

FSS SCIENCE EVIDENCE AND INFORMATION (SEI) STRATEGY

1 Purpose of the paper

1.1 This paper is for **Discussion**.

1.2 The purpose of the paper is to outline our final future SEI strategy, which is a key enabler to support us in how we deliver our strategy and corporate plan. The SEI and its linked documents will provide a framework for FSS to help direct how we identify and prioritise our SEI needs, assure how we use SEI in our work and how we weigh evidence and balance risks in decision making.

1.3 The Board is asked to:

- **Agree** the final SEI Strategy (Annex A);
- **Agree** the proposed approach to measuring impact of the SEI strategy in section 4;
- **Note** our intention to publish the final SEI strategy by April 2017.

2 Strategic Aims and Background

2.1 These areas were presented to the Board in the December SEI Strategy paper and can be found at: <http://www.foodstandards.gov.scot/news/board-meeting-14-december-2016>

3 Discussion

3.1 At the Board meeting on 14th December 2016, the Board:

- **Agreed** our definition of Science, Evidence and Information;
- **Agreed** the five principles upon which the SEI strategy is based;
- **Noted** the three SEI strategy themes and approaches and asked for consideration of a fourth theme on risk management;
- **Noted** the approach and the timeline to publish the Science, Evidence, Information strategy; and
- **Noted** that the SEI will be supported by a number of operational documents, including an annual current and forward evidence plan, risk management framework, a science governance statement and a science checklist.

3.2 Since the Board discussed the SEI strategy in December 2016; FSS has considered comments that the Board made and placed the draft SEI strategy online for wider stakeholder consultation for two weeks from 10 until 24 January 2017. 277 FSS stakeholders from academia, industry, local authorities, cross-Government, consumer and national organisations were sent the link to the consultation. Six responses were received. All modifications to the SEI resulting from the Board comments and consultation responses are presented in Annex B. FSS has brought the finalised strategy back to the Board for a final discussion before its publication on the FSS website by April 2017.

4 Measurement of the impact of the SEI Strategy

4.1 At their meeting on the 14th December 2016, the Board sought clarification on how the impact of strategy would be measured and how it is funded. There are a number of ways to measure the impact of the SEI strategy. There is a difference between monitoring and evaluation of the strategy and monitoring and evaluation of the science. FSS, through the annual business planning process prioritises our budget spend including that on SEI projects. The Science checklist used by staff to create business cases during the year includes an assessment of the impact of SEI and costs. All projects will be monitored through to completion and an independent (peer) review and impact assessment will be made once the SEI project is completed.

4.2 FSS will provide the Board with an annual report on:

- All SEI projects with an assessment of their impact against the FSS corporate plan and it's six outcomes; and
- An annual narrative of what we have achieved under each of the three SEI themes as well as our objectives for the following year.

5 Identification of risks and issues and European Union considerations (Brexit)

5.1 These areas were documented in the December SEI Board paper and can be found at <http://www.foodstandards.gov.scot/news/board-meeting-14-december-2016> FSS will keep our approach under review in the context of the EU exit.

6 Recommendation

6.1 The Board is asked to:

- **Agree** the final SEI Strategy (Annex A);
- **Agree** the proposed approach to measuring impact of the SEI strategy in section 4; and
- **Note** our intention to publish the final SEI strategy by April 2017.

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08 February 2017

ANNEX A

Food Standards Scotland Science, Evidence and Information Strategy

Introduction

Our first strategy Shaping Scotland's Future to 2021¹ has created our vision to put consumers first and foremost and is grounded by our five key values against which everything we do will be judged.

FSS Vision “ *To create a food and drink environment in Scotland that benefits, protects and is trusted by consumers*”

FSS VALUES

Public service - *having people at the heart of what we do, putting the consumer first;*

Authority – *being a credible, consistent and trusted voice of authority on food matters in Scotland, basing our decisions upon sound science and evidence;*

Openness – *being open and transparent in our dealings with the public, stakeholders and partners;*

Independence - *at arm's length from Ministers, but aligned with the Government's Purpose; and*

Partnership – *collaborating with others to achieve the best outcome for the public.*

The Food (Scotland) Act 2015² defines our objectives:

- To protect the public from risks to health which may arise in connection with the consumption of food;
- To improve the extent to which members of the public have diets which are conducive to health; and
- To protect the other interests of consumers in relation to food and feed.

