ IRC Executive Committee to define the exact procedure to do so.

### **(2) Scientific Committee**

STAR-IDAZ IRC will have a Scientific Committee, advising the Executive Committee on research priorities and progress made from a scientific viewpoint. The Scientific Committee act as scientific coordinating body, propose research priorities for consideration by the Executive Committee, propose policies and guidelines for adoption by the Executive Committee, assess progress made by the Working Groups (i.e. projects funded), address arising issues of scientific nature, encourage exchange of protocols and best practices, and agree on standard operating procedures and quality standards. The Scientific Committee will have up to 15 members with a balanced expertise and representation from academia, diagnostics, pharmaceutical industry, and regulatory bodies.

SIRCAH will submit to the STAR-IDAZ IRC Scientific Committee its annual report of the state of art of STAR-IDAZ IRC research activity and achievements toward STAR-IDAZ IRC goals, as it will be partially based on the outcome of the scientific committee meetings. It will be up to the STAR-IDAZ IRC Scientific Committee to define the exact procedure to act as a reviewer of the annual reports.

### **(3) Working Groups**

The Working Groups are composed of experts within specific scientific domains , including representatives from funded projects within the scope of STAR-IDAZ IRC. They will cooperate to ensure synergies of all research projects within the scientific area of the working group, by exchanging results, expertise, experiences and information, report major achievements to the Scientific Committee, develop and propose standards to the Scientific Committee for decisions and ensure that STAR-IDAZ IRC policies are applied and adapted to their respective scientific areas.

SIRCAH will submit to the STAR-IDAZ IRC Working Groups its annual report of the state of art of STAR-IDAZ IRC research activity and achievements toward STAR-IDAZ IRC goals, as it will be partially based

on the outcome of the activities of the working groups. It will be up to the STAR-IDAZ IRC Working Groups to define the exact procedure to act as a reviewer of the annual reports, prior to the Scientific Committee.

#### **(4) Mandate of the IRC Secretariat as outlined in the STAR-IDAZ IRC Governance Document**

The mandate of the IRC secretariat, and thus SIRCAH, is to provide organisational and communication support to STAR-IDAZ IRC and its various members and thereby contribute to the IRC policies and guidelines aimed at coordinating research at international level to contribute to new and improved animal health strategies. It supports the work of the STAR-IDAZ IRC as outlined earlier in the objectives and reports to the Executive Committee for its work plan and its activity report.

Responsibility for achieving the STAR-IDAZ IRC objectives largely rests with STAR-IDAZ IRC partners. There are few risks to achieving the SIRCAH deliverables as they are largely independent of the activities of the STAR-IDAZ IRC partners. However, achieving the deliverables of this project without contributing significantly to attaining the objectives of STAR-IDAZ IRC would be of limited value. Most of the risks outlined below relate to those that could prevent the attainment of the STAR-IDAZ IRC objectives.

SIRCAH involves five partners, all of which have been working closely with one or more of the other partners over a number of years. Defra, the lead partner, has close working relationships with all of the other partners. If for some reason one of the partners had to withdraw from the consortium their activities would be taken on by the other partners while endeavouring to continue engaging the same personnel. The withdrawal of Defra would necessitate its lead role being transferred to one of the international organisations involved i.e. CABI or OIE.

### **3.3 Consortium as a whole**

SIRCAH brings together five partners with complementary expertise and together are highly experienced in managing groups of experts, engaging with the animal health industry, animal health research community and policy makers internationally, knowledge management and communication. The individuals involved in the project include veterinarians, scientists, a law graduate, project managers and information management specialists. Defra and BBSRC are partners in STAR-IDAZ IRC, OIE has signed the STAR-IDAZ Memorandum of Understanding and all five organisations are experienced in leading international projects, including EU projects.

Both Defra and BBSRC fund and manage animal health research programmes ranging from fundamental to applied science. Defra led the highly successful EMIDA ERA-Net and the STAR-IDAZ global network on infectious diseases of animals research, building up good relations with partners in about 50 countries world-wide. BBSRC was a partner in both EMIDA and STAR-IDAZ and led a Work Package on networking research activities in the latter. Together BBSRC and Defra have been involved, with other partners in leading gap analysis activities on bovine TB, PRRSV, Brucellosis and Avian Influenza. IFAH Europe led the DISCONTTOOLS project engaging with the research community in

developing product and gap analysis databases for 52 animal diseases and these are currently being updated. The DISCONTTOOLS research gap analysis provides an excellent starting point for the development of more detailed gap analysis and roadmaps. Johannes Charlier, who currently manages the DISCONTTOOLS project for IFAH-Europe will be engaged on the project on a part-time basis merging the activities of DISCONTTOOLS with that of STAR-IDAZ IRC while Stefano Messori will be engaged in the project, having led tasks relating to identifying and prioritising research gaps in the Animal Health and Welfare ERA-Net (ANIHWA).

CABI has a strong track record in capacity building and knowledge management and sharing. The CAB Abstracts Database that CABI produces is the most comprehensive bibliographic database covering veterinary science and it is used to support research and higher education throughout the world. With the CAB Abstracts database CABI has the information expertise to search the literature and identify gaps in the research. CABI has also developed a series of Compendia, which are knowledge bases in animal health, plant health, forestry, aquaculture and invasive species. The Animal Health and Production Compendium was developed and funded through a consortium of over 20 public and private organizations, and it contains over 800 datasheets on animal disease and production topics written by subject experts.

OIE has formal links with 180 countries worldwide with regional and sub-regional offices in Africa; the Americas; Asia, the Far east and Oceania; Europe and the Middle East. BBSRC through the UK Department for Business, Innovation and Skills (BIS), its parent department, has close links with the UK Science and Innovation Network and its offices in many countries., In addition BBSRC is part of Research Councils UK, which has offices in a number of countries, including India, China and the USA. Defra, having led the STAR-IDAZ global network has links with animal health research funders/programme owners in over 50 countries worldwide while CABI, an intergovernmental body owned by its 48 member countries worldwide, has offices in 10 countries and has close links with the animal health community through the development of the disease compendia and information databases. These international links, including in-country offices, will facilitate close collaboration with the IRC partners and the research community worldwide.

CABI works with a range of national and international bodies, including those from the public and private sectors while IFAH-Europe will provide a direct link to the veterinary pharmaceutical industry facilitating their engagement in the IRC.

As well as managing knowledge management and development projects CABI has hosted secretariats. CABI currently hosts the GODAN (Global Open Data in Nutrition and Agriculture) and previously hosted the BioNET International (network to promote taxonomy in developing countries) Secretariat.

