

Food Safety Authority of Ireland

Science Strategy 2020-2024

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Foreword

The Food Safety Authority of Ireland (FSAI) developed its first science strategy in 2016. This strategy remained in place until the end of 2019 and was implemented with an action plan. A review of the action plan has shown that there have been many significant successes but also some goals that were not fully achieved.

On the positive side, we have managed to recruit several highly qualified scientists during the period of the strategy which has allowed us to expand our risk assessment and emerging risk identification work. Through our work with the Scientific Committee we have issued more scientific opinions than ever before. Our risk assessment tools have expanded and we now have procedures for the risk ranking of chemical hazards and soon we will have risks ranked for biological hazards. We have also enhanced our ability to carry out risk assessments related to the undeclared presence of food allergens. Our capability and capacity to detect and identify emerging risks has started to expand with the development of new monitoring and ranking systems and our support for a pilot project on Nutrivigilance. Over the three years of the strategy we have provided strong support to the Government for development and implementation of a healthy eating policy and we have provided resources for implementation of the Government's obesity action plan. The FSAI's first scientific conference was held in 2019 which raised the profile of the FSAI as a science-based organisation. We have given scientific presentations in Ireland and around the world including advice on the organisation of regulatory science to many visiting countries. FSAI technical compliance standards have been updated and are in use internationally and our scientists have provided their expertise to the work of the European Food Safety Authority (EFSA), the European Commission and the Codex Alimentarius. Our scientists have explored new ways to communicate their science by social media and infographics. They have expanded relations with third level research institutes and have provided lectures on numerous courses and trained students placed in FSAI.

Despite these advancements our biggest impediment to developing the evidence base for risk assessment has been our inability to secure additional Government funding to support a modest research programme. As we look to the future, a challenging funding landscape makes it unlikely that the FSAI will be able to fund even small scientific studies, so the need for dedicated funding for scientific research is even more acute as we move into the next science strategy. Nevertheless, we will continue to do as much as we can with what we have and rely on the skills of our scientists and the help of our Scientific Committee structure to ensure that FSAI remains a science-based organisation. Against this background FSAI has decided to refresh the science strategy and extend it until 2024 to overlap with the corporate strategy timelines. This document will provide the strategic direction for our scientific efforts over that period.

Dr Wayne Anderson,

Director, Food Science and Standards.

Science Strategy mission



“To build on our scientific and technical expertise to support and strengthen consumer protection.”

Science Strategy goals



Goal 1

Proactively strengthen existing scientific partnerships and networks



Goal 2

Continue to develop the evidence base and improve the use of data



Goal 3

Ensure the knowledge and skills of our staff enable them to address new challenges and developments



Goal 4

Improve the visibility and dissemination of FSAI science

The role of science in the FSAI Corporate Strategy

The [FSAI Corporate Strategy \(2019-2023\)](#) was launched in January 2019. It set out the Authority's vision, mission and goals for the next five years. The FSAI's vision is "safe and trustworthy food for everyone". The FSAI's mission is "To protect consumers and raise compliance through partnership, science and food law enforcement".

The FSAI Science Strategy (2020-2024) outlines the role of science in achieving the FSAI's Corporate Strategy (2019-2023).

All four of the FSAI's corporate strategy goals bear their foundations in scientific research (see Annex 1).

- Enforcement and compliance
- Science, expertise and evidence
- Engagement and communication
- Organisational excellence

In order to achieve these corporate goals, the new science strategy must deliver:

- Scientific support for our enforcement officers
- An understanding of the nature of risks in the food chain to underpin official controls
- Comprehensive scientific and technical advice
- Risk assessment that is focussed and fit for purpose
- Proactive emerging risk and threat identification systems.
- A comprehensive science and evidence base
- Compliance-building supports for the food industry
- Clear risk communication
- Expanded scientific networks at national and international level
- Expert advice to influence and inform the development of European food law and International food safety standards.

In considering these demands, the new Science Strategy for 2020-2024 must recognise the resource constraints that affect scientific activity at the FSAI, both funding and resourcing, as well as the increasing internal demands for scientific support for risk management, investigations and enforcement. Therefore, there is a need to consolidate the improvements in capacity and capability achieved under the first science strategy and prioritise further development within those constraints. The Science Strategy 2020-2024 was developed following the process outlined in [Annex 2](#).



