

GENERAL ADVISORY COMMITTEE ON SCIENCE

PAPER GACS 4-2 For discussion

Agenda item 5 8 September 2009

Developing the Agency's next Science and Evidence Strategy: a first draft outline for the Strategy

Issue

1. This paper reports progress to date in developing the Agency's next Science and Evidence Strategy 2010-2015, and presents a first draft for discussion. This draws on inputs from the GACS, the Science Review of the Agency and the Agency's response, external consultation, and internal workshops and analysis.

The Committee is asked to:

- i. **discuss** the progress to date and the draft Science and Evidence Strategy
- ii. **comment** on:
 - the overall approach and structure.
 - any major gaps or things that should be changed or omitted.
 - any key issues the Agency should consider in further developing the Strategy.

Origin of paper

Request for advice from the Agency; GACS work plan.

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Issue

1. The Agency is developing its next five-year Strategic Plan for the period 2010 to 2015, and, as a science- and evidence- based organisation, it is developing a new Science and Evidence Strategy (S&E Strategy) in partnership with the Strategic Plan.
2. This paper reports progress to date in developing the Agency's next Science and Evidence Strategy 2010-2015, and presents a first draft for discussion. This draws on inputs from the GACS, the Science Review of the Agency and the Agency's response (see paper GACS 4-1), external consultation, and internal workshops and analysis.

Background

3. Annex A outlines the process for developing the Strategy and progress to date.
4. At its last meeting, on 25 February 2009, the Committee discussed progress to that point and identified some key issues the Agency should seek views on, and address, in developing the S&E Strategy (Paper GACS 3-1). It agreed to establish a Science Strategy Working Group to maintain input from the Committee and to observe the process during the development of the Strategy, with Professors Aggett, Bainbridge, Maskell and Murcott and Mrs Goldberg as members.
5. Progress since then includes:
 - o A public consultation of the Agency's Strategic priorities and science and evidence needs. The results of this consultation and the Agency's response will be discussed by the Agency's Board at its open meeting on 16 September. An important point that emerges from this is an endorsement of the approach of integrating development and consultation on the Agency's science and evidence with that of the Strategic Plan, which has enabled the science discussions to inform the Strategic Plan, and *vice versa*.
 - o A science stakeholder workshop on the Agency's science and evidence needs held on 6/7 May (Professor Aggett took part).
 - o An internal workshop to further refine ideas on the Agency's science and evidence needs and priorities, held on 13 July, with 50 science and policy leaders across the Agency (Professors Aggett, Bainbridge and Murcott and Mrs Goldberg took part).
 - o Internal discussion and analysis of science priorities, supported by the Agency's Operational Research Team, and co-ordinated with wider work to develop the Agency strategic objectives, activities and priorities, and with cross-Government work to co-ordinate food policy and strategy.

Discussion

6. There is a large degree of consistency in the main messages that emerge from these different inputs. These give a strong endorsement of the Agency's science- and evidence- based approach, and suggest that the Strategy should:

Set out the kinds of science and evidence the Agency will need and how it will get and use it to inform and evaluate its policies.

Focus on high-level principles and strategic priorities, with detailed activities in a separate delivery plan that can be reviewed and updated regularly.

Link clearly to the Agency's Strategic Plan priorities but also support cross-cutting and longer-term work.

Fully integrate all evidence used by the Agency.

Ensure that high-quality science is procured.

Put more or clearer emphasis on:

- gathering and using existing data including to identify new risks and opportunities
- communicating and translating evidence into policies and advice
- partnership and collaboration (internal and external)
- evaluating outcomes and impacts.

7. Annex B presents an outline of the proposed structure for the Science and Evidence Strategy 2010-15 and a first draft of the Strategy itself. The key features, which reflect the key messages above, are summarised below:

i. A clear statement of what the Strategy is for and what it does: setting out the strategic evidence needs (what), and the key activities that will enable delivery (how), including evaluating and reporting progress.

ii. Six strategic evidence themes:

1. Food safety- imports
2. Food safety – UK production and consumption
3. Healthier foods and diets
4. Food behaviours and information
5. Effective risk-based regulation
6. Strategic and cross-cutting evidence and analysis

Annex C shows how these themes map onto the seven strategic outcomes set out in the consultation of the Agency's strategic plan. The first five evidence themes address the Agency's strategic outcomes, with themes 4 and 5 cutting across food safety and healthier eating - reflecting discussions in the two workshops on the common ground in the evidence needs in these areas. The sixth evidence theme addresses underpinning, strategic and longer-term and work that looks beyond the period of the Strategic Plan 2010-15. For each theme, the Strategy sets out

the overall objective

high-level evidence priorities

- links to other themes and activities including key partnerships

- iii. Five key activity themes the Agency will prioritise to enable delivery, with summaries for each of what the Agency wants to achieve, key actions, and examples of specific current and planned initiatives:
 1. Identifying and getting the evidence we need
 2. Partnership
 3. Interpretation, knowledge transfer and translation
 4. Knowledge, skills and capacities
 5. Evaluation – including evaluating progress on the Strategy itself
- iv. A strong emphasis on social science across all our work
- v. A broader scope of evidence: going beyond just commissioning new work and considering and giving proper emphasis to gathering and using existing evidence, translating evidence into actions, and evaluating impacts.
- vi. A new Strategic Evidence programme to address longer-term and strategic evidence needs, including: horizon-scanning; key future skills; strategic, long-term or cross-cutting work, including support for collaborative projects; *ad hoc* evidence needs that don't fit existing programmes, including from NI, Wales and the MHS.
- vii. Central ownership of evidence funds by the Chief Scientist, to be allocated on the basis of bids prioritised according to a common framework. This will help ensure the best combination of work across all our objectives.
- viii. Prioritisation: We will prioritise our evidence needs across the organisation supported by tools and analysis from our operational research team. The Strategy will set out the prioritisation process and how we will expose the results to scrutiny.