Our strategy sets out our contribution to the Scottish Government (SG) purpose through linking the national outcomes with our six strategic outcomes. Our six outcomes form the basis of our corporate plan (2016-19), outlining what we will do, through an ambitious and challenging programme.

FSS Strategic Outcomes

1. *Food is safe*
2. *Food is authentic*
3. *Consumers choose healthier diets*
4. *Responsible food businesses flourish*
5. *FSS is a trusted organisation*
6. *FSS is efficient and effective*

¹ <http://www.foodstandards.gov.scot/shaping-scotlands-food-future-our-strategy-2021>

² <http://www.foodstandards.gov.scot/about-us>

Our approach to risk

FSS is an organisation that manages current and future risks for safety, standards and diet in food and feed in Scotland and as an organisation using the principles of the Scottish Government risk framework.

To manage the risks we use science, evidence and information (including intelligence and emerging data). We are improving further our risk management approach through the development of a framework to show how science, evidence and information (SEI) is integrated into our standard processes that we use to manage risk and uncertainty under different circumstances e.g. in decision making, during incidents and through audit. The processes contained in the framework will complement the SG risk framework and internationally recognised protocols for the use, interpretation and publication of science, evidence and information.

Our approach to risk is underpinned by our published and developing organisational and surveillance strategies (below), which will support activities under our six strategic outcomes.

- **A Regulatory Strategy (RS)** outlining how FSS will fulfil its role as a national regulator in Scotland.
- **A Food Surveillance Strategy (FS)** which will generate the intelligence required to identify the risks to the health of consumers in Scotland and the reputation of Scottish produce.
- **A Communications Strategy (CS)** to influence positive consumer behaviours targeted to the intended population groups based on their particular risk, behavioural and demographic profiles.
- **A Foodborne Illness Strategy (FI)** to target the key pathways that are responsible for the transmission of microbiological, chemical and radiological risks throughout the food chain.
- **Setting the direction for the Scottish Diet (SDSD)**³ sets out the key principles and broad measures for FSS action to rebalance the Scottish diet.
- **A Science, Evidence and Information Strategy (SEI)** sets our vision, principles and three themes around how we will, prioritise, enhance and provide governance for the use of SEI to help achieve the corporate outcomes for FSS.

³<http://www.foodstandards.gov.scot/sites/default/files/Board%20meeting%20-%202016%20January%20-%20Diet%20and%20Nutrition%20Proposals%20for%20setting%20the%20direction%20for%20the%20Scottish%20Diet%20160104.pdf>

Our Science Evidence and Information Vision

Our Science Evidence and Information Vision

“ We will use science, evidence and information to develop, challenge and evaluate our policies, to tackle risk and promote opportunity in food safety, food standards and diet and nutrition both today and tomorrow.”

Our first Science, Evidence and Information (SEI) strategy will guide FSS on how to use SEI to help deliver our six strategic outcomes, to inform how we manage Scottish public health risks effectively and identify opportunities to improve our diet and food standards.

Our definition of Science Evidence and Information

FSS will use all SEI which is robust and appropriate to inform creation, development and evaluation of policy. However, emerging SEI may be incomplete or uncertain, including during incidents. Throughout the SEI strategy our definitions of science, evidence and information, which can be quantitative and/or qualitative, will apply:

- **Science:** physical, natural and social science which apply appropriate and novel methodologies to test theoretical principles;
- **Evidence:** all data and its analysis;
- **Information:** all surveillance, monitoring, market research, opinion (stakeholder, business, political, web analytics, observational data) and intelligence.

Our SEI strategy will be based on five key principles, linked to our FSS values (highlighted in bold) against which we judge everything that we do, and by which all our staff conduct work ensuring that we gather and use SEI effectively, from a variety of sources and use it to create a food and drink environment in Scotland that benefits, protects and is trusted by consumers.

