FSA 09/12/04 **8 DECEMBER 2009**

THE FOOD STANDARDS AGENCY'S NEW SCIENCE AND EVIDENCE STRATEGY 2010-15

EXECUTIVE SUMMARY

1. The Agency has developed a new Science and Evidence Strategy for 2010-15 in partnership with the new Strategic Plan, and in consultation with key science partners and other stakeholders (Annex 1).

2. The new Science and Evidence Strategy sets out our strategic priorities for the evidence that we need and the activities we will undertake to ensure we obtain and use it effectively. The Strategy will help to support delivery of our Strategic Plan 2010-15, test progress, and inform development of our future strategy beyond this.

3. The Board is asked to:

   - **discuss** the draft Science and Evidence Strategy, with regard to:
     i. its overall structure and approach, and
     ii. the high-level evidence and activity priorities.

   - **agree** to the publication of the Science and Evidence Strategy subject to any changes recommended by the Board.

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THE FOOD STANDARDS AGENCY'S NEW SCIENCE AND EVIDENCE STRATEGY 2010-15

Issue

1. The Agency has developed a new Science and Evidence Strategy for 2010-15 (Annex 1), in partnership with the new Strategic Plan. The draft Strategy draws on formal and informal consultation with all our stakeholders, and input and analysis from our external advisers and internally.

Strategic Aims

2. The new Science and Evidence Strategy sets out how the Agency will use science and evidence to meet the challenges of delivering safer food and healthier diets. It describes our strategic priorities for the evidence that we need and the activities we will undertake to ensure we obtain and use it effectively. The Strategy will help to support delivery of our Strategic Plan 2010-15, test progress, and inform development of our future strategy beyond this.

3. We will use our strategy internally as a high-level framework to guide detailed planning, prioritisation and delivery of our science, and externally as a statement of our principles and priorities and a basis for discussion with potential partners.

Discussion

Developing the draft Strategy

4. The draft Strategy Science and Evidence Strategy has been developed in close partnership with the Agency's new Strategic Plan, as well as other strands of the Agency's strategic evidence work. These include the Science Review of the Agency and the Agency's response, the external expert review of the Agency's Nutrition Research portfolio, and the development of cross-government food policy and science partnerships, emerging in responses to the common challenges set out in the Cabinet Office's report *Food Matters* and elsewhere.

Consumer engagement.

5. Consumer engagement has focused on helping to shape the overall objectives and priorities for the Agency in the new Strategic Plan. In developing the Science and Evidence Strategy, we have focused on engagement with science stakeholders to help identify and prioritise the science and evidence we will need to deliver these strategic objectives.

Stakeholder and advisory committee engagement

6. The formal, 12-week consultation on the Agency's proposed Strategic Plan 2010-2015 and our associated needs for science, evidence and analysis was held from

16 March to 5 June 2009.[1] Views were sought on the science and evidence needed to support the Agency's strategic priorities, gaps in the evidence base, and who we should work with. The Board discussed the results of this consultation and the Agency's response at its open meeting on 16 September 2009.[2]

7. A stakeholder workshop concentrating on our science and evidence needs was held in Birmingham on 6-7 May 2009, with 32 stakeholders taking part. This was followed by an internal workshop on 13 July, where 50 science and policy leaders across the Agency (and members of the General Advisory Committee on Science, GACS) refined ideas on our science and evidence needs and priorities.[1]

8. A first draft of the Strategy, drawing on these inputs, was discussed by the GACS at its open meeting on 8 September 2009.[3] A revised draft was discussed by the Food Advisory Committees (FACs) in Scotland, Wales and Northern Ireland.

9. A large degree of consistency emerged from these inputs, giving a strong endorsement of the Agency's science- and evidence- based approach, and suggesting the Strategy should:
   i. Set out the science and evidence the Agency will need and how it will obtain and use it to inform and evaluate its policies.
   ii. Focus on high-level principles and strategic priorities.
   iii. Link clearly to the Agency's Strategic Plan priorities but also support cross-cutting and longer-term work.
   iv. Fully integrate all evidence used by the Agency.
   v. Ensure that high-quality science is procured and evaluated robustly
   vi. Put more or clearer emphasis on:
      - gathering and using existing data, including to identify risks and opportunities
      - communicating and translating evidence into policies and advice
      - partnership and collaboration (internal and external)
      - evaluating outcomes and impacts.

10. In addition GACS felt the Strategy needed a clear, high-level summary to pick out the structure and show how science and evidence flows from and informs the Agency's strategic work, and responds to developments. The FACs each stressed the importance of a 'One Agency' approach that reflects the science and evidence needs and contributions from all parts of the Agency and the UK.

Key features of the Science and Evidence Strategy 2010-15

11. The Strategy does not describe every science activity of the Agency. Like the Agency's new Strategic Plan, it focuses on strategic priorities, and it aims to balance this with work on cross-cutting and longer-term issues.