- ix. An end-to-end review of evidence commissioning to ensure consistent, appropriate external peer review; clear statements in bids for new work of expected outcomes and plans to use and translate results; and commissioning that is effective and fit for purpose for us and contractors.

Next steps

8. The Agency will revise the draft Strategy in light of comments from the Committee and internally and publish it for comment by external stakeholders. We will publish the reports on the external workshops as background to this.
9. We will revise the Strategy further in light of the responses from this consultation and of other streams of work including:
 - further development of the Agency's Strategic Plan 2010-15 and the detailed work to identify and prioritise the actions needed to deliver it.
 - the outcomes of a review of the Agency's nutrition portfolio and the Agency's response.
 - further detailed analysis of the Agency's science and evidence needs including the first run of the prioritisation process outlined in the Strategy.
 - input from GACS via the Science Strategy Working Group and by correspondence.
10. We recognise the draft Strategy will need to be developed in a number of ways. Some are covered by drafting notes (DNs) in the draft text; others include:
 - An indication of priorities within the evidence themes, and of expected spend.
 - Clarity of links to the Agency's Strategic Plan as the latter develops
 - The structure below theme level for evidence programmes and their management. We expect this will generally map onto structures for delivering strategic outcomes to ensure close linkage between science and evidence and wider policy work.
 - Improving the clarity of language and terminology, and consistency of presentation with the Strategic Plan (include definitions, glossary, and a one-page diagrammatic representation of the Strategy showing how the main blocks of work fit together).
 - How to address 'business as usual' and work to meet statutory requirements which may not feature explicitly in a priority outcome.
11. The Agency Board will discuss a final draft Strategic Plan 2010-15 at its open meeting in December 2009. The intention is to present the final draft Science and Evidence Strategy 2010-15 to the Board in February 2010, ensuring it reflects and supports the final version of the Strategic Plan.

12. The Committee is asked to:

- **discuss** the progress to date and the draft Science and Evidence Strategy
- **comment** on:
 - the overall approach and structure
 - any major gaps or things that should be changed or omitted?
 - any key issues the Agency should consider in further developing the Strategy

Annex A Outline of the process to develop the Science and Evidence Strategy and progress to date

Time	Work on Science and Evidence Strategy
February 2009	Initial discussion by GACS Scoping workshop with key stakeholders
March to June 2009	Formal consultation on Agency Strategic Plan and science and evidence needs
May 6-7 2009	Workshop on science and evidence needs with external stakeholders, 6/7 may, Birmingham (GACS represented)
June-July 2009	Analysis of consultation and workshop outputs, to inform July workshop
July 13 2009	Internal workshop on science and evidence needs and priorities with Agency science and policy leaders (GACS represented)
August-September 2009	Further analysis to develop first draft outline and text of S&E Strategy Review of prioritisation tools and guidance Internal analysis of priorities in parallel with development of detailed activities to develop and deliver the Strategic Plan
September 8 2009	Discussion by GACS of first draft S&E Strategy
September- December 2009	First run of prioritisation of science and evidence needs to develop initial evidence plan
October-November 2009	Revision of draft S&E Strategy Follow-up consultation to get external views on draft
November 2009 -January 2010	Further revision of draft S&E Strategy informed by: Analysis of responses to follow-up consultation Development of Strategic Plan and underpinning activities Input from GACS results of review of nutrition research portfolio
February 2010	Discussion of final draft S&E Strategy by Agency Board
Spring 2010	Publication of first forward evidence plan
April 2010	Publication and launch

Annex B First draft of the FSA Science and Evidence Strategy 2010-2015

1. Outline structure

Foreword from Agency Chief Scientist (1 page)

To pick up + reinforce key messages from introduction (see below) and Board discussion. To be drafted later, once Strategic Plan and draft Strategy are essentially complete.

Introduction (1 page)

What the Strategy is for and what it does: sets out the strategic priorities and activities for our science and evidence work, as a framework for internal planning and statement for stakeholders and basis for discussion with potential partners. Clear links to Strategic Plan.

Where do we want to go?

- To gather, generate and use science, evidence and analysis to inform Agency strategic priorities, support their delivery and evaluate progress and impact.
- To identify and inform future strategic priorities, including our next Strategic Plan, and our ability to deliver in the long term.

How will we get there? How will we measure progress?

By setting out our main evidence needs (what), and the key activities that will enable delivery – including evaluating and reporting progress.