Our Principles for Science, Evidence and Information

The science, evidence and information we commission or collect will be:

- **Targeted** on our strategic priorities to reduce risks associated with food and feed: being informed by stakeholder, business and consumer participation and opinion (**Public Service & Partnership**).
- **High impact** by contributing to those areas that will lead to improving public health: bringing maximum benefits and opportunities for stakeholders, business and consumers (**Public Service & Partnership**).
- **Forward looking** by utilising the latest science, evidence and information and building our capability to provide value (**Authority & Partnership**).
- **Trusted and robust** through rigorous peer review and consultation with stakeholders, businesses and consumers (**Authority & Independent**).
- **Integrated transparently** through using the wider science community and in our decision making and through our risk management framework (**Public Service & Openness**).

The ambitious and challenging program outlined under our six strategic outcomes will be underpinned by three SEI themes:

- Prioritising our science, evidence and information needs;
- Enhancing and communicating the science, evidence and information we use;
- Providing governance of our science, evidence and information.

We are improving further our risk management approach through the development of a framework to enable transparency in how we deal with uncertainty in the evidence (incomplete or emerging data), how we weigh evidence to balance risks and benefits to stakeholders, businesses and consumers and how we make risk-based decisions.

Prioritising our Science, Evidence and Information

Our aim is for all FSS staff to identify, prioritise and investigate the key SEI that we need to conduct or gather on an annual basis as part of the business planning process. This will balance work focused on our immediate priorities and knowledge gaps with more innovative and strategic work.

We will:

- Identify existing, relevant SEI and focus on where additional SEI or new technologies will have greatest impact on our corporate outcomes and/or to meet current priorities;
- Promote, across FSS, intelligent and shared use of data, information and analytics, to understand existing risks, identify new and changing risks, and to develop more targeted and effective surveillance and regulation e.g. to drive up value from our statutory monitoring and reporting;
- Identify emerging risks that are based on scientific surveillance methods and using the analysis of information linked to our enforcement, operations, audit and food crime activities and our wider partnership working particularly with other Scottish Government regulators such as Marine Scotland and SEPA, with the food and drink industry and with Local Authorities;
- Be forward looking by considering the future food requirements of consumers to ensure that food trends, their interests and concerns are properly understood and protected by FSS (such as population growth, climate change, ageing population, and food behaviors);
- Publish an annual science, evidence and information plan which will provide an updated list of our current research and surveillance projects, specify our datasets and analysis that are publically available and include a section identifying gaps in our knowledge base where we will look to identify potential future work which may need to be undertaken.

Enhancing and communicating our science, evidence and Information

To enhance our SEI we will maintain and develop our scientific capabilities, develop our UK and international strategic science partnerships and communicate our SEI effectively with impact.

Our people and Skills

The nature of food supply and emerging and re-emerging food risks are constantly changing. FSS must continually assess our staff capabilities and capacity to ensure that we can meet current and future challenges related to our strategic outcomes. We will ensure that we have, or have access to, highly skilled scientific staff across a range of

disciplines. We will also foster an environment for interdisciplinary team working across FSS.

We will:

Ensure we can effectively communicate the implications of the relevant SEI to staff, to stakeholders and to consumers by;

- Providing regular seminars for staff and stakeholders on our science and its application for consumers;
- Ensuring staff include a communication plan at the onset of any project where SEI are gathered or used;
- Ensuring staff include an equality impact assessment (EQIA) at the onset of any project where SEI are gathered or used;
- Developing the skills of all FSS staff to enable clear communication of the SEI on which we base our decisions and policies.

Maintain and develop the science capabilities within FSS by;