[1] http://www.food.gov.uk/consultations/ukwideconsults/2009/proposedfsastrategy20102015
[2] www.food.gov.uk/aboutus/ourboard/boardmeetings/boardmeetings2009/090916/boardagenda090916
[3] http://www.food.gov.uk/multimedia/pdfs/committee/gacs4_2.pdf

12. The overall structure and key elements of the Strategy are shown in Figure 1 (page 1 of the draft strategy). Its key features and innovations are set out below:

i. Six priority evidence themes - the key evidence we will need, to deliver our strategic objectives, test progress, and identify and shape our future priorities

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

The first five themes address Agency strategic outcomes directly, while the sixth supports the underpinning and longer-term work that looks beyond the period of the Strategic Plan.

ii. Five priority activity themes - the actions we will take to obtain and use evidence effectively

1. Identifying and obtaining the evidence we need
2. Partnership - including internal links across themes and key partnerships
3. Interpretation, knowledge transfer and translation
4. Knowledge, skills and capacities
5. Appraisal and evaluation – including progress on the Strategy itself

iii. 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.

iv. Reinforcing the contribution of social sciences across our work

v. 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 and support for collaborative projects; and evidence needs that don't fit existing programmes.

vi. Central control of evidence funds by the Agency Chief Scientist, allocated on the basis of bids prioritised according to a common framework. This will help ensure we deliver the best package of work to address our strategic priorities.

vii. Prioritisation of evidence needs across the Agency supported by tools and analysis from our operational research team. The Strategy sets out the prioritisation process and how we will expose the results to scrutiny.

viii. An end-to-end review of evidence commissioning to ensure consistent, external peer review; clarity 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

13. Following discussion by the Board we aim to publish the final Science and Evidence Strategy early in 2010.

Impact and resources

14. The implementation of the Strategy will support the delivery our Strategic Plan 2010-15, help us to test progress, and inform development of our future strategy beyond this.

15. The resources required to deliver the Strategy will draw on the wider work to determine detailed resources and priorities to support the Agency's new Strategic Plan. The initial total annual resource and its split across the new evidence themes will be determined by the first strategic evidence prioritisation exercise. This will be considered by the new cross-Agency Evidence Priorities Board on 2 December 2009 (see page 3 of the draft Strategy). The Chief Scientist will table an update for the Board at the meeting on the outcome of this exercise.

16. Further details will be included in the final Strategy itself, and refreshed and reported annually in the proposed 'evidence plan' and in the Chief Scientist's Annual Report to the Board.

Conclusion

17. The draft Strategy aims to set out how we will use science and evidence to deliver improvements in food safety and healthy eating. It does this by describing high-level priorities for the evidence we will need and the activities we will undertake to ensure we obtain and use that evidence effectively, to support the delivery our Strategic Plan 2010-15, test progress, and inform development of our future strategy beyond this.

Previous Board consideration

18. The Board discussed the Agency's science and evidence work, including the response to the Science Review of the Agency, at its July open meeting. It discussed the consultation on the Strategic Plan and associated science and evidence needs, and the Agency's response, at its September open meeting. The Board has received regular updates on the development of the Science and Evidence Strategy.

Board Action Required

19. The Board is asked to:
    - **discuss** the draft Science and Evidence Strategy, with regard to:
        i. its overall structure and approach, and
        ii. the high-level evidence and activity priorities.

    - **agree** to the publication of the Science and Evidence Strategy subject to any changes recommended by the Board.

ANNEX 1

Food Standards Agency
Science and Evidence Strategy 2010-2015

Final draft for discussion by the Agency Board, 8 December 2009

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Foreword from the Agency's Chief Scientist

[Note: This will be finalised following the Board's discussion and can pick up any key issues the Board suggests to highlight]

Issues to cover:

Setting the scene:

- Science at the heart of the Agency
- Building from a solid basis - Science Review

Challenges going forward

- More with less
- Our priorities – safer food and healthier eating
- Cross-cutting challenges – climate change, diet and health, food security, economy
- What actually works?
- How do we change behaviour?
- How do we know what impact we are having? Evaluation

Our response:

- Science more vital than ever – only robust evidence and analysis can help us target our work effectively and measure our impact effectively
- Reaffirm commitment to open, independent expert advice and challenge

New focus:

- Partnership – internal and external
- Multidisciplinary approaches integrating social sciences
- A 'One Agency' Strategy reflecting the needs of Scotland, Wales, NI and the MHS
- Innovation in how we carry out our science work and how we use science to drive an agenda of innovative advice, policy and controls
- Broad definition of evidence
- Restructure reinforces science in delivery and Chief Scientist role
- Looking to the future