OIE's activities through its network of 252 Reference Laboratories in 39 countries covering 118 animal diseases or topics as well as its 49 Collaborating Centres in 26 countries, its Specialist Commissions, Working Groups and *ad hoc* Groups, the organisation of major scientific conferences and the preparation of Scientific and Technical reviews on a range of topical and priority issues could underpin

the STAR-IDAZ Working Groups on specific diseases and cross-cutting issues. Additionally, the OIE Regional Commissions have a very similar geographic distribution to that of the STAR-IDAZ Regional Networks and with their conferences devoted to regional cooperation in the control of animal diseases could aid in establishing the latter as sustainable networks. It is proposed and agreed that SIRCAH will have an office in the OIE building in Paris, which will aid coordination with its activities and help dissemination of information.

### ***Industrial and Commercial Involvement***

It is not intended that the project on its own will generate exploitable intellectual property. However, it will assist the STAR-IDAZ IRC in generating exploitable IP. STAR-IDAZ IRC partnership includes a number of the big veterinary pharmaceutical industries and the STAR-IDAZ IRC Executive Committee will have representatives of the pharmaceutical and diagnostic trade associations.

### ***Other countries and international organisations***

**OIE** has the support of a global network of 252 Reference Laboratories covering 118 animal diseases or topics in 39 countries and 49 collaborating centres covering 46 topics in 26 countries. With this network OIE is the best connected organisation in the world with the disease experts of interest to the IRC. Although a major user of the outputs of the nationally funded research programmes OIE doesn't have any direct involvement in the management of these research programmes or their coordination. Establishing an office in OIE will allow us direct access to this unique network of experts as well as the possibility of organising meetings back to back with related meetings they organise. When OIE offered the possibility of having an office in their Head Quarters it seemed logical that the person based there should be employed by them, thus necessitating that they join as a full partner with an associated budget. OIE's involvement may also be important in relation to the long-term sustainability of the initiative.

**CABI** is essential to the project as it produces the most comprehensive database on animal health (*Grindley DJC, Brennan ML, Dean RS. Searching the veterinary literature: a comparison of the coverage of veterinary journals by nine bibliographic databases. J Vet Med Educ. 2012;39:404–412. doi: 10.3138/jvme.1111.109R*). This resource will be an important part of literature search components of Work Package 3. In producing the database CABI has developed the information skills to search for literature, which is an essential part of gap analysis and horizon scanning – both of which are core activities of the Secretariat. CABI also has experience in hosting the secretariats of international collaborations (as described above) and has the knowledge and experience required to provide the efficient support required.

### ***3.4 Resources to be committed***

The total cost of the project is €3,468,187.50 for its 5 year duration and involves a total of 220.2 person months of which 176.2 will be charged to SIRCAH. 50 person months of the Coordinator's total of 116.7 person months will be contributed by Defra in kind.

**Table 3.4a: Staff effort by task and WP**

Task	Description	Total Effort (Person Months)									
		1/Defra				2/CABI		3/IFAH	4/BBSRC	5/OIE	
		AM	SS	ATS	LD	RT	AA	RW	JC	SS	SM
1.1.1	Identify new countries and appropriate funding bodies to be involved in IRC	0.5									
1.1.2	Contact funding bodies in new countries and invite to join IRC	0.5									
1.1.3	Identify new funding bodies in existing IRC member countries and facilitate in-country collaboration	0.5									
1.2	Integrate WG activities with those of DISCONTTOOLS, OIE, CABI and other expert groups	1				1		1.5		5	
1.3.1	Engage with international stakeholders	0.5									
1.3.2	Align SI regional networks with those of OIE and others that may exist	0.5			0.5						0.5
	<b>WP1 INDIVIDUAL TOTALS</b>	3.5	0	0	0.5	1	0	0	1.5	0	5.5
	<b>WP1 PARTNER TOTALS (WP LEADER IN BOLD)</b>	<b>4</b>				<b>1</b>		<b>1.5</b>	<b>0</b>	<b>5.5</b>	
2.1.1	Maintain list of IRC members and contact details and store in member-restricted area online				0.5		0.5				
2.1.2	Facilitate communication between IRC members and disseminate information needed for decision making				5						
2.2.1	Organise/participate in annual EXC meetings (agenda and other preparatory docs, venue, catering etc)	1			2			1	1	1	
2.2.2	Draft and circulate minutes of EXC meetings				1.00						
2.2.3	Organise twice-yearly SC meetings (agenda and other preparatory docs, venue, catering etc)				2.5	2.5					
2.2.4	Draft and circulate minutes of SC meetings				2.5						
2.2.5	Organise gap analysis and roadmap workshops for WGs	3			3	3					3
2.2.6	Organise WG meetings to update and maintain gap analysis and roadmap reports	6	3		3	6					6
2.2.7	Draft and circulate notes of WG meetings	7.5			7.5						7.5
	<b>WP2 INDIVIDUAL TOTALS</b>	17.5	3	0	27	0	12	0	1	1	17.5
	<b>WP2 PARTNER TOTALS (WP LEADER IN BOLD)</b>	<b>47.5</b>				<b>12</b>		<b>1</b>	<b>1</b>	<b>17.5</b>	
3.1.1	Collect existing guidelines and policies from IRC members relating to IP, engagement with industry and data				0.5						
3.1.2	Develop guidelines and policies for IRC projects regarding open data, IP and early engagement with industry	0.5			0.5						
3.1.3	Develop a reporting template for IRC projects	0.5			0.5						
3.2	Liaise with and maintain contact with research consortia from related FP7 and H2020 AH projects	2.5									2.5
3.3.1	Identify the major players working on the priority diseases and establish working groups	1									1
3.3.2	Map existing initiatives in WG fields with input from IRC members and stakeholders								1.5		
3.4.1	Identify research information gaps in WG fields from DISCONTTOOLS and OIE reports							1	1	1	
3.4.2	Perform or commission literature reviews for research gap analysis in WG fields where needed					1	4				
3.4.3	Produce gap analysis and roadmap reports prioritising those topics likely to produce IRC deliverables	5			11			7			20
3.4.4	Publish gap analysis and roadmap reports in CAB Reviews journal and/or on STAR-IDAZ website										
3.5.1	Identification of industry interests in topics and funding sources	3	1.5		1.5						
3.5.2	Map current and planned research, compare to gap analysis reports and recommend scope for realignment	3	1.5	6.7	1.5						3
3.6	Monitor emerging issues and report to the SC and EXC				5						2
	<b>WP3 INDIVIDUAL TOTALS</b>	15.5	3	6.7	21	1	0	4	8	2.5	29.5
	<b>WP3 PARTNER TOTALS (WP LEADER IN BOLD)</b>	<b>45.7</b>				<b>5</b>		<b>8</b>	<b>2.5</b>	<b>29.5</b>	
4.1.1	Develop logo and graphically designed template for IRC documents, newsletter, presentations etc										
4.1.2	Produce IRC information leaflet, poster and Powerpoint presentation (update as needed)				2.5	0.25					
4.2	Update the STAR-IDAZ Communications Strategy to meet the requirements of the IRC	0.5			0.5						
4.3.1	Develop product description for modification of SI website for IRC					0.25					
4.3.2	Modification of SI website for IRC to facilitate information sharing and collaboration										
4.3.3	Hosting, maintenance and content management of SI website and databases						3				
4.3.4	Support STAR-IDAZ databases to map publications, existing research initiatives, organisations and facilities										
4.3.5	Modify CWG database to capture information on current and planned research										
4.4.1	Produce and disseminate annual state-of-the-art report on IRC AH research				2						2.5
4.4.2	Produce newsletters with IRC and WG developments, IRC research projects, AH events and emerging issues				2.5	2.5					2.5
4.4.3	Organise IRC sessions or talks at major international AH events	1			1						1
	<b>WP4 INDIVIDUAL TOTALS</b>	1.5	0	0	8.5	0.5	2.5	3	0	0	6
	<b>WP4 PARTNER TOTALS (WP LEADER IN BOLD)</b>	<b>10</b>				<b>6</b>		<b>0</b>	<b>0</b>	<b>6</b>	
5.1.1	Technical and financial reports to the European Commission	1.5				0.5			0.5	0.5	
5.1.2	Distribution of funds to Partners										
5.1.3	Six-monthly overview reports to EXC				0.5						
5.2.1	Project management/work plan monitoring and risk management	4			1						
5.2.2	Scientific Secretariat weekly team meetings	1			1	1	1		1	1	1
5.3	Develop a business plan for a sustainable IRC beyond the life of the project				0.5						0.5
	<b>WP5 INDIVIDUAL TOTALS</b>	6.5	0	0	3	1.5	1	0	1.5	1.5	1.5
	<b>OVERALL INDIVIDUAL TOTALS</b>	44.5	6	6.7	60	4	16	7	12	5	60
	<b>WP5 PARTNER TOTALS (WP LEADER IN BOLD)</b>	<b>9.5</b>				<b>2.5</b>		<b>1.5</b>	<b>1.5</b>	<b>1.5</b>	
	<b>OVERALL PARTNER TOTALS</b>	<b>116.7</b>				<b>26.5</b>		<b>12</b>	<b>5</b>	<b>60</b>	
	<b>GRAND TOTAL</b>	<b>220.2</b>									