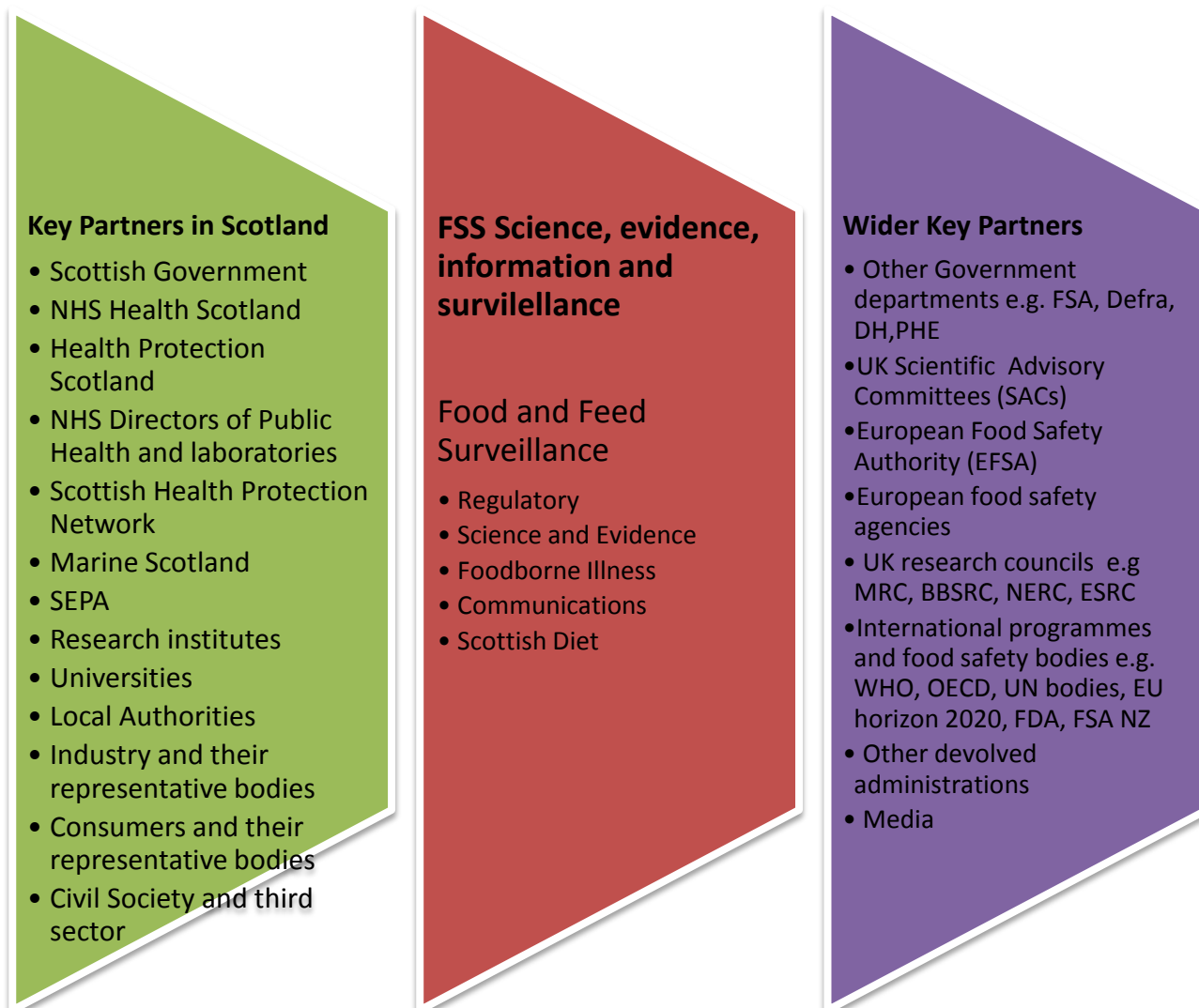
- Providing opportunities for staff development and training, conducting regular skills audits to ensure the scientific expertise is in place to face future challenges (including emerging risks, uncertainties and incidents);
- Being receptive to new science based technologies, innovative approaches and transformational methods of information gathering and analysis;
- Using our skills to make information easy to use and analyse;
- Using our skills, and where appropriate partnership working, to turn data into answers;
- Being well informed, skilled and professional in our approach.

Working with others

We will work with others to increase value, rather than working alone, to achieve the best outcome for Scottish consumers and deliver ambitious objectives and cross-cutting impact through strategic partnerships.