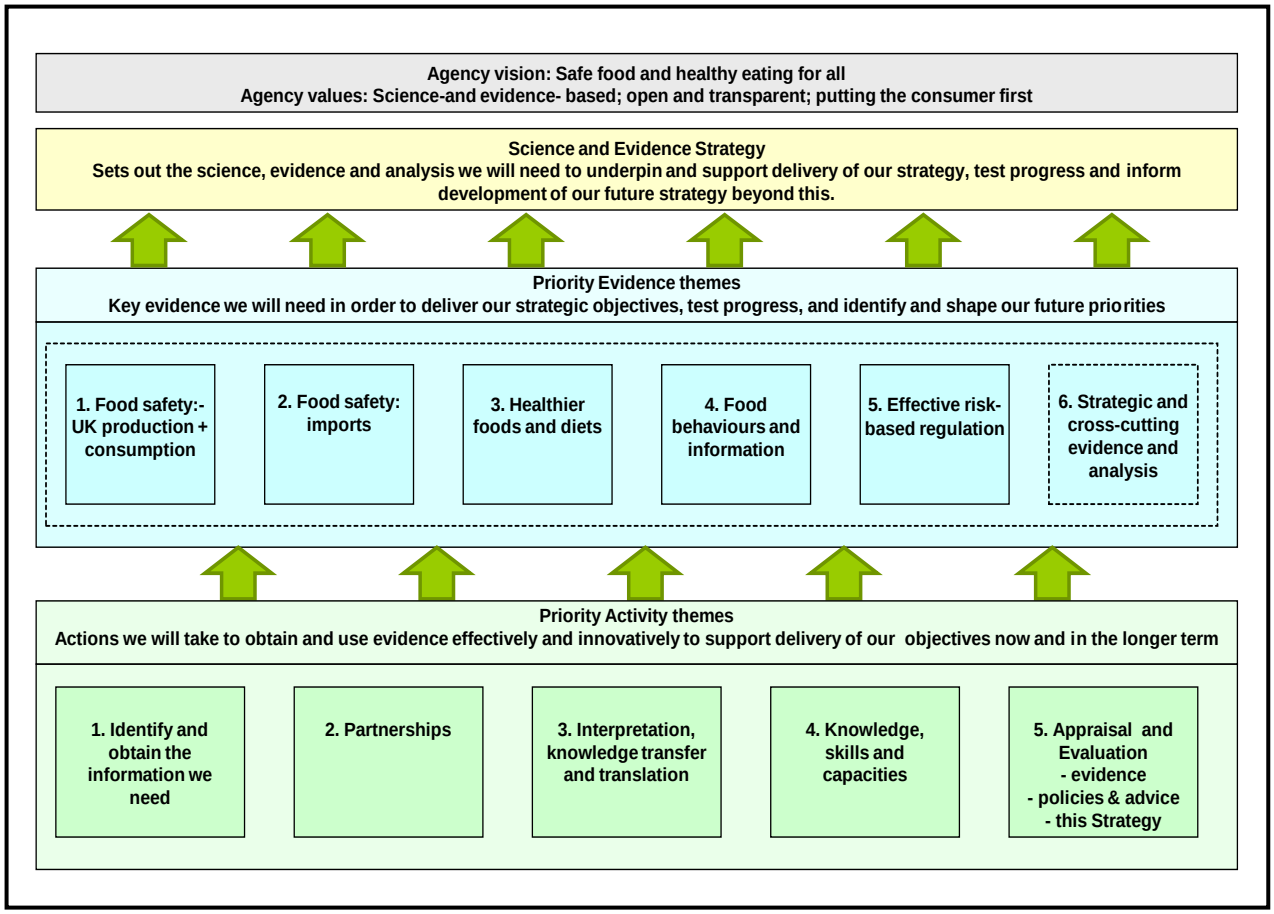
The Strategy in summary: what the Strategy is for and what it does

What does the Strategy do?

This Science and Evidence Strategy shows how we will use science and evidence to meet the challenges of delivering safer food and healthier diets. It sets out our strategic priorities for the evidence we will need and the activities we will undertake to ensure we obtain and use that evidence effectively, to support delivery of our Strategic Plan 2010-15, measure progress, inform development of our future strategy, and support our ability to deliver in the long term.

We will use our strategy internally as the high-level framework to guide our detailed planning, prioritisation and delivery of our science, and externally as a statement of our principles and priorities and a basis for discussion with potential partners.

