FSA Science Council Working Group Capability and Assurance (Working Group 1)

Summary of initial advice and recommendations

The question set by FSA:

1. The WG is addressing the question set to the Council by the FSA Chairman:

   What*: To advise the Board on how it can be confident that we have access to the right science capability and we are using it to the best of our ability*

2. The drivers for this are set out in the WG ToR. The FSA wants to reinvigorate science at the heart of the organisation and ensure access to the best capability and capacity and have a good framework for this. The FSA aspires to be an excellent, modern accountable regulator. Excellence relies on having science as a basis for advice, and on commissioning and originating science and evidence on which to determine food safety and authenticity. Working with leading academic and technical expertise (external and internal), being collaborative and using data are all key to being a modern regulator.

Approach taken by the Working Group:

3. The WG is taking a phased approach so that the Council can deliver useful outputs as it works. Phase one will focus on how the FSA identifies and accesses the scientific evidence, advice and capabilities it needs. Phase two will address how the FSA uses these inputs to inform its decisions and policies.
4. The WG considered detailed background information from the FSA on how it currently operates in accessing and using science, looking at the different ways science should inform FSA's work throughout the policy cycle. It considered strengths and weaknesses using a 'heat map', developed through internal consultation within FSA. The WG agreed five high-level issues which are key to a good use of science, where there was a need or opportunity to improve, and where the WG was best placed to advise:

Issue 1: Identifying new ideas, groups and expertise

Issue 2: Accessing the science the FSA needs

Issue 3: Scientific Advisory Committees and external expert advice

Issue 4: Internal science capability: intelligent customer function

Issue 5: Assurance

Initial conclusions, advice and recommendations from the WG
General points

5. In general the WG found that FSA has good approaches in many areas but there is the need to do more, or to do things in a more consistent and structured way. The WG identified some key elements of good practice in each area with recommendations as to how FSA could improve. These will be developed further in Phase 2, particularly on issues 4 and 5.

6. There are also some issues which were identified during Phase 1 which would be of benefit for the WG to explore as its work continues and moves from Phase 1 to 2. These are:
   - Helping the FSA understand better the nature and level of the capacity it needs
   - How the FSA might work more smartly with the resources it has
   - How the FSA might get more out of leveraging
   - Whether the WG might be able to suggest priority and sequencing for the recommendations
   - Whether the FSA might look into its prioritising and commissioning processes
7. Other Science Council WGs will be providing advice on some aspects of the issues within the scope of WG1. WG3 will advise on approaches to identifying needs through horizon scanning and foresight and also on intelligent customer capability in relation to these and global food system risks. WG2 will advise on approaches to establish and communicate risk and uncertainty which is likely to have relevance to access to expert advice, intelligent customer capability and assurance.

Issue 1: Identifying new ideas, groups and expertise

Main observations

One good example of identifying wholly new expertise is FSA's engagement with external experts to develop knowledge in data science. This was done through the CSA networking to identify expertise and targeted funding to a known group to develop a partnership. The working group recommended this approach to initiate FSA research in a new area. Once the FSA were familiar with an area and better known amongst the community then research could be called for in open competition.

Key elements of good practice

- Always make use of external expertise when trying to build capability in a new area, outside the FSA's typical areas of expertise
- Be proactive in drawing the attention of the wider community to the FSA's challenges to engage them in its work and to enhance its scientific reputation and the prestige of researchers working for the FSA

DRAFT Recommendations: The FSA should:

- At the initial stages of developing a new area FSA should work directly with key people and organisations, and through personal contacts, then progressively move to more established open/competitive routes as it becomes more mainstream
- Improve the extent and effectiveness of how it communicates on its science activities and needs, including via the following means:
  - When FSA staff present at meetings they should have a corporate slide-pack which focuses on exciting science, past and future
  - Through posters, social media and internet channels

- Develop a more structured and targeted approach to increase its scientific profile and engagement, including through the following means:
    - Capitalising on the 'impact agenda' including by working proactively with 'impact officers' in Universities
    - Regularly attending university events and scientific conferences
    - Increased engagement with early career researchers
    - Building more partnerships and engagement with research councils, and with UKRI
    - Working with learned societies such as the Royal Society or Royal Academy for Engineering for events, networking or research calls
    - Closer engagement with other Government organisations on research – e.g. Public Health England or the Department of Health
    - Increasing FSA's engagement with learned societies

Issue 2: Accessing the science the FSA needs

Main observations

As for issue 1, there are good practices such as early engagement with key experts and research providers to develop new calls for research and the use of the Strategic Evidence Fund to develop new ideas and approaches. There is scope to improve how FSA engages with researchers to develop research needs and ideas, to further develop the Strategic Evidence Fund (SEF) by piloting new ways of working, and to increase the FSA leveraging of science funding and capability. Actions under issue 1 would also have benefit here.

The WG noted that FSA science spend had fallen in recent years and that the Executive recognised the need to try to address this.