### ***Personnel costs***

53% of the budget will be allocated to human resources with the time spent on each task by both individuals and their organisations detailed in Table 3.4a.

Partner 1 (Defra) employs the Coordinator (AM) who will have ultimate responsibility as the grant holder for all contractual obligations to the European Commission and will contribute mainly to the network expansion activities of WP1 and gap analyses/road maps in WP3. Defra also employs Luke Dalton, retained from STAR-IDAZ, through a secondment from Beta Technology Ltd but working in house full time with the Coordinator. He will be responsible for the overall implementation of the project including organisation and reporting of meetings, communication between the various groups, dissemination to the wider animal health community and reporting to the IRC Executive Committee. He will help the Coordinator to ensure adherence to the work plan, risk monitoring and reporting to the European Commission. He will also contribute to the production of gap analysis and roadmap reports and recommendations for IRC partner programme alignment. A budget has been assigned for additional part-time veterinary expertise within Defra specifically for the task of research programme alignment in the final three years of the Project (T3.5.2).

Partner 2 (CABI) will be responsible for preparing literature reviews/bibliographies to feed into the WGs and will also be responsible for keeping the website updated with news, events and the various reports that will be produced. A considerable amount of time will be spent organising meetings for the various groups and travel for the Scientific Committee for which they hold the budget.

Partner 3 (IFAH) employs the DISCONTTOOLS Project Manager through a secondment from Avia-GIS NV. His main tasks will be T1.2 and T3.4.3, integrating the DISCONTTOOLS experts groups with the IRC WGs and producing gap analysis and roadmap reports from these groups.

Partner 4 (BBSRC) will contribute (at no cost to SIRCAH) mainly to tasks T3.3.2 and T3.4.1 involving the mapping of existing initiatives in WG fields and identifying research gaps in WG fields from DISCONTTOOLS and OIE reports.

Partner 5 (OIE) will employ SM to work full time on the project, mainly integrating the WG activities with those of DISCONTTOOLS, CABI, OIE and other expert groups (T1.2), preparing the gap analysis and roadmap reports from the WGs (T3.4.3) and producing the annual state-of-the-art report on IRC AH research (T4.4.1).

### ***Other direct costs***

Academics and members of the research community are being or will be invited to participate in the Scientific Committee (SC) and Working Groups (WG) but will not be claiming for their time. SC members will meet at least twice a year and SIRCAH will cover their travel costs and also the meeting costs (venue hire and catering). WG members will attend workshops in the first instance then

meetings (as described) in order to perform gap analyses and develop research roadmaps. The Executive Committee (ExC) of the IRC (funders and programme owners) will meet once a year to hear the SC's recommendations and discuss how to align their research programmes. SIRCAH will cover the WG and ExC meeting costs but not the participants' travel or time. CABI holds the budget for WG and SC workshop and meeting venue hire and catering and for Scientific Committee members' travel to SC meetings and Defra holds the budget for ExC venue hire and catering and for one SC member to attend each of the WG workshops and meetings.

**Tables 3.4 b - 'Other direct cost' items**

<b>Participant No. 1 Defra</b>	<b>Cost (€)</b>	<b>Justification</b>
<b>Travel</b>	7.5k	Targeted interaction with funding organisations/programme owners in select countries where engagement isn't at the desired level
	22.5k	AM, LD and Scientific Committee Chairperson travelling to five EC meetings
	45k	AM and LD attending ten SC meetings
	90k	One SIRCAH and one SC member attending each of 30 WG workshops
	180k	One SIRCAH and one SC member attending each of 60 WG meetings
	8k	One SIRCAH member attending meetings of related FP7 and H2020 initiatives
	20k	Presenting the STAR-IDAZ IRC activities at 10 international animal health conferences
<b>Equipment</b>		
<b>Other goods and services</b>	25k	Venue hire, catering etc for five meetings of the ExC
	3k	One audit certificate
<b>Total</b>	401k	

<b>Participant No 2 CABI</b>	<b>Cost (€)</b>	<b>Justification</b>
<b>Travel</b>	7.5k	RT attending five ExC meetings
	225k	15 SC members attending 10 SC meetings
<b>Equipment</b>		
<b>Other goods and services</b>	30k	Venue hire and catering for 10 SC meetings
	90k	Venue hire and catering for 30 WG workshops
	180k	Venue hire and catering for 60 WG meetings
	840	Development of logo and branded templates
	1,898	Production of IRC information leaflets and posters
	2,373	Development of product description for websites and databases
3k	One audit certificate	
<b>Total</b>	540,611	

Participant No 3 IFAH Europe	Cost (€)	Justification
Travel	7.5k	JC attending five ExC meetings
<b>Total</b>	7.5k	