Figure 1 shows the structure of the Strategy and its key components

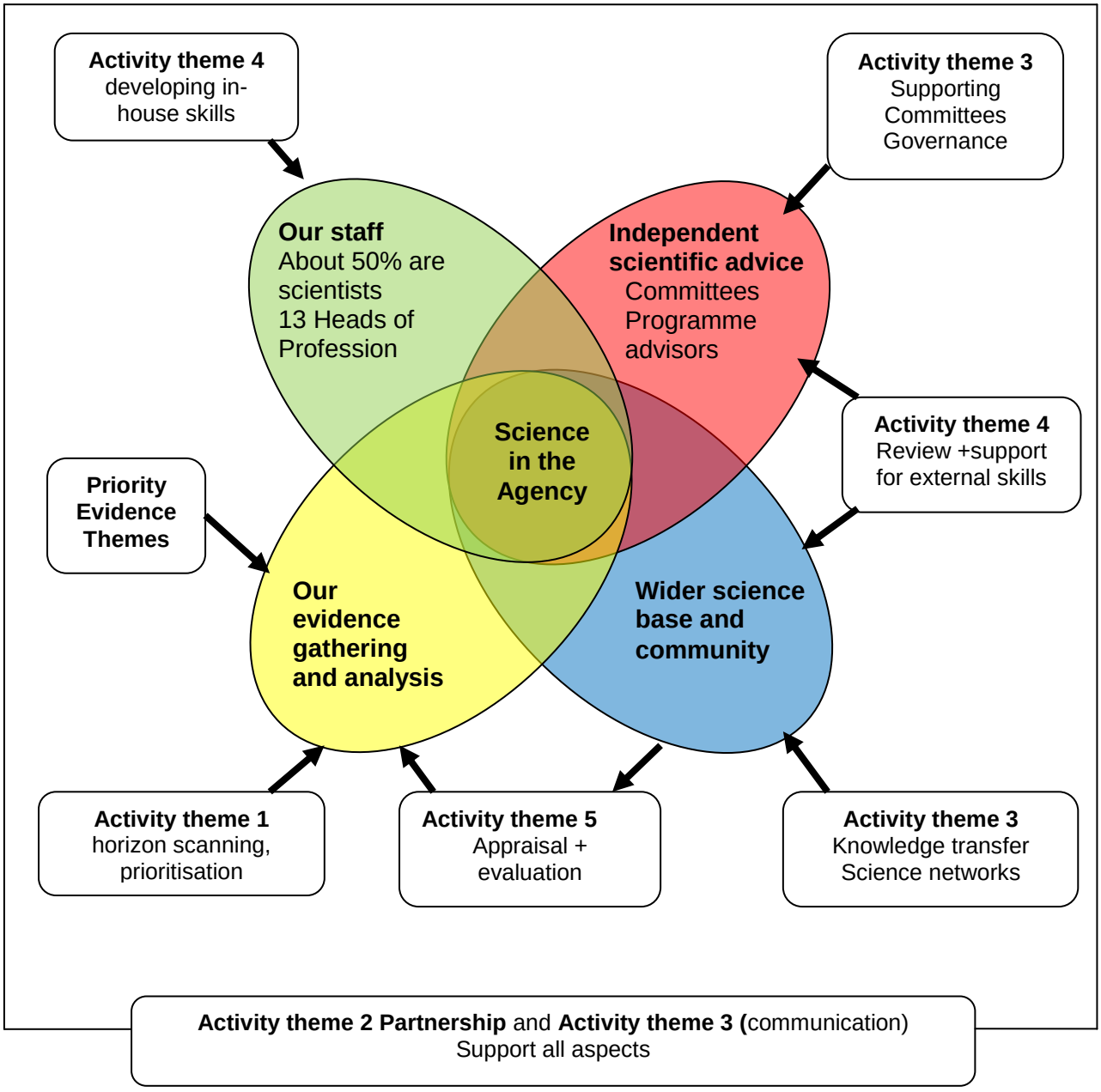


Our Strategy focuses on high-level priorities. It does not list everything we will do. We will report regularly on the detail of our science work, including in our Chief Scientist's Annual Reports. The priorities in this Strategy will help us deliver our Strategic Plan over the next five years. Much of this science work will continue and help to shape and deliver our objectives in the longer term, and will inform our next Strategic Plan. We want to set a strategic direction and use this to forge partnerships to deliver and use the science we need now and in the future.

The Evidence and Activity priorities are discussed in more detail later.

Science in the Food Standards Agency

Science is at the heart of the Agency's work. We aim to be science- and evidence- based in everything we do. Science in the Agency covers a wide range of resources and activities, from our staff – some 50% of whom are scientists - to independent expert advice, our own science evidence-gathering, and the international science base and community. This Strategy aims to support and develop all of these aspects of our science.



The Agency currently spends around £20m a year on commissioned evidence, about 15% of our total spend - among the highest such proportions in UK government. We work with other funders to help develop and benefit from the wider base of evidence and expertise, in the UK and internationally. We communicate our science and evidence openly, including through our open-access site Foodbase[1], so that others can use and benefit from the work we do. Our Board has concluded that it cannot 'ring-fence' our science spend, because it must retain flexibility to manage resources in the face of developments, but it has put on record its desire to maintain our commitment to a robust science base.[2]

[1] http://foodbase.org.uk/
[2] http://www.food.gov.uk/multimedia/pdfs/board/boardmins090714.pdf

What science and evidence do we need?
The challenges we face require multidisciplinary approaches. We will bring together evidence and expertise across the natural and social sciences, and deliver using multi-disciplinary teams within the Agency and with our partners. We will look at evidence broadly, and give proper emphasis to gathering and using existing evidence, translating evidence into actions, and evaluating progress and impacts of our work, as well as commissioning new evidence.

We need to work effectively and achieve value for money in our science work. This means focusing on priorities, asking the right questions, using evidence effectively and translating results. We need to work with national and international scientists, food business, enforcement and other partners domestically and internationally, to add value and improve impact – for example by sharing data, planning and costs.

What is evidence?
In this Strategy, **evidence** means reliable, accurate information that we can use to make well-informed decisions about our policies and advice, and evaluate their impact. It includes:

- ✓ collection of new data and information (quantitative and qualitative), including investigative research to describe phenomena and understand their underlying causes and mechanisms
- ✓ monitoring and surveillance
- ✓ analysis and modelling of existing statistical, economic or other data (including qualitative information), including to identify gaps
- ✓ reviewing and synthesising knowledge from existing research, stakeholder consultation and expert knowledge, including advice from independent expert advisors
- ✓ evaluation of previous, new or prospective policies

How do we use evidence?
- to develop and improve our risk assessment and advice
- to develop and support policy
- to track progress and evaluate the impact of our policy and advice
- to identify future issues and evidence gaps and develop options to respond to them

Setting and reviewing priorities
Two key innovations in this Strategy are:

i. to move to a **broader definition of evidence -** to ensure we bring together all the relevant expertise and evidence need to meet the challenges we face, and
ii. to use this to conduct **strategic prioritisation of our evidence needs** across all our work, so we can identify the best package of work across all our needs.

The prioritisation framework is outlined in Annex A.

This will result in an **evidence plan** of the main work we wish to commission for the next 1-2 years, which we will refresh annually. We will publish the evidence plan, to provide transparency and to invite external comments, before we commission new work, on:

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

[***Note: information for final version is being developed in light of outcomes of detailed planning for the Strategic Plan and of the evidence prioritisation. This will cover**:*

- *An indication of the initial annual resource requirement and balance across the evidence themes [pie chart]*
- *Qualitative indication of expected broad trends - for example which areas are new/increasing/maintaining/decreasing.]*