Key elements of good practice

- Engaging effectively with researchers to develop good quality specifications and to get good tenders for research calls

DRAFT Recommendations: The FSA should:

- Identify the full range of science the FSA needs and the resource needed to deliver this, and ensure this is properly reflected in decisions on resource prioritisation
- Review its processes for prioritisation to ensure they properly capture the value of science and ensure science prioritised appropriately alongside other types of investment
- Ensure that the full tenders for new science work are openly available (i.e. outside firewall/registration only systems)

- Develop its use of iterative and co-creation approaches with experts/research providers, such as sandpits[1], especially when contracting in novel areas
- Use its improved approach, engagement and profile (using ideas/recommendations under issue 1) to increase leverage of funding and expertise by looking at funding shared PhDs, Doctoral Training Partnerships, IPAs (Industrial Partnership Awards) and letters of support in industrial grant bidding
- Do more on engagement and advertising for its science needs with for example
    - For large projects and/or in developing new areas, hold meetings to develop and/or notify relevant people of the research calls
    - Direct contact with the right people at universities (e.g. impact officers, research officers or relevant academics)
    - Posting advertisements in publications
- Use the Strategic Evidence Fund to pilot new approaches to accessing science
- Review the Strategic Evidence Fund to find ways to make it more able to deliver more of the types of work it is targeted at in an effective way; and over time the Science Council should develop its role in identifying ideas for the Strategic Evidence Fund
- Define the ongoing role of the Council to help develop FSA capability in this area

Issue 3: Scientific Advisory Committees and external expert advice

Main observations

The FSA has good existing capability external expertise but there are challenges, for example, there are a number of functions which are likely to change with the EU Exit, and challenges from reducing numbers of people in particular career trajectories who wish to serve in advice roles

Key elements of good practice

Good practice would involve developing the pipeline of new expertise effectively; by attracting relevant people to expert roles - one route to improve the attractiveness of these roles is the ensure that they are recognised and rewarded appropriately (for the experts themselves and their employers/funding bodies).

DRAFT Recommendations: The FSA should:

- Develop a systematic and targeted approach to develop and engage new experts including: using subgroups; targeting academics earlier in their careers; fellowships with learned societies (such as the Royal Society's FLIPs); working with these organisations to promote awareness; mentoring programmes for expert advisers

[1] A sandpit is a group approach to enable formulation of questions and development of ideas, and working up of call, specification and proposals around a research area, maybe with some commitment to funding if including potential contractors

- Consider whether it could increase remuneration and/or to have a flexible approach to expert roles which would be more attractive
- Work with those in universities who work on the impact agenda to promote the message that working on committees contributes to impact.

Issue 4: Internal science capability: intelligent customer function [Note: Issues 4 and 5 will be considered in more detail in Phase 2 – conclusions made so far are included here and this will be expanded during Phase 2]

Main observations

The main challenges are for the internal science capability to be able to know what it needs, to be able to manage spending, have enough time available and use science in the best way.

A key factor which affects the scope for improvement is the FSA's capacity. More people working on science engagement would enhance the FSA's ability to bring in new ideas and areas of expertise, but the FSA could also work more smartly to make better use of the resource available.

Key elements of good practice

Science capability within FSA consists of a range of activities in three main types and good practice will reflect the challenges of understanding these roles, matching them to needs in terms of capability and time available and using them effectively:

a. Deep specialist roles for example performing risk assessment and conducting economics work
b. Science roles for example defining and managing projects, interpreting results
c. Science literacy in wider roles in knowing when science is needed, how to bring it in and what it means

DRAFT Recommendations: The FSA should:

- Have an intelligent customer capability across the FSA in its internal science capability and in those using science, working smartly to make good use of science with impartiality, and get value for money
- Have the capability and capacity the FSA needs to develop and deliver the range and scale of science activity which the FSA determines the FSA needs
- Have a culture and leadership which is clear that the organisation needs science and that this is supported across all areas of the FSA, not just science areas - these should support a reciprocal endeavour to identify, access and use science
- Internal marketing of science would benefit from activities focussed on skills such as shadowing, mentoring and rotating, and other opportunities such as surgeries and sandpits for developing ideas, sharing good practice and identifying and encouraging FSA staff good at introducing others and brokering

Issue 5: Assurance [Note: Issues 4 and 5 will be considered in more detail in Phase 2 – conclusions made so far are included here and this will be expanded during Phase 2]

Main observations

FSA has a number of guidelines, frameworks and processes around assurance but these do not provide a complete systematic overview of how well things are working in practice or sufficient confidence the FSA would pick up serious failures at an early stage. FSA has identified these key areas to address: capacity; quality; relevance and impact within this assurance.

Key elements of good practice

- Good practice would be improved by having a complete systematic review of performance

DRAFT recommendations: The FSA should:

- Develop assurance suitable for different levels, including audit of processes and periodic internal and external peer review, and staff surveys, as well as day to day oversight
- Develop a method to evaluate the implementation and operationalisation of this whole set of recommendations on accessing and using science, monitoring and evaluating how this is put into practice
- Develop a framework and process to assure and demonstrate how FSA science activity is performing, drawing on the WG's advice on main issues, good practice and recommended actions, which would also serve as a framework for the periodic internal/external review which WG has recommended.
- Develop and publicise internally exemplars of good practice

The WG will look further at science spend in Phase 2 including the relative success of bids for science and for other types of investment.