Participant No 4 BBSRC	Cost (€)	Justification
Travel	7.5k	SS attending five ExC meetings
<b>Total</b>	7.5k	

Participant No 5 OIE	Cost (€)	Justification
Travel	7.5k	SM attending five ExC meetings
	7.5k	SM attending meetings of related FP7 and H2020 initiatives
<b>Other goods and services</b>	3k	One audit certificate
<b>Total</b>	18k	

## Section 4: Members of the consortium

### 4.1. Participants (applicants)

#### Partner 1: Defra

**The Department for the Environment, Food and Rural Affairs (Defra)** is the government department with responsibility for policies relating to Animal Health and Welfare in Great Britain. The STAR-IDAZ IRC, which Defra has joined, is specifically related to one of Defra's objectives which makes reference to the need of having the nation better protected against plant and animal diseases and other hazards through investment in animal and plant health science. Defra has an animal health and welfare research programme, to provide evidence for policy development and implementation, with an annual budget in the region of 25 million Euros, funding research on Bovine TB, Exotic Diseases, Zoonoses, TSEs, Endemic Diseases, Animal Welfare, Veterinary Medicines and diseases of fish. This research programme is managed centrally within Defra's Animal and Plant Health Directorate and a significant part of the research programme is conducted in Defra's Animal and Plant Health Agency. There are close working relationships with the other UK research funders including the Research Councils of the Department for Business, Innovation and Skills (especially the Biotechnology and Biological Sciences Research Council), with the animal health research budget holders in the devolved administrations in Scotland and Northern Ireland, with the Food Standards Agency and with the Wellcome Trust, a major charity involved in Biomedical research. At a European and global level Defra led the EMIDA ERA-net on emerging and major infectious diseases of animals (Project

Reference: FP7-KBBE - 219235) and the STAR-IDAZ global network on infectious diseases of animals and zoonoses (Project Reference: FP7-KBBE - 265919) and was active in the Animal Health and Welfare ERA-Net (ANIHWA - Project Reference: FP7-KBBE - 291815), leading one of the work packages. STAR-IDAZ involved 25 partners from 18 countries and through regional networks established for the Americas, Asia and Australasia and Africa and the Middle East complementing the existing network in Europe outreach extended to approximately 50 countries.

### **Main tasks in the project and previous experience relating to these**

Defra will coordinate the project, play a major role in all Work Packages and lead Work Packages 1, 2, 3 and 5. With the above mentioned wide-ranging research programme on animal diseases, links to other UK research funders and experience in leading European and global initiatives Defra is in a position to make a significant contribution to the successful coordination of animal health research and the delivery of the IRC target deliverables through leading the IRC support project (SIRCAH).

**Dr Alex Morrow** BA, MVB, PhD, MRCVS (**Coordinator**) (male) is a veterinary surgeon with twenty years' experience in research, followed by four years in a research support capacity at Edinburgh University and twelve years in his current position in research programme management with Defra. He has also undertaken formal (certificated) training in project (Prince 2) and programme (Managing Successful Programmes) management. In Defra, where he is currently International Evidence Lead, he was previously responsible for an annual research budget of approximately 10 million Euros, including direct responsibility for the research programme on endemic diseases, and established research advisory groups involving the various industry sectors. He represents Defra on the Biotechnology and Biological Sciences Research Council, Committee A (previously the Animal Sciences Committee), grant awarding meetings, and co-ordinates the UK Animal Diseases Research Funders Forum. He proposed the establishment of and coordinated, for ten years, the Collaborative Working Group on Animal Health and Welfare research under the EU Standing Committee on Agriculture Research and represented the CWG on the Executive Board of the European Technology Platform on Global Animal Health. He led the associated EMIDA ERA-Net and a work package in the ANIHWA ERA-Net. These ERA-Nets were referred to as "**very notable ERA-NET success stories** in 'agriculture'" in a review of Framework Programme 7 activities on FOOD, AGRICULTURE AND FISHERIES, AND BIOTECHNOLOGY. He also led the STAR-IDAZ global network, the first of its kind to be funded by the EC. With his experience in research, including research programme management with responsibility for significant research funding, leading the EMIDA ERA-NET and associated SCAR CWG on animal health and welfare and the STAR-IDAZ global network on infectious diseases of animals and zoonoses and working in an environment where he is supported by administrators he is well suited to leading this Support Action project.

**Luke Dalton** BCA, BSc, MSc, (male) has worked for Defra via secondment since 2006, first managing the Veterinary Medicines and Antimicrobial Resistance research programmes then as Project Manager for the FP7-funded EMIDA ERA-Net from 2008 and STAR-IDAZ from 2011. As a PRINCE2 Practitioner with a degree in management, courses in financial and technical reporting for FP7, and having seen two international animal health research coordination projects through from proposals to

completion, he has the training and experience required to successfully manage the SIRCAH Coordination and Support Action. Luke ran the secretariat for the SCAR CWG from 2006-2015 and designed, commissioned and managed three websites, an online collaborative platform and database for this network and the two FP7 projects. He is an active member of the CWG Strategy and Foresight Unit and took a leading role in the foresight exercises performed under ANIHWA and STAR-IDAZ to identify the research needed to prepare for emerging infectious animal disease threats in the next 20 years. He has recently completed a Masters degree in Risk Analysis for which his dissertation was titled "A systems approach to understanding the drivers for the emergence of infectious diseases of animals".

**Dr Scott Sellers** BSc, PhD (male) has 22 years' experience working in core Defra and UK government research agencies, including the Veterinary Laboratories Agency (now the Animal and Plant Health Agency) and the Institute for Animal Health (now the Pirbright Institute). He has undertaken research activities, including work on immune responses to bovine TB and genetic resistance to infectious disease in poultry. In his current role, as lead for Animal Health & Welfare (AH&W) R&D strategy at Defra, he has oversight of the Defra AH&W R&D portfolio (approx. €25m/pa) and has been an active member of several international networks to co-ordinate AH&W research, including the SCAR-CWG, EMIDA & ANIHWA ERA-nets and STAR-IDAZ.

## **Partner 2: CABI**

**CAB International** (CABI – [www.cabi.org](http://www.cabi.org)) is an intergovernmental, not-for-profit organization, owned and run by its 48 member countries, with 500 staff based in over 12 locations around the world, all of them experts in their field. Staff members range from microbiologists and ecologists to content editors, book commissioners and web specialists. CABI has an annual turnover of about 25 million GBP. It's mission is to improve people's lives worldwide by providing information and applying scientific expertise to solve problems in agriculture and the environment. CABI's research and development work focuses on four overarching themes: Knowledge for Development, Knowledge Management, Trade and Commodities, Invasive Species Management. CABI uses Prince 2 project management methodology, and has developed the project management and financial reporting systems required by institutional donors. It is compliant with requirements for Joint Management of strategic EC programmes, following successful 4-pillar audit in 2011. This review covers accounting standards, audit standards, internal control framework and procurement standards.