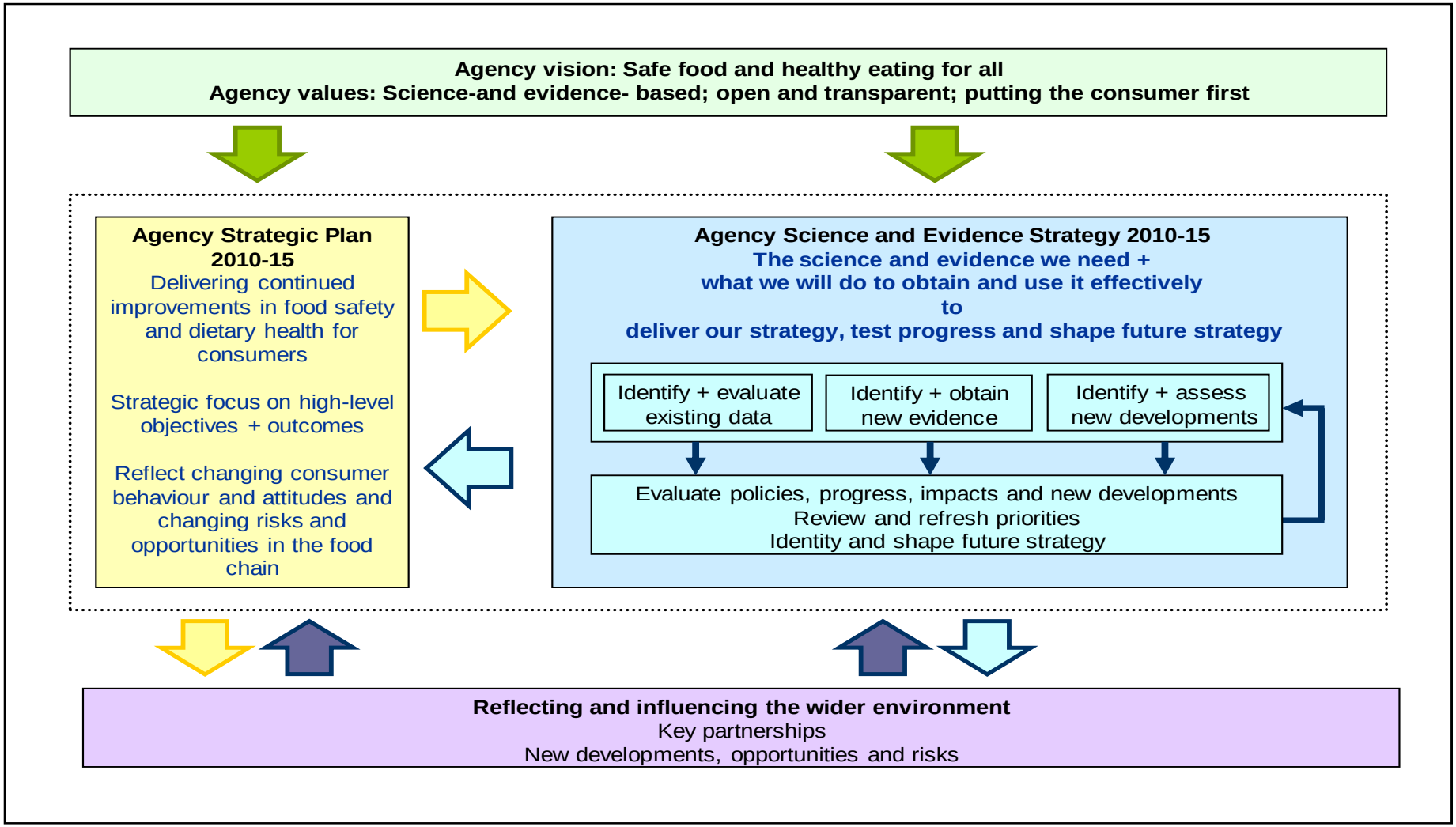
Reviewing and refreshing our Strategy

We will review this Strategy regularly and refresh it as needed in light of developments. The outputs from this Strategy will inform the review and revision of our Strategic priorities.

Our Chief Scientist's Annual Reports will provide updates on our level and balance of resourcing, and report progress, new developments, and any revision of priorities. The GACS will provide independent commentary and challenge on these issues.

Figure 2 sets the Science and Evidence Strategy in context, showing how science and evidence reflects and informs the Agency's Strategic priorities and the wider environment.

Figure 2 **How our Science & Evidence Strategy reflects and informs our strategic priorities and the wider environment**



Part 1: Priority Evidence themes

The first five priority evidence themes address the outcomes in the Agency's Strategic Plan 2010-15, while the sixth supports the underpinning and longer-term work that looks beyond the period of the Strategic Plan 2010-15.

Priority Evidence themes *set out the key evidence we will need, to deliver our strategic objectives, test progress, and shape future priorities*

Evidence theme 1 - Food safety: UK production and consumption

Overall objectives for this priority are 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 importance for health of risks from chemical and biological hazards and from allergens in food and feed
- improve our ability to anticipate and minimise the effects of food and feed incidents

Evidence priorities include:

- Analysis of existing and alternative intervention strategies to identify which have the greatest potential to control or reduce food safety risks. Major areas of work include:
  - Effective official controls, including behaviour and culture that achieve compliance and food safety
  - Campylobacter in food, focussing on chicken, to support risk-based interventions
  - Broader work on risk-based controls for meat
  - Risks and controls for other major pathogens, drawing on data from the IID2 study[3]
- Systematic collection of survey, monitoring and epidemiological data on patterns and drivers of risks from chemical and biological hazards and allergens in food and feed, including robust data on foodborne illness across the UK.
- Horizon scanning and intelligence to identify current and future technologies, trends and new and re-emerging risks – taking a 'whole food chain' approach.
- Better access and use of data from other sources, particularly from industry, official and unofficial controls, surveys and from incidents and outbreaks.
- Data collection and analysis to support our ability to respond to current and emerging food safety threats, including CBRN (chemical, biological, radiological and nuclear) threats.

[3] The second study of Infectious Intestinal Disease in the community (IID2) is a major research project to update the baseline data on the burden and causes of infectious intestinal disease (IID) in the UK population.