Part 1: High-level evidence priorities (6 pages)

Summary of the high-level evidence priorities under each of the strategic evidence themes

One page for each of the six strategic evidence themes (one to map onto each of the strategic plan outcomes and one for cross cutting and strategic work):

Overall objective

High-level evidence priorities

Links (internally) to other themes and activities including

- key partnerships
- where we are looking to work with or through others to deliver underpinning or wider work

Part 2: Key activity themes (5 pages)

Summary of the activities themes we will prioritise in order to enable delivery:

- Identifying and getting the evidence we need
- Partnership
- Interpretation, knowledge transfer and translation
- Knowledge, skills and capacities
- Evaluation

One page on each theme summarising what we will do with examples of specific current and planned initiatives. Similar format to Part 1: What the Agency wants to achieve, key actions, examples of major current and planned work.

Closing page: Contacts for information and comments on the Strategy.

2. First draft of Science and Evidence Strategy

Introduction: What the Strategy is for and what it does

The Strategy sets out our strategic priorities and activities for our science and evidence:

- to gather, generate and use science, evidence and analysis to inform Agency strategic priorities, support their delivery and evaluate progress and impact.
- to identify and inform future strategic priorities and our ability to deliver in the long term.

It will set out our main evidence needs (what), and key activities to enable delivery (how), including evaluating and reporting progress. It will give us the framework for internal planning and delivery and a basis for discussion with stakeholders and potential partners.

[DN - summarise Parts 1 and 2 – evidence and activity themes]

Our commitment to science- and evidence- based approaches and to openness and transparency in all our work is unchanged. The Science Review of the Agency has commended the way we live up to this commitment. This Strategy sets out how we will maintain and develop it further in the years ahead, including through several new initiatives **[DN include summary]**

The Agency currently spends around £20m a year on commissioned scientific evidence. This represents some 15% of our total spend, among the highest proportions across UK government. We also work with and influence other funders and use the outcomes of their research. Our Board has concluded that it cannot ring-fence science spend because it must retain the flexibility to manage resources as it sees fit, in the face of future developments, but it has put on record its desire to ensure that our commitment to funding a robust science base is maintained.[ref] This Strategy sets out how we will ensure we get and use the science and evidence we need effectively to fulfil our objectives.

In this Strategy we bring together a wider range of evidence than before and we give a strong emphasis to social science across all of our work. This will ensure a coherent and strategic approach that goes beyond just commissioning new work and considers and gives proper emphasis to gathering and using existing evidence (HS, scoping reviews, engagement); translating evidence into actions and evaluating impacts. **[DN include clear definition of evidence - to cover all the disciplines and types of evidence we need.]**

The strategic are challenging, and will contribute to delivering our Strategic Plan over the next five years. In many cases this science and evidence will continue in the longer term and will help to shape, and to deliver our objectives in the longer term and form the bases for our next Strategic Plan. We have deliberately included priorities and activities that require a longer-term approach because we want to set a strategic direction and use this to forge partnerships to deliver the science we need in the longer term. We will review the Strategy regularly and refresh it as needed in light of developments

Our Strategy focuses on high-level evidence needs because we want our science work to be guided by this overall strategic framework, not by the organisational structural divisions we use to deliver the work, which can change over time or become 'silos'.

This Strategy includes science and evidence work funded by FSA Scotland. This work is funded by the Scottish Government so it is managed separately, but it is fully integrated with the Agency priorities, and managed according to the same principles and procedures.

The final Strategy will give an indicative funding profile across the main evidence themes, and set out how we structure our science and evidence work within these themes. This will reflect the organisational structures for delivering the Agency's strategic outcomes.

Part 1: High-level evidence priorities

Summary of high-level evidence priorities under each of the strategic evidence themes.

One page for each of the six strategic evidence themes (one to map onto each of the strategic plan outcomes and one for cross cutting and strategic work).

Evidence theme 1 - Food safety: imports

The overall objective for this priority is to deliver a systematic programme of work to:

- identify and capture all current data sources on food and feed imports
- analyse the data to identify critical gaps and ensure they are addressed
- develop and prioritise proposals for more effective, targeted controls
- evaluate the effectiveness of existing and new measures in practice

Priorities for evidence in this theme focus on horizon-scanning, systematic information gathering and analysis. They include:

Regular, systematic identification and collection of data on imported food/feed and associated controls across international food chains, including traceability, from upstream (for example import testing), to downstream (for example results from surveys, incidents and outbreaks).

Analysis of data to evaluate and prioritise risks across the different foods ingredients, chains, points of entry and controls, and the underlying factors that affect these.

Scoping and evaluation of the effects in practice of options for improvements.

Analysis and collaboration to develop shared understandings of key terms and principles including the scope of 'imports'.

Horizon scanning and intelligence sharing to pick up current and future technologies, trends and risks relating to food imports

Links with other priorities and activities

Work on this theme will be co-ordinated with themes

2 - Food safety: UK production

5 - Effective, risk-based regulation

We will also need to consider the nutritional composition of imports in relation to Theme 3 – Healthier foods and diets.

Delivery of this priority will be supported through **partnership** within the UK, EU and beyond, to identify, share and analyse data, and develop effective responses. Links with enforcement and industry partners will be particularly important to ensure that informal and enforcement **data are gathered and used** effectively to inform this work, and that the results of the analysis are **translated** effectively to inform planning and future enforcement and control activities. Underpinning work on **evaluation** and **analysis** will inform priorities and assess impacts.