We will

- Work with others to build the capabilities of the science community in Scotland (e.g. research institutes, universities, industry etc.);
- Work across the UK and elsewhere so that existing expertise, skills and knowledge in our areas of interest will be available now and in the future;
- Utilise a variety of communication techniques (e.g. blogs, twitter, wider media, public talks/education/science fairs etc.) to increase engagement and communication with consumers, the science community, industry and stakeholders;
- Build increased analytical expertise in Scotland, through partnership working, (e.g. with Marine Scotland and SEPA) to add value;
- Understand and work with consumers, food businesses, enforcement partners and others in the food chain to support behaviour change and build on spreading good practice;
- Build and maintain strategic scientific partnerships and networks, through existing collaborations (e.g. with the FSA and other partners across Scottish and UK Governments), through new scientific collaborations and with food agencies across Europe and elsewhere in the world and with other science funders to add value to what we do.



Our Science, Evidence and Information landscape

Governance of our Science, Evidence and Information

Our science and evidence and information governance statement will help to ensure that our staff is transparent in how we deal with uncertainty in our SEI and will support our risk management framework. Our corporate plan provides our values, principles and key enablers which are linked to our SEI values.

Our science and evidence checklist will help us, at the beginning of any new work or project, to consider the appropriate use of the SEI that we plan to collect for example what will it achieve and how will it be communicated through the development of a communication plan and subsequent policy papers, guidance and proposals which deal with or include science-based issues. The checklist also deals with the application of SEI to risk assessment, using robust and appropriate SEI and consideration of the different sources of evidence.

Summary of our science, evidence and information governance statement

Our Science and Evidence Governance	How we will do it	
We will be open and transparent in identifying issues and defining our needs	We identify the evidence we need through the expertise of our staff and input from relevant Scientific Advisory Committees, other experts and stakeholders, through regular dialogue, attending workshops/meetings, and peer review of our research ideas and requirements.	We prioritise our evidence needs annually and publish a forward evidence plan setting out the work we plan to commission and inviting comments on existing data that may exist and can address the identified needs, opportunities for collaboration, and whether we have defined our evidence needs in the best way.
We will use quality assurance in commissioning and gathering science, evidence and information	The guidelines within the <i>Scottish Government Public Sector Procurement in Scotland</i> set out the guidelines that govern our purchasing of goods and services including science, evidence and information. We will procure our science, evidence and information, wherever appropriate and as determined by the financial cost of the project, through open competition.	We will ensure and evaluate the quality of our commissioned science and evidence through appropriate quality assurance (including accreditation of methods). We require all scientific research we fund to comply with the <i>Joint Code of Practice for Research</i> which sets out standards for the quality of science and the quality of research processes that contractors use.
We will ensure evaluation of our science, evidence and information	An evaluation plan for commissioned science, evidence and information will be built in and agreed at the onset of the commissioning process.	We ensure the quality, fitness-for – purpose and impact of the work we commission by peer review of research proposals, final reports and outputs.
We will welcome and seek challenge	We will ensure that our science, evidence, information and analysis is informed by input, scrutiny, challenge by experts and other stakeholders through direct liaison and appropriate consultation.	We will invite comments, annually, on our forward science, evidence and information needs.
Publication and Use of our science and evidence	We will ensure that we publish current details of the science, evidence and information that we are funding.	Wherever possible we will publish, all reports and results on our website at www.food.scot and encourage publication in open access academic journals, as open data, or in data archives.

Science, Evidence and Information informs Risk Assessment and Management

Involvement of staff in directing risk assessments

FSS staff will continually use their professional skills (e.g. science, enforcement, audit, operations and communications) to:

- be fully aware of current or potential hazards under our remit;
- regularly engage with relevant Scientific Advisory Committees (SACs), research funders and programs, individual scientists, with other Government departments, stakeholders (including industry) and consumers;
- ensure that FSS is involved in framing risk assessment questions for SACs, that assessments can be prioritised to meet Scottish needs, that Scottish data can be included or enhanced (e.g. by specific industry information or by consumer focus groups in Scotland) and assessments can be provided within the necessary timescales;
- aid the preparatory work for a SAC risk assessment e.g. sifting scientific papers for review or providing resource to help draft reports to deliver an assessment within a shorter timeframe; and
- carry out an immediate risk assessment for specific food incidents.

Our developing risk management framework

Our developing risk management framework requires science, evidence and information at all stages. The international CODEX principles for risk assessment set the working principles and definitions for risk analysis for food safety for application by Governments which are followed by FSS⁴.