Evidence theme 2 - Food safety: imports

The **overall objective** for this priority is to:

- identify and capture current data on imported food
- analyse the data to identify critical gaps and risks
- develop proposals for more effective, targeted measures to spot and control risks
- test how effective existing and new measures are in practice

Specific priorities:

- Analysis of data to evaluate and prioritise risks across the different ingredients, chains, points of entry and controls for food/feed, and the underlying factors that affect these.
- Modelling and testing options to improve controls.
- Horizon scanning, intelligence sharing and information management to pick up current and future trends and risks relating to food/feed imports.

Evidence theme 3- Healthier foods and diets

Overall objectives for this theme are to:

- improve our understanding of 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 to prioritise options with the greatest impact
- understand which measures work best to promote the availability and uptake of healthier products and diets – focusing on saturated fat, salt and calories – and evaluate their impact in practice on diet and health outcomes

Specific priorities include:

- Systematic gathering, analysis and reporting of data on UK food consumption and nutritional status, including the National Diet and Nutrition Survey and the supporting food composition data published in the McCance and Widdowson series. Developments include:
  - improved ability to track trends in food consumption, identify problem areas and respond to emerging policy issues
  - better data on catering and out-of-home food consumption
  - links with other relevant national and international data sets
- Research and analysis to improve risk-benefit assessment of the effects of diets on health, including by proxies and markers of exposure and effect, and to develop and support consistent criteria on ‘healthier’ foods and diets.
- Translational research to test the effects of dietary interventions on health outcomes in representative, large-scale studies, to ensure that dietary recommendations are based on robust evidence.
- Research on critical gaps to allow us to assess the impact of options to change the composition of foods, including overcoming technical barriers to reformulation, and to understand which measures have most impact in changing products and behaviour.
- Evaluation to measure the effects of changes to products and consumer behaviour on the overall diet and on health outcomes, including unintended consequences.

Evidence theme 4 - Food behaviours and information

Overall objectives for this theme are to:

- understand which interventions work best to help people achieve healthier diets
- assess and test what influences food behaviours and choices in practice and evaluate the impact on diet and on health
- develop evidence-based messages for consumers on food safety and healthier diets, including information at point of purchase or point of choice

Specific priorities include:

- Analysis and targeted research to identify and test interventions that have the biggest impact on food behaviours which contribute to good food hygiene practices and to healthier diets, including learning from other sectors and contexts.
- Data and analysis to improve baseline knowledge on what works in influencing food behaviours, and to identify critical gaps, including:
  - what influences food behaviour and choice inside and outside the home, and why, and the impacts of these on food safety and diet
  - behaviour and culture in food businesses and enforcement
  - where and how to refine messages for specific groups
  - how food safety and healthier eating interact with other factors to influence food behaviour (such as waste, ethics, cost, brand, etc.).
- Evaluating the uptake and impact of existing and new interventions on actual behaviour and health outcomes (including unintended consequences). To include innovative ways to deliver food information, for example Scores on the Doors and similar schemes, front-of-pack labels, and information in catering and food service contexts.
- Robust evidence and analysis to inform integrated advice to consumers on food issues

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Evidence theme 5 - Effective risk-based regulation

Regulation *covers self-regulation, assurance, guidance and inspection, as well as formal statutory controls and enforcement*

The overall objectives are to:

- develop a consistent, evidence-based view of proportionate, effective regulation across the food chain
- develop and test new approaches and evaluate their impacts in practice.

Specific priorities include:

- Data, analysis and research to understand risks and benefits of options for controls, to identify which work best to reduce risks and adverse impacts on health. To consider:
  - cultures and behaviours of key people and organisations in regulation, to understand the scope for effective controls and incentives, and their impact
  - data and analysis to develop and assess options for meat controls.
  - gaps in coverage/compliance and their consequences
  - better use of survey and incidents data to identify high risk activity and causes
- Data and analysis to audit the pattern and impact of enforcement activity across the UK
- Monitoring, analysis and research on critical gaps on: protecting consumers from risks from food fraud and misleading practices, and compliance with labelling and compositional standards, with a focus on areas of highest risk.

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

Overall objectives are to:

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

Specific priorities include:

- A new funding stream for Strategic Evidence, to address cross-cutting and longer-term evidence needs, including:
  - Horizon-scanning to identify, analyse and prioritise cross-cutting and longer-term issues, threats and opportunities, including better understanding of climate change impacts on food safety and nutritional standards.
  - Support for longer-term and cross-cutting work that cannot be picked up in existing programmes - including scoping, 'start-up' costs, or ongoing support, for example for collaborative projects, including in EU programmes
  - Other evidence needs that do not fit in existing themes and programmes
- Data, analysis and research on critical gaps to develop a more consistent understanding of risks and benefits across the food chain. This will inform prioritisation based on an understanding of risk-benefit and impact. Developments include reflecting variation within and between groups of people, and support for evidence prioritisation.
- Robust data, analysis and research on critical gaps to develop impact assessment of proposed regulations and other initiatives, and post-hoc evaluation of impacts
- Implementing and evaluating the Social Science Strategy[4] with guidance from the Social Science Research Committee (SSRC), including:
  - Robust evidence and analysis on consumer attitudes and behaviours across the UK, from a new flagship rolling survey on Food Issues
  - Developing a Strategic Partnership with the ESRC including collaborative work on why people eat what they eat and the Understanding Society longitudinal study.