Evidence theme 2 - Food safety: UK production

The overall objectives for this priority are to deliver robust evidence and analysis to:
understand what measures are most effective in reducing risks
prioritise and develop risk-based controls and test them in practice
improve our understanding of the nature, patterns, trends and relative importance for health of risks from chemical and biological hazards and from allergens in food
improve our ability to anticipate and minimise the effects of food incidents

Evidence priorities focus on robust monitoring and analysis of risks, and analysis and testing of which measures are most proportionate and effective to control risks, including.

Analysis of existing and alternative intervention strategies to identify those with the greatest potential to control or reduce food safety risks. Includes long-term work on:
risk-based controls for meat;
Campylobacter in the food chain to support risk-based interventions.

Analysis and testing to move to risk-based prioritisation, to focus on critical risks and knowledge gaps, including specific vulnerable groups and uncertainties in evidence.

Regular, systematic collection of survey, monitoring and epidemiological data on patterns and drivers of risks from chemical and biological hazards and allergens in food, including robust data on foodborne illness across the UK. Better access and use of data from other sources, particularly industry.

Underpinning work to improve risk analysis and assessment across food-borne risks, including through proxies and markers of exposure and effect

Horizon scanning and intelligence sharing to pick up current and future technologies, and trends and the potential risks (and benefits).

Data and analysis to support our ability to respond to current and emerging food safety threats, including CBRN (chemical, biological, radiological and nuclear) threats.

Links with other priorities and activities

Work on this theme will be co-ordinated with themes

- 1 - Food safety: imports
- 4 - Food behaviours and information
- 5 - Effective, risk-based regulation

We will look at ways to use work on reformulation and data on food composition and consumption under Theme 3 - Healthier foods and diets to inform work on food safety. Underpinning work on **evaluation** and **analysis** will inform priorities and testing impacts.

Delivery will be supported through **partnership** within the UK and internationally, to ensure we share and use existing data effectively, in particular with industry and enforcement partners, build a common understanding and evidence base for new controls, and **translate** results effectively to deliver reductions in food-related ill-health in practice.

We will work with and through other funders to ensure that:

Our work is co-ordinated with wider work on food security and sustainability

Supporting longer-term and underpinning basic science is taken forward on the underlying nature, mechanisms and development of risks from pathogens, chemicals and allergens in foods, and to underpin effective risk assessment. In particular, we hope to develop a strategic, cross-funder approach to control of Campylobacter with Defra, the BBSRC and other partners. **[DN update after workshop 12-14 October]**

Evidence theme 3- Healthier foods and diets

The overall objectives for this theme are to deliver robust evidence and analysis to:
maintain and improve our understanding of the nature, patterns and trends in food composition and consumption and their effects on health
understand the scope to produce healthier products by changing composition (reformulation) and portion size and prioritise those with the greatest impact
understand which measures are most effective in promoting the availability and uptake of healthier products and diets
evaluate the effects of interventions on food behaviours and health outcomes

Specific priorities include:

Systematic gathering, analysis and reporting of data on UK food composition and consumption, including the National Diet and Nutrition Survey and the food composition data in the McCance and Widdowson series [refs]. Developments include:

- consideration of vulnerable groups and specific micro-nutrients
- data on catering and out-of-home consumption
- links with other relevant national and international data
- trends over the life course.

Underpinning research and analysis to improve risk-benefit assessment of the effects of diets on health, including by proxies and markers of exposure and effect. Evidence and analysis to develop and support consistent criteria on 'healthier' foods and diets.

Data gathering, review and research on critical gaps to enable assessment of the impact of options to change composition of foods, including overcoming technical barriers and understanding what measures have most impact in changing products and behaviour.

Evaluation of the impact in practice of past and new initiatives and active communication and translation of the results to stakeholders.

Understanding, modelling and measuring effects of changes to products and consumer habits and on health outcomes including unintended consequences

Horizon scanning and analysis of future drivers and challenges their positive or negative effects on ability to deliver Agency targets.

Links with other themes and activities

Work on this theme will be co-ordinated with theme 4 - Food behaviours and information. We will get added value from data on food composition and consumption by co-ordination and joint analysis with data on consumer attitudes and behaviours. Underpinning **evaluation** and **analysis** will inform priorities and testing impacts.

Delivery of this priority will be supported through **partnership** within the UK and internationally, to ensure we share and use existing data effectively, including from industry, consumer and health partners.

We will work with and through other departments and funders to ensure that:
Our work is co-ordinated with wider science and evidence work on food security and sustainability and on diet, lifestyle and health.

Underpinning longer-term and basic science is taken forward to develop understanding of the relationships between diet and health and the underlying mechanisms and the factors that influence them.

Evidence theme 4 - Food behaviours and information

The overall objectives for this theme are to deliver robust evidence and analysis to:

- understand which approaches are most effective in helping people achieve a healthier diet, including fruit and vegetables and lower salt and saturated fat products
- develop and promote integrated, evidence-based messages on food safety and healthier diets, with a particular focus at point of purchase
- understand food behaviours and choices and factors that influence them
- evaluate the impact of measures to promote safer and healthier food behaviours

Specific priorities include:

Systematic gathering and analysis of data in the UK and internationally on information sources and approaches to promote healthier and safer dietary choices by consumers (and learning from other sectors and contexts), and their effectiveness.