Throughout its 100 year history, CABI has managed knowledge through systematically creating, organising, storing and communicating information in agriculture, veterinary medicine, and animal science, as well as food, health and the environment. By acting as a central resource and facilitator, CABI has enabled researchers and practitioners around the world to access the world's research knowledge. CABI has much experience in building international consortia of public and private organizations to fund knowledge tools, such as the Animal Health and Production Compendium, and the Invasive Species Compendium (an open access resource). For these consortia of organizations from the private and public sectors came together to build knowledge tools that benefit all those researching, teaching and practicing in that subject area.

CABI's carries out development projects with public, private and international organizations such as European Commission, DfID, B&M Gates Foundation, and development aid organizations from many countries including Switzerland, Australia, Canada, Netherlands, and Denmark. CABI also collaborates with FAO, WHO and OIE, and CABI has cooperation agreement with the OIE.

CABI's status and cost-effective structure has enabled it to be chosen to host and manage international secretariats such as GODAN, and previously, BioNet International.

### **Knowledge management (including Publishing)**

CABI's world-class reputation as a database and publishing house is widely cited as an important area that distinguishes CABI from other organizations. CABI is seen as a source of credible, reliable and quality-assured information, and, CABI has the skills needed to handle information produced by other organisations, as well as that generated by itself. So, **through resources like CABI's global databases and Compendia, CABI is able to collate, synthesize and disseminate research knowledge and identify gaps in the global research initiative.** CABI's ability to maintain sustainable knowledge databases is also well established. CABI handles information and knowledge on public health, food and nutrition, veterinary medicine and environmental information, as well as agriculture.

### ***The CAB Abstracts Database***

The most comprehensive database of its kind, CAB Abstracts gives researchers instant access to over 8 million records from 1973 onwards, with over 360,000 abstracts added each year. Its coverage of the applied life sciences includes agriculture, environment, veterinary sciences, applied economics, food science and nutrition. Our excellent international coverage sets CAB Abstracts apart from other databases. We process all relevant publications, including less well-known and non-English journals and those published by independent and learned publishers.

With publications from over 116 countries in 50 languages, including English abstracts for most articles, researchers get the fullest global picture for any subject.

### ***Compendia***

Compendia first launched 1994 have been making a difference to people's work across the world, by bringing together a vast selection of information into one place on subjects such as animal health and production, crop protection, aquaculture, and forestry. The Compendia combine indexed information of all scientific research, detailed datasheets, images and much more. They are each funded by an international consortium of public and private bodies, and with partners such as the OIE, FAO, ILRI and others.

CABI Hosts the secretariat of Global Open Data for Agriculture and Nutrition (GODAN) initiative.

### **Main tasks in the project and previous experience relating to these**

CABI will be involved in all Work Packages, playing a major role in WP 2, 3 and 4 and leading Work Package 4 which is concerned with communication and dissemination. CABI's knowledge databases are important for WP 3 and their knowledge management systems and experience relating to communications are important for WP4. They will be responsible for preparing literature

reviews/bibliographies to feed into the WGs and will also be responsible for keeping the website updated with news, events and the various reports that will be produced. A considerable amount of time will be spent booking meetings for the various groups and travel for the Scientific.

**Robert Taylor BSc, Editorial Director, CABI (male)**

In his career at CABI, Robert Taylor has acquired extensive skills and experience in the production and appropriate delivery of agricultural information. He is currently Editorial Director in CABI's Knowledge Business, which is responsible for the databases, books, and Compendia on agriculture, veterinary medicine, human health and the environment. He has a degree in zoology, and worked mainly in the animal health section of CABI, developing its veterinary business. He has a strong commitment to agricultural information for development and has studied development management at the Open University. Overseas experience includes consultancy placement in Lithuania and India, and delivering training in information skills in India, Tanzania and South Africa and speaking at conferences in France, South Africa, Tunisia and Trinidad.

**Partner 3: IFAH-Europe**

**International Federation for Animal Health - Europe (IFAH-Europe)** is the representative body of manufacturers of veterinary medicines, vaccines and other animal health products in Europe. It represents 13 corporate Members and 20 National Animal Health Trade Associations in Europe. These companies comprise both local medium-size enterprises (SMEs) and international companies. IFAH-Europe's Membership covers 90% of the European market for veterinary medicinal products, both originators and generics.

Since 1997, the European animal health industry has been working towards improving the quality of life for animals and people by successfully addressing the strategic priorities that contribute towards safeguarding the health and quality of life of animals, people and the environment.

IFAH-Europe is committed to proactively engaging with the EU institutions, stakeholders including veterinarians, farmers, pet owners, as well as the media and other partners to ensure a working relationship based on mutual trust and respect by:

- increasing awareness of the value animal health brings to society in terms of companion animals, sustainable agriculture, safe food and diseases which can impact public health;
- promoting a predictable, harmonised, science-based and innovative market place for quality animal medicines.

IFAH-Europe is a source of reliable information for all key stakeholders. In order to achieve this IFAH-Europe has broad experience in undertaking a number of activities which include:

- Organising international symposia
- Organising workshops on selected topics related to animal medicines
- Publishing information and outreach material

- Writing position papers (on technical and political issues)
- Building networks
- Contributing to the definition of EU research programmes

In December 2004 when the Vision document for the ETPGAH (European Technology Platform) was launched, IFAH-Europe took the lead. Since then IFAH-Europe has overseen the successful development of the ETPGAH and the publication of the final Vision document, the Strategic Research Agenda and the Action Plan of the platform (Project Reference: FP6-POLICIES - 22515). IFAH-Europe has led the platform through the governance structure as chair of the executive board and the steering council. The successor of the ETPGAH, DISCONTTOOLS (Project Reference: FP7-KBBE - 219235), has been and is still managed by IFAH-Europe.

Consequently IFAH-Europe is well experienced in participating as coordinator of the DISCONTTOOLS Support Action project. IFAH-Europe has also demonstrated the ability to run not only the governance of the platform but also to involve stakeholders in the development of the various components of the platform and that of DISCONTTOOLS.

#### **Main tasks in the project and previous experience relating to these**

IFAH-Europe developed and are currently updating the DISCONTTOOLS disease databases identifying gaps in knowledge and disease control products. They will therefore contribute to WP1 helping to integrate STAR-IDAZ IRC activities with those of DISCONTTOOLS, CABI and OIE and the development of disease research roadmaps in WP3. They will also contribute to WP1 and 5.

#### **Roxane Feller - IFAH-Europe Secretary General (female)**

Before joining IFAH-Europe in February 2015, she was Director of the Economic Department in FoodDrinkEurope, an umbrella organisation which, as the name suggests, represents the food and drink manufacturing industry in Europe. The department coordinates the work related to the Commission's "High Level Forum for a better functioning Food Supply Chain" and inputs into EU policies that impact the competitiveness of the industry, such as those related to the supply of agricultural raw materials, trade and relations in the food chain.