[4] http://www.food.gov.uk/multimedia/pdfs/committee/ssrcstrat.pdf

Part 2: Priority Activity themes

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

Priority Activity Themes *set out the actions we will take to obtain and use evidence effectively and innovatively, to support delivery of objectives now and in the longer term.*

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: To ensure we balance horizon-scanning; gathering and using existing data; commissioning new work, analysis and interpretation; translating evidence into actions; and evaluating impacts. We will make better use of existing data by increasing our awareness of data and by systematic analysis and review.

Horizon scanning to pick up new issues, threats and opportunities, through the scientific advisory committees and other projects and activities, joining up across the Agency and across Government.

Prioritisation: We will ensure the best combination of work across all our objectives and between current and future priorities by prioritising our evidence needs centrally using a common framework. An outline of the prioritisation process is at Annex A. We will publish the results as an evidence plan, setting out the main work we wish to commission in the coming 1-2 years. This will provide transparency and give us external comment, before we commission new work, on:

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

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

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
- the scoping of new work sets out the expected outcomes, and the plans and resources for how and with whom the outcomes will be used and translated into impacts.
- commissioning is effective and fit for purpose for us and for our contractors

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.
- Collaborate effectively across the Agency.

Priority activities

We will promote effective internal collaboration by:

- Setting a common framework for all our science work in this Strategy - emphasising cross-cutting and underpinning themes and mechanisms to make this easier.
- Building multidisciplinary teams across the Agency to ensure we get the range of expertise and skills and we integrate science and policy work.
- Evidence prioritisation across the Agency that helps us identify internal partnerships

Prioritise and support the delivery of collaborative work with external partners in our new Strategic evidence programme (see Activity theme 1)

Evidence prioritisation will include explicit consideration of the potential for partnership in all new work and this will be reinforced by publishing a forward look of evidence needs.

We will deliver through partnership in the UK, EU and beyond, to identify, share and analyse data, identify and respond to opportunities for strategic collaboration, and develop effective responses (see the following box on page 11 for key examples)

Key partnerships

With other departments and funders to ensure that:

- Our work is co-ordinated with relevant work by others, including cross-government work on: a Food Research Partnership and Joint Food Research Strategy; food security and sustainability, in the face of climate change; diet, lifestyle and health; and wider work on public health, behaviour change and education
- Relevant long-term, underpinning science and skills are supported in key areas, including:
    - the underlying nature, mechanisms and development of risks from pathogens, chemicals and allergens in foods, and to underpin effective risk assessment. We aim to develop a strategic, cross-funder approach to control of Campylobacter with Defra, the BBSRC and other partners.
    - understanding the relationships between diet and health and the underlying mechanisms and the factors that influence them.
    - biomarkers in relation to diet and cancer, and other food-related risks.
    - understanding food behaviours in the context of wider behavioural and social science research, including descriptive and theoretical work on potential barriers to behaviour change, to complement the Agency's work on testing interventions. In particular we will continue to develop research with the ESRC on why people eat what they eat.
    - better understanding from the economic and social sciences of what influences effective regulation and safe or unsafe behaviours by operators, regulators and consumers; and on the underlying nature, mechanisms and development of risks from pathogens, chemicals and allergens in foods, and to inform effective risk assessment, including through strategic partnership with the ESRC.

With **enforcement, monitoring and industry partners,** including to:

- ensure that informal and enforcement data, as well as qualitative information, are gathered and used effectively to inform our work, and that the results of analysis are translated effectively to inform planning and future enforcement and control activities
- ensure monitoring data collected by ourselves or by partners provide maximum value to the Agency as well as to others
- build a common understanding and evidence base for new controls, and translate results effectively to deliver reductions in food-related ill-health in practice

With **EU and international funders, regulators and risk assessors**, including the European Food Safety Authority, EFSA

With **government professional networks** in economics, social research, operational research, and developing partnerships with the learned and professional 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, and communicated effectively to everyone who may need or want to use it – not just the science community but consumers, producers, retailers and enforcement partners.

The General Advisory Committee on Science (GACS) will continue to provide independent expert 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 those who need to use it – including food business operators - and to other stakeholders.

Priority activities:
The Scientific Advisory Committees (SACs) will remain the cornerstone of our independent, expert risk assessment.

Governance: We will apply good governance to ensure robust good practice in the development and use of scientific evidence and advice[5]. We will review and strengthen these measures, with the advice of the GACS.

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

We will develop innovative ways to support knowledge transfer to those who need to use and apply the results in practice to help deliver safer food and healthier diets – for example by reformulating products or improving safety controls. This will build on experience with successful resources such as Combase[6]. We will support this by ensuring all new work has a clear plan for knowledge transfer and communication before it is commissioned.

[5] These include: The Agency Good Practice Guidelines for SACs and Science Checklist, Recommendations of the Agency's 2002 Review of SACs and the Cross-Government Code of Practice for SACs (COPSAC).
[6] See http://www.combase.cc/

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 developing our in-house capabilities in core areas (including toxicology, nutrition science, microbiology, environmental health, veterinary science, economics, social science, operational research and statistics), supported by internal Heads of Profession, wider professional groups, and Continuous Professional Development for all relevant professions in the Agency.

We will develop and support external knowledge, skills and capacities by

- Commissioning 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 areas where such advice is needed by the Agency.
  - the SACs are supported effectively and appropriately by the Agency.
- Reviewing the Agency's needs and options to support external skills training, currently delivered primarily through our Postgraduate Scholarship Scheme, to examine and prioritise alternative approaches. To be completed by December 2010.
- 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.