Analysis and targeted research to address key gaps, to understand technical and other barriers and opportunities, and identify and prioritise approaches that will have the biggest impact on healthier foods choices.

Data gathering and analysis to get baseline knowledge on consumer perceptions, motives and behaviours and what influences these. Research on critical gaps. Specific aspects include:

the relative impact of negative and positive messages

where and how to refine messages for specific vulnerable/at risk groups

what influences food behaviours and choices inside and outside the home, and why, and the impacts on food safety

how food safety and healthier eating interact with other factors to influence food behaviour and information (such as waste, ethics, cost, brand, etc.).

extending the evidence base on behaviour to cover other key actors including food businesses

Evaluation of the uptake and impact of existing and new interventions to influence food behaviour and choices on actual behaviour and on health outcomes (including unintended consequences). To include 'Scores on the Doors', front of pack labels, and information in catering and food service.

Links with other themes and activities

Work on this theme will be co-ordinated with themes 2 - Food safety: UK production, 3 - Healthier foods and diets, and (strongly) with social science work in Evidence theme 6, particularly the survey work on consumer attitudes and behaviour. Underpinning **evaluation** and **analysis** will inform priorities and testing impacts.

Delivery of this priority will be supported through **partnership** within the UK and internationally, to ensure we share and use existing data effectively, including from government, industry, consumer and health partners.

We will work with other departments and funders to ensure that:

Our work is co-ordinated with wider science and evidence work on food security and sustainability, on diet, lifestyle and health, and wider work on public health, behaviour change and education.

Longer-term and underpinning basic science is supported on understanding food behaviours in the context of wider behavioural and social science research. In particular we will continue to develop joint research with the ESRC on why people eat what they eat. ***[DN bring in other examples of current or desirable partnerships]***

Evidence theme 5 - Effective risk-based regulation

Note: 'Regulation' is used here in a wide sense, to include self-regulation, assurance, guidance and inspection, as well as formal statutory controls and enforcement.

The overall objective is to generate robust evidence and analysis to develop a consistent, evidence-based view of proportionate, effective regulation across the food chain, to develop and test new approaches, and to monitor and evaluate the impacts in practice.

Specific priorities include:

- Gathering and synthesis of consistent data on the risks and benefits relating to current and potential points of 'control' across the food chain. Includes better use of survey and 'incidents' data to identify high risk activity and causes.
- Systematic data gathering on current risks and controls in the UK and internationally, including costs and impacts, and gaps in coverage/compliance and the consequences.
- Analysis and research on critical gaps, to identify and prioritise those that are the most effective in reducing significant risks and impacts on health and other key outcomes. This may include development of underpinning tools.
- Evaluation of effectiveness and impact of current and potential alternative approaches.
- Data and analysis to audit the pattern and impact of enforcement activity across the UK

Evidence on underlying perceptions and behaviours of key people and organisations in regulation, and analysis and research on critical gaps to understand the impact for effective controls.

Monitoring, analysis and underpinning research to address critical knowledge gaps, on compliance with labelling and compositional standards and enforcement, including food fraud, with a focus on identifying and understanding potential impacts on health.

Links with other priorities and activities

This is a cross-cutting theme which draws on and informs all the other five themes, in particular those on food safety, and theme 4 - Food behaviours and information. Work in this theme to develop proportionate and risk-based approaches will draw on and inform work in the food safety and healthier foods and diets themes to deliver robust evidence on relative risks and benefits across the food chain, and to identify and respond to new and (re)emerging risks.

Delivery of this priority will be supported through **partnerships** in the UK and internationally, to ensure we share and use existing data effectively. Links with enforcement and industry partners will be important to ensure that informal and formal enforcement **data are gathered and used** effectively to inform this work, and that the results of the analysis are **translated** effectively to inform planning and future controls.

We will work with and through other funders to ensure that:

Our work is co-ordinated with wider work on food security and sustainability

Longer-term and underpinning basic science is supported, including better understanding from the economic and social sciences of what influences effective regulation and safe or unsafe behaviours by operators and regulators; and on the underlying nature, mechanisms and development of risks from pathogens, chemicals and allergens in foods, and to inform effective risk assessment.

Evidence theme 6 - Strategic and cross-cutting evidence and analysis

The overall objectives of this theme are to:

- deliver robust, cross-cutting evidence and analysis to support delivery and evaluate progress and impact across all our current strategic objectives
- to inform future strategic priorities and our ability to deliver them in the longer term.