Pre-assessment requires information from surveillance (scientific, intelligence, and/or observational) and from consumers to inform FSS on what the current issues are or will be in the future.

Risk assessment in known and emerging circumstances will generally be science and evidence based and informed by experts in the UK by relevant Science Advisory Committees (e.g. the Advisory Committee on the Microbiological safety of Food and the Scientific Advisory Committee in Nutrition), in Europe by the European Food Safety Authority (EFSA) and internationally by organisations such as the American Food and Drug Administration (FDA).

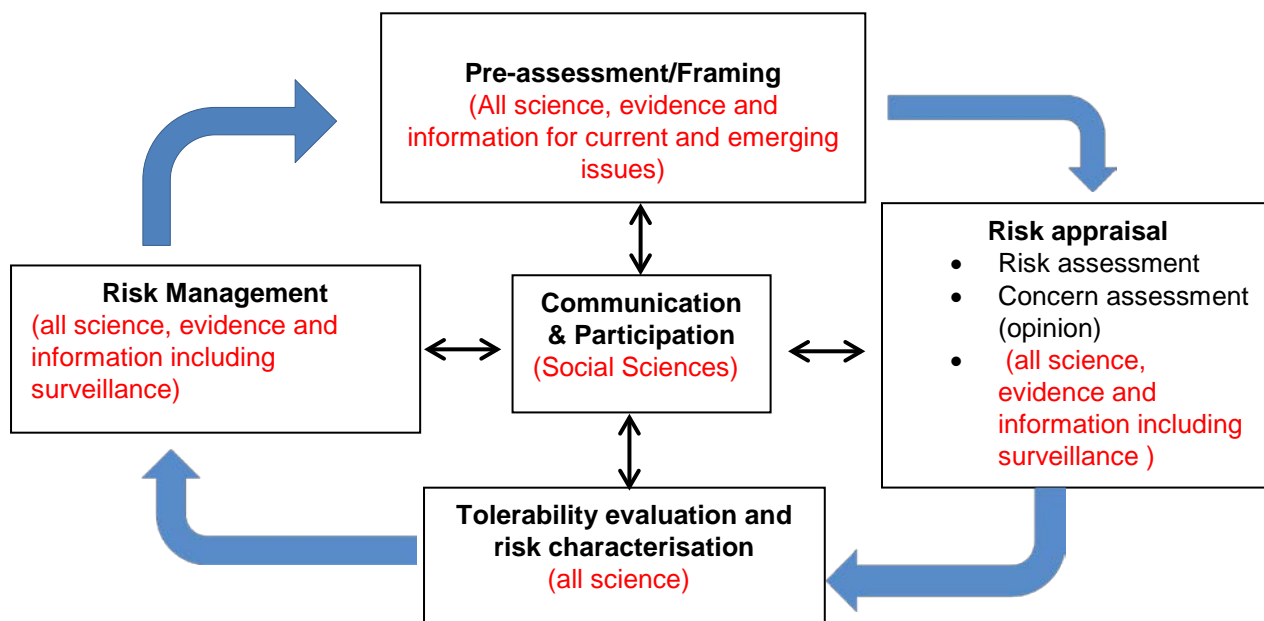
Concern assessment requires the use of social science, to identify the concerns of consumers, stakeholders and the economic and social impacts of the risk.

Risk characterisation and tolerability evaluation is informed by the risk appraisal process, using all available science (including social opinion) but does not acquire new scientific or other information.

Risk Management requires a generated risk assessment and consideration of a combination of other information such as surveillance/observational/intelligence data, stakeholder and business opinion(s), social, economic, political and feasibility aspects to inform the management option(s). For FSS, this includes monitoring and review of option(s) put in place which may require regular review and additional science, evidence and information.

⁴ <http://www.codexalimentarius.org>

Communication and participation using science, evidence and information to maximise opportunity and target information and opinions throughout the risk analysis process (particularly on hazards and risks, risk-related factors and risk perceptions). FSS must communicate clearly the science, evidence and information related to risk assessment findings and the basis of our risk management decisions within FSS (amongst our risk assessors and managers) and externally (to consumers, food and feed businesses and a variety of other stakeholders).



Outlining the roles of science, evidence and information in the risk management framework.