Activity theme 5: Appraisal and evaluation

Appraisal *tells us the potential impact of different options and helps us decide what to do, and how.*

Evaluation *tells us how things work in practice and what impacts they have.*

We need to use data, tools and analysis to:

- **appraise** our work before it is commissioned to inform priorities and define specifications
- **evaluate** completed science projects and implemented policies to determine quality, success and impact.[7]

This covers:

- Individual science and evidence projects, programmes and bodies of work
- 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, research proposals, and completed work.

For Agency policies and initiatives

- A new cross-Agency project led by our Analysis and Research Division will develop tools and guidance to embed and support evaluation across the Agency's work. Its aim is to deliver common understanding, approaches, tools and supporting data, and identify critical evidence and skills gaps.

For the Agency's Science and Evidence Strategy:

- Assessing and reporting against the Performance Indicators for Agency science developed by the GACS and developing the 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.
- 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.
- Overarching assessment and reporting by the Agency's Chief Scientist including in his Annual Report, assessing progress, key achievements, problems and proposed revisions and future plans in delivering the Science and Evidence Strategy.

[7] Further details and guidance on these processes are set out in the cross-Government guides known as the Green Book and the Magenta Book. See:
www.hm-treasury.gov.uk/data_greenbook_index.htm
www.nationalschool.gov.uk/policyhub/magenta_book/

Contacts for further information and comments on the Strategy.

If you would like further information on the Agency's Science and Evidence Strategy and our science work, or have any questions or comments, please visit our website at www.food.gov.uk or contact us at:

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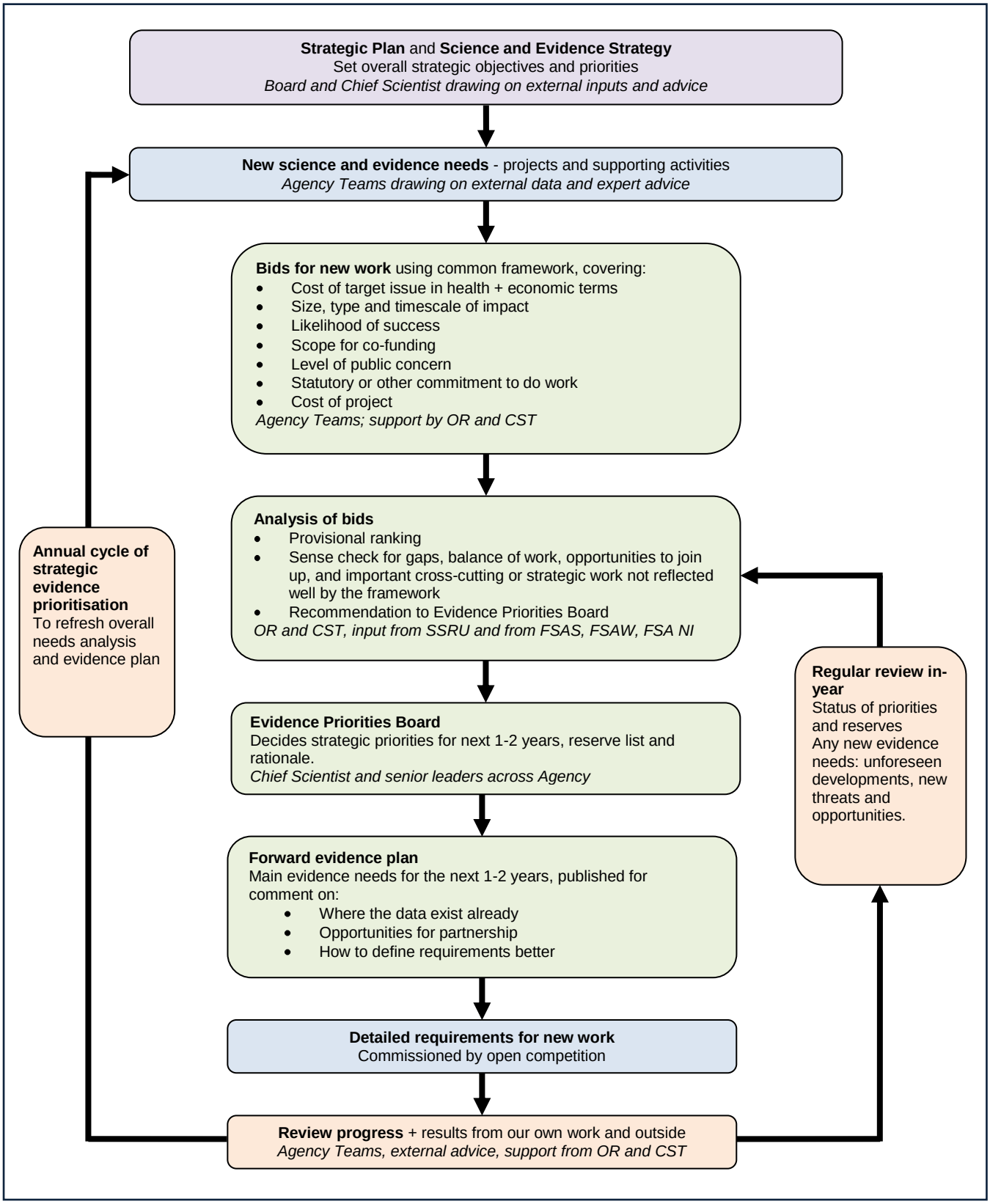
Annex A Outline of the evidence prioritisation process

The aim of the evidence prioritisation process is to provide am open, structured and evidence-based framework for deciding priorities across our strategic needs.



Key: OR: Operational Research team; CST: Chief Scientist Team; SSRU: Social Science Research Unit; FSAS – FSA Scotland; FSAW – FSA Wales; FSANI- FSA Northern Ireland