Key priorities include:

- o A new funding strand on Strategic Evidence to address longer-term and strategic evidence needs, including:
 - Horizon-scanning to identify, analyse and prioritise cross-cutting and longer-term issues, threats and opportunities
 - Reviewing, prioritising and implementing options to support key future skills
 - Strategic, long-term or cross-cutting work, including scoping, 'start-up' or ongoing support for collaborative projects, including in EU programmes
 - Ad hoc evidence needs that do not fit in existing themes and programmes, including for example from FSA Scotland, NI and Wales or the MHS
- o Robust data, analysis and research on critical gaps to develop a more consistent understanding of risks and benefits across the food chain, to inform prioritisation based on risk-benefit and impact. Developments include reflecting variation within and between groups, and support for science prioritisation.
- o Robust data, analysis and research on critical gaps to develop impact assessment of proposed regulations and other initiatives, and post-hoc evaluation of impacts
- o Implementing and evaluating the Social Science Strategy [ref] with guidance from the Social Science Research Committee (SSRC), including:
 - Robust evidence and analysis of consumer attitudes and behaviour across the UK, from a new flagship rolling survey
 - Developing a Strategic Partnership with the ESRC including collaborative work on why people eat what they eat and the Understanding Society longitudinal study.
- o Underpinning scientific evidence and data quality, including by developing, testing, validation and translation into practice of robust, fit-for purpose methods for analysis of foods and relevant parameters, and continuing to apply the Joint Quality Assurance Code of Practice [ref]

Links with other priorities and activities

This theme informs and draws on all the other themes, providing the underpinning data, analysis and links to longer-term strategic work. Delivery will be supported through **partnerships** internally and across the UK and internationally, to ensure we **share and use data effectively**, and identify and respond to opportunities for strategic **collaboration** across all our priorities. Links with other funders and across professional groups will be particularly important to ensure that:

Our work is co-ordinated with wider work to develop a cross-government Food Research Partnership and Joint Food Research Strategy, and on food security and sustainability. Longer-term and underpinning basic science is supported, including better understanding from the economic and social sciences of what influences effective regulation, food behaviours, including through strategic partnership with the ESRC.

Part 2: Key activities to enable delivery

We have identified five key activity areas that will underpin and enable delivery of the Science and evidence work across all of our work:

- Identifying and getting the evidence and analysis we need
- Partnerships
- Interpretation, knowledge transfer and translation
- Knowledge, skills and capacities
- Evaluation

This section outlines the priorities under each activity. These draw on recommendations of the Science Review of the Agency and the Agency's response and advice from the General Advisory Committees on Science (GACS).

Activity theme 1: Identifying and getting the evidence and analysis we need

We need to:

- identify the evidence and analysis we need
- prioritise effectively and transparently
- deliver good quality work that addresses the prioritised evidence needs

Priority activities:

A wider definition of evidence: This Strategy defines evidence broadly. As well as commissioning new work we will ensure proper consideration is given to: horizon-scanning; gathering and using existing evidence; analysis and interpretation; translating evidence into actions; and evaluating impacts. A key part of this is making better use of existing data both by increasing awareness and by systematic analysis and review.

Central ownership of evidence funds The Chief Scientist will oversee funds for evidence work centrally. They will be allocated on the basis of bids prioritised according to a common framework, to help ensure the best combination of work across all our objectives.

Prioritisation: We will prioritise our evidence needs across the organisation using tools and analysis from our operational research team. An outline of the prioritisation process and the criteria used is at Annexe A.

The outcomes will be peer challenged at senior level in the Agency, to give a sense check and to identify and record the rationale for any adjustments - to address strategic priorities that are not reflected well by the prioritisation framework, including the balance between different types of evidence and between current and future priorities.

We will publish the results as a forward evidence plan covering 1-2 years. This will provide transparency on the process and results and will give us external commentary, before we commission new work, on:

- Existing data that can address the identified needs
- Opportunities for collaboration at early stage
- Whether we have defined our evidence needs in the best way.

We will publish the outcome of the first prioritisation in spring 2010 to coincide with the start of this Strategy. We will refresh the forward plan annually on a rolling basis.

A new strategic + cross cutting evidence programme in Evidence Theme 6 will support long-term, cross-cutting, collaborative work and act as a safety net to ensure we can respond to ad hoc issues that fall outside existing programmes

An end-to-end review of evidence commissioning will be carried out in 2010 to ensure:

- we have consistent, appropriate external peer review of new evidence requirements, submitted proposals and completed work
- bids for new work set out the expected outcomes and include plans and resources for how and with whom they will be used and translated into impacts.
- commissioning is effective and fit for purpose for us and contractors

Work under Evidence theme 6 on method development and quality and on quality assurance in research will underpin delivery of quality evidence and analysis.

Activity theme 2: Partnership

We need to:

Work in partnership with other funders and stakeholders to ensure coherent approaches, avoid gaps and duplication, and exploit opportunities to do things better by working together. We also need to collaborate effectively across the Agency.

Priority activities

We will promote effective internal collaboration by:

- Setting an Agency-wide framework for all our science and evidence work in this Strategy.
- Emphasising cross-cutting and underpinning themes and mechanisms to make this easier.
- Developing organisational and management structures that ensure science and evidence work is integrated with wider policy work, and across organisational units, though team working.

With external partners:

The new Strategic evidence programme will provide a mechanism to prioritise and support delivery of collaborative work (see Activity theme 1).

Prioritisation will include explicit consideration of potential for partnerships and this will be reinforced by publishing a forward look of evidence needs.