Prior to this position, she worked for Copa-Cogeca, the organisation representing European farmers and agri-cooperatives, for 14 years, where she was senior policy officer in charge of all food and feed safety-related issues including animal health and welfare. She was representing Copa-Cogeca at the ETPGAH and DISCONTTOOLS since their creation.

She started her career in the area of EU political advocacy in Brussels in 1992 for the European Sugar Industry, where she was in charge of social affairs.

Roxane Feller studied in the United States and in Switzerland. She is a lawyer by training and speaks French and English, with an excellent knowledge of German, Spanish and Dutch.

**Dr Johannes Charlier** DVM, PhD, Dip. EVPC, (male), graduated as a veterinarian from the Faculty of Veterinary Medicine (Ghent University) in 2002. From 2002 to 2015, he worked as a researcher at the Laboratory of Parasitology (Faculty of Veterinary Medicine, Ghent University) and specialized in the diagnosis, epidemiology and economics of helminth infections in cattle. He acquired international expertise through participation in several EU funded projects. His research led to the development of

2 ELISA kits that assess the exposure of dairy cattle to gastrointestinal nematodes and liver fluke and estimate the impact of these infections on animal productivity. In 2015, he joined Avia-GIS with the aim to translate the gained knowledge in health information systems for the veterinary community. His research has been published in 59 peer-reviewed articles and has been recognized by several scientific awards, including the Peter Nansen Young Scientist Award of the World Association for the Advancement of Veterinary Parasitology (WAAVP).

He is editor of the journal BMC Veterinary Research, section Parasitology and project manager of DISCONTTOOLS, a European project to prioritize animal health research towards the development of novel diagnostics, vaccines and pharmaceuticals.

#### **Partner 4: BBSRC**

**The Biotechnology and Biological Science Research Council (BBSRC)** is the UK's leading funder of academic research and training in the non-clinical life sciences in universities, institutes and centres. It is one of the seven UK Research Councils that work together as Research Councils UK. BBSRC is a non-departmental public body sponsored through the Department for Business, Innovation and Skills (BIS).

BBSRC's Vision is to lead world-class 21<sup>st</sup> century bioscience, promoting innovation and realising benefits for society within and beyond the UK. It funds internationally competitive research to improve fundamental understanding of biological systems. BBSRC's funded research spans the microbial, plant and animal kingdoms, from molecules to cells to whole organisms and populations.

Animal Health and Welfare are areas of strategic priorities for BBSRC. Animal Health research is aimed at combating both endemic and exotic infectious diseases, including food-borne and vector-borne diseases. BBSRC is also committed to ensuring high standards of animal welfare and supports research that will inform strategies for improving the conditions of animals. BBSRC has recently published its five year Veterinary Vaccinology strategy which focuses on addressing current unmet needs; improving current vaccines and preparing for future threats through vaccinology research and deployment that will enable prevention and eradication of diseases and maintenance of disease free status to sustainably increase productivity and address welfare issues;

BBSRC, on behalf of the UK Research Councils of HM Government (Department for Business, Innovation and Skills, Government Office for Science, Department for Environment, Food and Rural Affairs, Food Standards Agency, Department for International Development, Public Health England) and Department of Agriculture and Rural Development – Northern Ireland, Scottish Government and Welsh Government, published research strategy 'A Vision and high-level Strategy for UK Animal and Plant Health Research To 2020 and Beyond ' to realise the following vision:

- By 2020, the UK will have created and harnessed new research knowledge and technology that will transform our ability to:
  - systematically predict, detect and understand key current UK animal and plant health problems and emerging threats in real time

- direct sophisticated and rapid responses to effectively and efficiently prevent and mitigate impacts on our agri-environment and wider ecosystems and landscapes

BBSRC has a significant research portfolio of research in Animal Health and Welfare and the recent strategic investment includes £7M investment in developing new approaches to tackling bovine tuberculosis and £20.5M for research and training to reduce the impact of zoonoses on poor people in developing countries and their livestock. BBSRC has recently funded two Networks: Veterinary Vaccinology and Animal Welfare. The vision of these Networks is to foster a multi-disciplinary community. BBSRC provides strategic funding to eight Institutes which provide critical national capability and expertise in strategically important areas. Two of these Institutes, the Pirbright Institute and the Roslin Institute, provide specialist facilities for long term basic, strategic and applied research in Animal Health and Welfare:

- The Pirbright Institute is a world-leading centre of excellence for research and surveillance of virus diseases of farm animals and viruses that spread from animals to humans. Roslin Institute, now incorporated with the Royal (Dick) School of Veterinary Studies, is focused on the health and welfare of animals, and applications of basic animal sciences in human and veterinary medicine, the livestock industry and food security.

BBSRC maintains strong connections with the other major funders of animal health research in the UK, particularly with the Defra, Food Standards Agency, the devolved administrations in Scotland and Northern Ireland, and the Wellcome Trust.

### **Main tasks in the project and previous experience relating to these**

BBSRC will be mainly involved in WP3 mapping existing initiatives in the field of the various working groups and contributing to gap analysis, having led these areas in STAR-IDAZ and having established a veterinary vaccinology network. They also provide a link with the G20 Ministry of Agriculture Chief Scientific Advisors initiative on coordination of research activities on priority animal health topics, with a particular focus on vaccinology.

**Dr Sadhana Sharma BSc, PhD** (female) has over 10 years of academic and industrial research experience in Canada and UK focussing on the structure-function relationships of both microbial and mammalian proteins including G-protein coupled receptors. Dr Sharma also has management experience in industry (Group Leader of Gene Structure and Function group and manager of core automated sequencing facility). She has been with BBSRC for over 10 years, responsible for developing, implementing and communicating BBSRC Strategies and Policies related to animal health and welfare including veterinary vaccinology strategy, tools, resources and technologies including Nanotechnologies and Bioscience Engineering. In her current role, Dr Sharma is responsible for BBSRC's Animal and Plant Health. She represents BBSRC at the SCAR CWG, ANIHWA (Project Reference: FP7-KBBE - 291815) and the UK Animal Disease Research Funders Forum and has led a workpackage for STAR IDAZ (Project Reference: FP7-KBBE - 265919) and has led in developing BBSRC – National Institute of Food and Agriculture, US Department of Agriculture, partnership in animal health and welfare.

**Dr Sarah Plowman, PhD** (female) received her undergraduate degree from the University of York in 1997, her Masters degree from the University of Nottingham in 1998 and her PhD from the University of Edinburgh in 2003. She spent the next nine years working in academia first as a postdoctoral researcher in Australia and then as an Assistant Professor in USA.