Annex B: Summary of Board and online consultation comments and changes to the SEI Strategy

Board Comments and changes made to the SEI Strategy

1. Should the SEI Strategy have an additional strategic theme called risk management?

FSS is developing a separate risk management framework, which is mentioned in the final SEI Strategy on Page 2. Additionally, we have inserted text at the end of the SEI Strategy on pages 10 and 11 to summarise the role of FSS staff using SEI in risk assessment and management by adding a section from the August Board information paper on *Risk assessment use to aid delivery of risk management and policy advice within Government*.⁵

2. The SEI Strategy could be clearer on the mechanism for risk assessment and balancing evidence.

We have inserted text at the end of the SEI Strategy on pages 10 to summarise the role of FSS staff using SEI in risk assessment. How FSS staff will consider risk assessment and balancing evidence is covered within the science and evidence checklist which is provided in the Board pack for information and will be published on the FSS website with the SEI Strategy.

3. Equality impact assessment (EQIA) should not just be included as part of communications and could be separate in the SEI Strategy.

EQIA and communications on separate lines now under our people and skills on Page 7.

4. The Board sought clarification on how the impact of strategy would be measured and how it is funded.

A proposal to provide an annual report to the Board on the SEI strategy including impact is provided in section 4 of this Board paper.

5. Add text to the SEI Strategy on the technology used for interventions.

This has been added into the final SEI strategy on page 6 under Prioritising our Science, Evidence and Information.

6. Social Science can help with views of the public.

Social Science is included in the definition of SEI on page 5 of the SEI Strategy.

Consultation comments and changes made to the SEI Strategy

1. General comments: Five of the consultation responses thought that the SEI strategy overall was good, complete, appropriate and that the principles and themes were sensible for the role of FSS. One response thought that the strategy could be tightened in places with a bit more detail. One response indicated that the strategy is strong with potential to make significant contributions to the use of evidence and that the three science, evidence and information themes and the actions identified capture the core mechanisms to support the effective use of evidence identified by the Alliance for Useful Information's 2016 evidence review⁶.

⁵ <http://www.foodstandards.gov.scot/board-meeting-17-august-2016>

⁶ Alliance for Useful Information 2016 Using Evidence what works? A discussion paper

2. Under the SEI theme on *Working with others* some additional suggestions were made by respondents for inclusion including European food agencies, Health Protection Scotland, NHS health boards, Departments of public health and NHS laboratories. It was suggested that the wording of linking with other food agencies *where possible* should be revised to omit that wording.

One comment was positive that the strategy is explicit about maintaining cross-UK collaboration, particularly in light of Brexit.

These suggestions have been added to our science, evidence and information landscape under key partners in Scotland on page 8 of the strategy and the *where possible* wording on page 7 has been omitted.

3. Two comments were made on how FSS would measure the impact of SEI collaboration and how some of the outcomes and priorities identified in the themes would be measured.

One comment was positive that the strategy had built in an evaluation plan at the outset as part of our science governance statement summarised on page 9.

A proposed approach to measure the impact of the SEI outcomes and priorities has been provided in para 4.1-4.2 of the Board paper for the FSS Board to consider and agree.

4. A comment was made about simplifying or providing a summary of the SEI strategy for consumers to make it more accessible.

One comment was positive that the strategy formally deals with public concern-assessment as part of your risk assessment approach.

FSS will provide a short paragraph on our website to indicate that the SEI strategy is a working document for FSS staff e.g. Food Standards Scotland (FSS) has produced our first Science, Evidence and Information (SEI) strategy. The working strategy helps how FSS operates to support our vision and priorities. The strategy will link, our organisation, our staff and our three SEI themes with actions.

5. A comment was made about methods of enhancing communication and that FSS could use you-tube videos may be a method to do this.

Under our people and skills on pages 6 and 7 of the strategy the need for FSS staff to ensure that they include a communication plan at the onset of any project where SEI are gathered or used is specifically identified. You-tube and other social media can be part of that plan.

6. A comment was made about the definitions of science, evidence and information focusing on quantitative data and that this could be enhanced by the addition of an explicit reference to qualitative evidence.

This was originally in the strategy but has now been made explicit on Page 5.