Currently projects with an element of co-funding account for upwards of 20% of the Agency's science spend. We will develop and build on these existing and planned partnerships on cross-cutting and common issues, including:

- The cross-government Food Research Partnership and Joint Food Research Strategy
- A developing cross-funder programme on food security
- Strategic partnerships with the ESRC
- Working with Defra, the BBSRC and others to develop a potential cross-funder programme on Campylobacter
- Developing strategic partnerships with the Scottish Government
- Building effective partnerships with EU and international funders, regulators and risk assessors, including EFSA
- Engaging with UK and international partners to shape research in the EU Framework Programmes for research, and collaboration and co-funding in relevant projects
- working across government professional networks in economics, social research, operational research, and developing partnerships with the leaned societies

Activity theme 3: Interpretation, knowledge transfer and translation

This theme focuses on how we ensure evidence is analysed and used effectively and properly across all our work. The GACS will continue to provide independent advice and challenge on all of these activities.

We need to:

- Ensure scientific evidence is analysed and interpreted to rigorous scientific and governance standards.
- Translate evidence effectively into actions to deliver policy and organisational objectives and make these linkages clear to stakeholders
- Communicate with and transfer knowledge to partners, stakeholders and other users.

Priority activities:

The Scientific Advisory Committees (SACs) will remain the cornerstone of our independent, expert risk assessment. Annexe 2 lists the ten SACs that advise the Agency. We will work with them and particularly the GACS to maintain and develop their ability to deliver expert, independent advice.

Governance: The Agency will continue to apply a range of governance tools and guidance to set out and assess performance against good practice in the development and use of scientific evidence and advice. These include

- The Agency Good Practice Guidelines for SACs [check title, ref]
- The Agency's Science Checklist [ref]
- Recommendations of the Agency's 2002 Review of SACs [ref]
- The Cross-Government Code of Practice for SACs (COPSAC) [ref]

We will develop and strengthen these measures, with the advice of the GACS, by:

- Reviewing the clarity and consistency of application in practice of the distinction between risk assessment and risk management, and implementing any changes that are needed
- Reviews of the SACs and advice from GACS (see activity 4)

We will improve our access to and use of external expert advice by establishing a science discussion community to allow us to engage with a wider range of expert commentary and opinion of science topics, and a peer review register to simplify, broaden and make more consistent our use of independent expertise for peer review.

The end-to-end review of commissioning (see Activity theme 1) will ensure bids for new work will set out the expected outcomes and include plans and resources for how and with whom they will be used and translated into impacts.

The wider definition of evidence and prioritisation (see Activity theme 1) will ensure proper consideration is given in prioritising and commissioning new work on analysis, interpretation and translating evidence into actions.

This activity will be supported and complemented by work under Evidence theme 6 to deliver robust cross-cutting evidence, analysis and evaluation across all our current strategic objectives.

Activity theme 4: Knowledge, skills and capacities

We need to:

Maintain and develop the knowledge, skills and capacities we need to deliver our science and evidence objectives, within the Agency and externally.

Priority activities:

Within the Agency we will maintain and develop our knowledge, skills and capabilities by:

- Maintaining and developing our in-house teams and capabilities in the economics, social science, operational research and statistics professions, supported by internal Heads of Profession, and the wider professional groups across government. Support for Continuous Professional Development for all relevant professions in the Agency.
- Developing a standard staff objective for research and evidence management and delivering the training and support to ensure it is met consistently.
- Undertaking a project in 2010 to better understand the overhead, in resource and skills, to support and deliver the evidence programme effectively, and implementing any recommendations.

External knowledge, skills and capacities

We will commission and publish the results of a programme of reviews of the Scientific Advisory Committees (SACs) that advise the Agency. Together with advice from the GACS these will ensure that:

- the SACs operate effectively and properly in advising the Agency
- individually and collectively the SACs deliver rigorous, independent expert advice across all the relevant areas where such advice is needed by the Agency.
- the SACs are supported effectively and appropriately by the Agency.

We will review the Agency's support for external skills training, currently delivered primarily through the Agency's Postgraduate Scholarship Scheme, and examine and prioritise alternative or complementary approaches to support key future skills. We will complete the review and implement the conclusions by December 2010.

We will engage with and seek to influence other expert bodies that carry out or help shape scientific assessment and regulation, including EFSA and other international bodies.

Partnerships with other funders, particularly on the Food Research partnership and Joint Food Research Strategy, will help us shape wider plans to develop skills and capacities relevant to our current and future needs.

Activity theme 5: Evaluation

[DN – to include a clear definition of evaluation and reflect this in setting out this theme]

We need to develop and apply data, tools and analysis to evaluate our work, both before it is commissioned, to inform priorities and define specifications, and after it is implemented, to determine its quality, success and impact. This covers:

- Individual science and evidence projects, programmes and bodies of work
- Evaluating Agency policies and initiatives, as they are developed and their effects in practice
- Progress and impacts of the Science and Evidence Strategy itself

Priority activities

For science and evidence projects and bodies of work

- Consistent, fit-for-purpose peer review and external commentary on new evidence requirements, individual projects and programmes; proposals for commissioned work, and of completed work.

This will be supported by activities in other Activity themes: the end-to-end review of evidence commissioning will ensure that procedures are effective and consistent and that expected outcomes and impacts are analysed before work is started; the forward evidence plan, discussion community and peer review college will improve access to external input.