Sarah has worked at BBSRC since 2012 first as a Peer Review Officer and since 2013 as a Strategy and Policy Officer in the Bioscience for Health Strategy Team. Sarah has led on the delivery of multi-funder projects including the 'Integrated Programme of Research on Bovine Tuberculosis' which was a joint activity between BBSRC, Defra and NC3Rs. Sarah is currently jointly providing the secretariat for the UK Vaccine Research and Development Network with Department of Health and Medical Research Council. She is also current scoping potential multi-funder activities around vector borne disease.

## **Partner 5: OIE**

**The World Organisation for Animal Health (OIE)** is the intergovernmental organisation responsible for improving animal health and welfare throughout the world. The OIE has 180 Member Countries as of 2015 and maintains permanent relationships with over 70 other international and regional organisations<sup>1</sup> as well as regional and sub-regional offices in Africa; the Americas; Asia, the Far East and Oceania; Europe; and the Middle East<sup>2</sup>. The OIE also has the support of a global network of 252 Reference Laboratories covering 118 animal diseases or topics in 39 countries, and 49 Collaborating Centres covering 46 topics in 26 countries; OIE Reference Centres provide the OIE with scientific and technical assistance and expert advice on a broad range of subject matters, methods and procedures that facilitate the harmonisation of OIE intergovernmental standards, guidelines and recommendations at global level.

In the context of the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (the SPS Agreement), the OIE is the international reference for the development, elaboration and promotion of intergovernmental science-based standards for animal health and zoonoses. The SPS Agreement encourages countries to base their sanitary measures on OIE standards, guidelines, or recommendations in order to promote, to the greatest extent possible, the global harmonisation of sanitary measures in animal health and trade. In addition, the SPS Agreement gives the OIE a significant role in collaborating with the WTO in promoting the development and use of international animal health standards between Member Countries and providing technical expertise and advice to the WTO or individual Member Countries. OIE standards, guidelines, and recommendations are developed on the best scientific basis and to ensure widest possible support and implementation; they are prepared by elected OIE Specialist Commissions, Working Groups and ad hoc Groups, bringing together internationally renowned scientists and experts. OIE intergovernmental standards are adopted by the World Assembly of national Delegates to the OIE.

Ensuring transparency in and enhancing knowledge of the worldwide animal health situation is another core mandate of the OIE. Among the formal obligations of OIE Member Countries is the

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<sup>1</sup> Complete list and corresponding agreements available at: <http://www.oie.int/en/about-us/key-texts/cooperation-agreements/>

<sup>2</sup> More information available at: <http://www.oie.int/en/about-us/wo/regional-representations/>

submission of information on the relevant animal disease situation – including on zoonoses present in their territory –in the most timely and transparent way. A single OIE list of notifiable terrestrial and aquatic animal diseases has been established for this purpose. To accomplish its mandate in this respect, the OIE created and manages the World Animal Health Information System (WAHIS), providing information on 118 listed diseases. WAHIS provides public access to all data regarding OIE listed diseases; this extensive database is a cornerstone of the OIE’s efforts to improve the transparency, efficiency and speed with which animal health information is disseminated throughout the world.

The OIE has a longstanding relationship and collaboration with the European Union; through an exchange of letters and as adopted by the Commission of the European Communities and the OIE on 23 February 2004, both parties “can agree on any joint measures, in particular aimed at developing international cooperation in order to protect animal health, ensure the sanitary safety of foodstuffs of animal origin, combat zoonoses and in relation to animal welfare, as well as the preparation and implementation by developing countries of intergovernmental standards and guidelines related to above mentioned fields”.<sup>3</sup> In its capacity as reference organisation, recognised by the WTO for improving animal health worldwide, the European Union recognises that the OIE has a de facto monopoly in the field of animal health and welfare. Moreover, the OIE has been positively assessed and has been qualified as a Pillar Assessed Organisation by the EU.

Among others, the OIE’s comparative advantage includes:

- Direct access to Member Countries’ National Delegates to the OIE (Chief Veterinary Officers) in 180 countries globally
- Technical and scientific objectivity and expertise closely linked to its role in setting global animal health standards built on the active participation of Member Countries, represented by their Delegates and technical staff, with input of a network of more than 300 OIE Reference Centres
- Strong relationships with regional institutions, technical agencies and private sector representative organisations
- Highly responsive, global technical assistance in all fields encompassing the veterinary domain<sup>4</sup>
- Capacity development approach of working with partner government systems in recognition of State’s primary responsibility in managing their respective veterinary services in accordance to OIE standards

Additionally, the OIE produces a wide range of publications which constitute a valuable source of documentation for the international scientific community and facilitate progress in veterinary medicine worldwide. They cover the full spectrum of animal health issues throughout the world and include periodicals, OIE international standards, global conference proceedings, and publications addressing key topical issues. OIE publications are divided into three categories:

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<sup>3</sup> Available at: <http://www.oie.int/about-us/key-texts/cooperation-agreements/exchange-of-letters-between-the-commission-of-the-european-communities-ec/>

<sup>4</sup> The OIE defines the Veterinary domain as “all the activities that are directly or indirectly related to animal, their products or by-products, which help to maintain and improve the health and welfare of animals, including by mean of the protection of animal health and welfare, and food safety”

- Periodicals: *Scientific and Technical Review; Bulletin; Disease Information* (available on the WAHIS Interface or in *World Animal Health*).
- International standards: *Terrestrial Animal Health Code; Aquatic Animal Health Code; Manual of Diagnostic Tests and Vaccines for Terrestrial Animals; Manual of Diagnostic Tests for Aquatic Animals*.
- Non-periodicals: Technical series; Thematic publications and joint publications; International scientific conference proceedings and compendiums; Compendium of technical items.

All titles published by or co-published with the OIE are in English, French and/or in Spanish.

### **Main tasks in the project and previous experience relating to these**

OIE will be involved in all work-packages, contributing in particular to the development of gap analysis and research roadmaps in WP3 where its extensive network of disease specialists around the world will be invaluable.

**Dr Elisabeth Erlacher-Vindel** (female) is Veterinarian with over 30 years of international experience in the veterinary field, including research, field practice and senior positions in various professional and international organisations. Her previous positions include: Head of the Food Safety Unit and later Deputy Director and Head of Scientific Research at the *Centre National Interprofessionnel de l'Economie Laitière* (France). Since 2006, she has been Deputy Head of the Scientific and Technical Department at the OIE Headquarters in Paris (France). She is responsible for managing and organising the work of the OIE Scientific Animal Diseases Commission, the Biological Standards Commission, as well as numerous other Working groups and ad hoc Groups focusing on specific animal disease related topics. She also supervises the official process for recognition of the sanitary status of Member Countries, and of diagnostic tests; including oversight of the operational activities of the OIE Reference Laboratories and Collaborating Centres. This includes developing, oversight and management of numerous scientific projects. She is also tasked with the responsibility of providing answers to OIE Member Countries on scientific questions related to animal health. In this position, she has consolidated experience in organising scientific OIE conferences, seminars and meetings. She has represented the OIE at numerous international conferences, scientific symposiums and other relevant meetings and fora. Her experience in the research and management of international scientific issues, Dr Erlacher-Vindel is a valuable partner to this project.