For Agency policies and initiatives

- Work under Evidence theme 6 will underpin and develop evidence, analysis and skills to improve impact assessment and risk-based prioritisation.
- A new cross-Agency project led by our Analysis and Research Division will develop tools and guidance to support evaluation across the Agency's work. It will aim to deliver common understanding, approaches, tools and supporting data, and identify critical evidence and skills gaps. The programme is due to complete in **[DN confirm]**.

For the Agency's Science and Evidence Strategy:

- Assessing and reporting against the Performance Indicators for Agency science developed by the GACS. Activities in other themes address the need to develop underpinning systems and data for this assessment.
- Implementing and monitoring progress against our action plan for our response to the recommendations of the Science Review of the Agency.
- Active participation in cross-government initiatives to support and assess science in government
- Independent assessment and challenge by the GACS including through its Annual Report and the GACS Chair's annual report in person to the Agency Board.
- Publishing a forward evidence plan for commentary and challenge
- Overarching assessment and reporting by the Agency Chief Scientist including in his Annual Report, which will include assessment of progress, key achievements, problems and proposed revisions and future plans in delivering the Science and Evidence Strategy.

Closing page

Contacts for information and comments on the Strategy.

[DN - Add after consultation.]

Annex A Outline of the evidence prioritisation process 1 page

[DN: To be added following review of tool in advance of autumn exercise.]

Annex B The Scientific Advisory Committees that advise the Agency

Committee	Remit
General Advisory Committee on Science (GACS)	<ul style="list-style-type: none"> provides independent challenge and advice on general science issues supports and challenges on science strategy and governance provides advice and horizon scanning on areas not covered by other committees
Advisory Committee on Animal Feedingstuffs (ACAF)	<ul style="list-style-type: none"> advises on the safety and use of animal feeds and feeding practices, with an emphasis on protecting human health provides a range of advice on other aspects, including new European legislation, animal feed ingredients including genetically modified organisms, and labelling and information for purchasers of animal feed
Advisory Committee on the Microbiological Safety of Foods (ACMSF)	<ul style="list-style-type: none"> provides advice on microbiological issues regarding food advises on the risk to humans of micro-organisms which occur on or in food
Advisory Committee on Novel Foods and Processes (ACNFP)	<ul style="list-style-type: none"> advises on matters relating to novel foods and novel processes carries out safety assessments of novel foods or processes submitted for approval under the European regulation on novel foods
Committee on Carcinogenicity of Chemicals in Food, Consumer Products and the Environment (COC)	<ul style="list-style-type: none"> advises on the potential carcinogenicity of chemicals in food, including possible chemical causes of cancer in humans. COC opinions frequently include advice from the COM advises on carcinogenic risks from new scientific discoveries and general science issues
Committee on Mutagenicity of Chemicals in Food, Consumer Products and the Environment (COM)	<ul style="list-style-type: none"> assesses the potential mutagenic risks to man of substances used or proposed for use in foods advises on general principles or new scientific discoveries in connection with mutagenic risks, and on testing methods and strategies for assessing mutagenicity
Committee on Toxicity of Chemicals in Food, Consumer Products and the Environment (COT)	<ul style="list-style-type: none"> assesses the risk to human health from chemicals which may enter the food chain either deliberately or inadvertently. Evaluations may include assessments by the COC and COM advises on general principles and new scientific discoveries in relation to chemical toxicity
Scientific Advisory Committee on Nutrition (SACN)	<ul style="list-style-type: none"> advises on scientific aspects of nutrition and health with specific reference to the nutrient content of individual foods and the diet as a whole advises on wider public health issues where nutritional status is one of the risk factors
Social Science Research Committee (SSRC)	<ul style="list-style-type: none"> provides access to social science expertise and challenge for the Agency and other scientific advisory committees
Spongiform Encephalopathy Advisory Committee (SEAC)	<ul style="list-style-type: none"> provides advice and risk assessments on food safety and public and animal health issues relating to TSEs¹ advises on the change in risk through changing control measures designed to protect human and animal health

¹ TSEs are transmissible spongiform encephalopathies such as BSE, CJD and scrapie.

Annex C Proposed evidence priorities mapped onto the draft strategic outcomes for the Agency as set out in the public consultation.

Evidence theme:	Draft strategic outcome
1. Food safety – imports	1. Imported food entering the UK is safe to eat
2. Food safety – UK production	2. Food produced or sold in the UK is safe to eat <u>Part of 3.</u> Consumers make informed choices about food safety when eating outside the home and prepare and cook food safety at home: - continued reduction in foodborne disease - what interventions work in foodservice
3. Healthier foods and diets	5. Retail products and catering meals are healthier
4. Food behaviours and information	6. Retailers, manufacturers and caterers provide the nutrition information consumers need to make healthy choices 7. Consumers understand about food and a healthy diet, have the skills needed to choose, prepare and cook healthy meals and are motivated to do so <u>Part of 3</u> Consumers make informed choices about food safety when eating outside the home and prepare and cook food safety at home: - Scores on the Doors
5. Effective, risk-based regulation	4. A proportionate, risk-based regulatory regime relating to food, which is clear about the responsibilities of food business operator and others & which generates public confidence in food
6. Strategic and cross-cutting evidence and analysis	No direct map but covered by the cross-cutting commitment to underpinning work and to the core value of being science- and evidence- based.