**Dr Alain Dehove** (male) is a Veterinarian with a specialised Master's degree in economics and food industry management. His previous positions include: Head of Unit for the 'internal market' (of the European Union) and Head of Unit for Sanitary and Phytosanitary Multilateral Agreements at the French Directorate General for Food of the French Ministry of Agriculture and Fisheries; National expert at the Unit for monitoring and disseminating scientific opinion of the Directorate General for Health and Consumer Protection (DG SANCO, now DG SANTE) at the European Commission in Brussels; seconded national expert to the European Commission in the field of international food, veterinary and phytosanitary matters; Administrator of the European Commission team responsible

for Community coordination of *Codex Alimentarius* meetings. In July 2006, he joined the OIE as Coordinator of the World Animal Health and Welfare Fund. The OIE World Fund is a multi-donor trust fund that collects voluntary contributions to implement projects of international public utility relating to the control of animal diseases and the strengthening of national veterinary services. On 20 January 2016, Alain Dehove was appointed Director of Finance of the OIE, under the direct authority of the OIE Director General; he will provide financial and contractual guidance for this project. He is also a Member of the Governing Council (2014-2017) of the French National Veterinary School of Alfort - *Ecole nationale vétérinaire d'Alfort* - ENVA.

**Dr Stefano Messori** DVM, PhD, (male) who will be employed by OIE, graduated with honours at the faculty of Veterinary Medicine of Parma in 2006. Since then, he has undertaken research activities on animal health and welfare in several institutions in Italy and France. Since 2011, he is working as a researcher and expert in the management of international projects at the OIE Collaborating Centre for Veterinary Training, Epidemiology, Food Safety and Animal Welfare of the Istituto Zooprofilattico Sperimentale dell’Abruzzo e del Molise (Teramo). From 2012 to 2015, he worked for the Italian Ministry of Health as a Task Leader on the ANIHW ERA-Net, being in charge of identifying research gaps on animal health and welfare and supporting decision-makers in research prioritisation and in the alignment of research programmes. In this framework, he supported and supervised the development of a Web platform for the collection and sharing of research programmes and calls on animal health and welfare, as well as in the development of a publication database and in the implementation of bibliometric analyses to map research collaborations on animal health and welfare across Europe. In 2014, he co-organised and implemented an international foresight for the definition of a Strategic Research Agenda for animal health in the Mediterranean area, and was involved in the foresight exercises carried out under the ANIHW and STAR-IDAZ projects. For about 5 years, he has been involved in lecturing and in the tutoring and management of working groups at training courses for official veterinarians, both under BTSF and TAIEX initiatives of the European Commission. Since 2016, he is running the secretariat of the SCAR CWG on animal health and welfare research.

#### 4.2. *Third parties involved in the project (including use of third party resources)*

##### Partner 1: Defra

<i>Does the participant plan to subcontract certain tasks (please note that core tasks of the action should not be sub-contracted)</i>	N
The participant does not plan to subcontract tasks.	
<i>Does the participant envisage that part of its work is performed by linked third parties<sup>5</sup></i>	N
The participant does not envisage that work will be assigned to linked third parties	
<i>Does the participant envisage the use of contributions in kind provided by third parties (Articles 11 and 12 of the General Model Grant Agreement)</i>	Y

<sup>5</sup> A third party that is an affiliated entity or has a legal link to a participant implying a collaboration not limited to the action (Article 14 of the Model Grant Agreement).

Luke Dalton will be employed by a third party (Beta Technology Ltd) and seconded to Defra full time for the five year life of the project. This in-kind contribution will be against payment as per Article 11. This has been costed at €100k per year for a total of €500k over five years. It is the same amount it would cost Defra to employ a permanent person at this level and covers the employee's salary costs only.

### Partner 2: CABI

<i>Does the participant plan to subcontract certain tasks (please note that core tasks of the action should not be sub-contracted)</i>	Y
Tasks 4.3.2, 4.3.3, 4.3.4 and 4.3.5 relating to website/database development and hosting (€50k in total) will be subcontracted out by CABI because none of the partners have in-house expertise and server equipment needed to perform this work. Hosting of the website is budgeted at €3k/year for a total of €15k over the five year project. It is estimated that five days of maintenance work fixing bugs etc will need to be done each year at €700/day for a total of 25 days at €17,500. A further 25 days of development work will be needed for a total of €17,500.	
<i>Does the participant envisage that part of its work is performed by linked third parties<sup>6</sup></i>	N
The participant does not envisage that work will be assigned to linked third parties	
<i>Does the participant envisage the use of contributions in kind provided by third parties (Articles 11 and 12 of the General Model Grant Agreement)</i>	N
The participant does not envisage that contributions will be made in kind by third parties	

### Partner 3: IFAH Europe

<i>Does the participant plan to subcontract certain tasks (please note that core tasks of the action should not be sub-contracted)</i>	N
The participant does not plan to subcontract certain tasks.	
<i>Does the participant envisage that part of its work is performed by linked third parties<sup>7</sup></i>	N
The participant does not envisage that work will be assigned to linked third parties	
<i>Does the participant envisage the use of contributions in kind provided by third parties (Articles 11 and 12 of the General Model Grant Agreement)</i>	Y
The DISCONTTOOLS Project Manager will be employed by a third party (Avia-GIS NV) and seconded to IFAH Europe for one day a week. This in-kind contribution will be against payment as per Article 11. This has been costed at €33,800 per year for a total of €169k	

<sup>6</sup> A third party that is an affiliated entity or has a legal link to a participant implying a collaboration not limited to the action (Article 14 of the Model Grant Agreement).

<sup>7</sup> A third party that is an affiliated entity or has a legal link to a participant implying a collaboration not limited to the action (Article 14 of the Model Grant Agreement).

over the five years of the project and covers the employee's salary costs only.

**Partners 4 and 5** (BBSRC and OIE) are not planning to engage any type of third party to perform their work.

## **Section 5: Ethics and security**

### **5.1 Ethics**

No ethics issues were noted in the ethical issue table in the administrative proposal forms.

### **5.2 Security<sup>8</sup>**

1. Activities or results raising security issues: NO
2. EU-classified information' as background or results: NO

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<sup>8</sup> Article 37.1 of the Model Grant Agreement: *Before disclosing results of activities raising security issues to a third party (including affiliated entities), a beneficiary must inform the coordinator — which must request written approval from the Commission/Agency. Article 37.2: Activities related to 'classified deliverables' must comply with the 'security requirements' until they are declassified. Action tasks related to classified deliverables may not be subcontracted without prior explicit written approval from the Commission/Agency. The beneficiaries must inform the coordinator — which must immediately inform the Commission/Agency — of any changes in the security context and — if necessary — request for Annex 1 to be amended (see Article 55*