Key factors influencing science in the FSAI

The FSAI Science Strategy 2020-2024 must be responsive and adaptive to changes in the external environment within which the FSAI functions if it is to remain relevant to the FSAI mission. The most imminent factors influencing science in the FSAI at present include:

Brexit

The FSAI is an independent State body with responsibility for the enforcement of food law in Ireland. It operates within the remit of the Department of Health and implements food law, under a series of service contracts with official agencies. The FSAI's operations are underpinned and supported by this science strategy. However, now that the United Kingdom (UK) has left the European Union (EU), Ireland will face a significantly different trading arrangement with the UK as a third country. The need for science-based risk management decisions will increase should UK food law diverge from EU legislation. This is likely to increase demand on FSAI scientific expertise to support front line official controls, thereby reducing that resource for other scientific activities.

Sustainability

The FSAI operates in an agile environment where food production methods, processing techniques, packaging and the way in which food is presented have changed extensively over the years and continues to evolve. Since the previous science strategy (2016-2019), the United Nations sustainability goals 2030 have become a significant focus for member countries and the public. Many are relevant to food safety. Sustainability of the food system is under significant scrutiny and in 2019 the Irish Government published a climate action plan to 2030 with targets to reduce waste, energy usage and carbon emissions from agriculture that will strongly impact on Ireland's food production systems over the coming years. These changes in food production and processing may bring with them new food safety considerations. Sustainability also means that food should not be needlessly discarded, so accurate risk assessment and a complete evidence base are paramount to reduce precautionary recalls of food due to uncertainty regarding the risks they may pose.

The European Food Safety Authority

The work of the European Food Safety Authority (EFSA) has a significant influence on the work of the FSAI. EFSA has been in flux over the past three years with significant push-back by consumers and governments on EFSA risk assessments e.g. bisphenol A and glyphosate. Citizen groups and the EU Parliament have demanded more access to data used to approve products for market along with greater transparency. Consequently, new EU rules were agreed and published in 2019 to increase the transparency and sustainability of the European risk assessment system

and this will result in greater public access to data and a significant increase in budget and staff for EFSA. Hence EFSA's role in risk assessment at European level is growing.

The digital age

FSAI scientists operate in a society that now has real time access to vast amounts of information, dis-information and misinformation via the internet. Science is no longer the preserve of the scientist and there is a growing challenge to scientists and their expertise, even on issues where strong scientific agreement exists. Social media amplifies non-scientific conversation and confirmation-bias. However, recently the issue of 'fake news' on the web has raised awareness of the public regarding the veracity of information they access, which is a welcome development. The FSAI needs to communicate science clearly, concisely and in a timely manner (both proactively and reactively) that is consistent with modern information demands to both inform the public and counteract mis/dis-information about food safety science.

The FSAI needs to have a comprehensive knowledge and understanding of the evolving communication channels/ networks which if harnessed correctly, will be invaluable in detecting both existing and new hazards in the food chain and establish the level of risk using a balance-of-evidence approach based on the best data available.

Importantly, it also needs to ensure that legislative controls are risk-based, practical and effective, which will ultimately protect and improve the safety of Irish food and ensure that imported food meets the high standards demanded by EU food law.

The economy and public spending

Access to adequate funding is essential for research and development of the evidence base. In recent years the Irish economy has rebounded from a serious economic crash but the lessons learned during that period remain. Corporate governance in public bodies has been strengthened and spending in the public service is carefully managed under the scrutiny of the Department of Public Expenditure and Reform. However, in real terms the budget available to FSAI through the Department of Health has declined significantly since the last science strategy through a combination of an increasing cost base and static funding. Therefore, resources available to fund science have diminished further. Any future threat to the Irish economy will further impact public spending and therefore it is essential that in the FSAI, we look to leverage external sources of funding for science whilst we continue to seek additional funding from the Department of Health to support the delivery of the corporate strategy.

The FSAI Science Strategy 2020-2024

Scope of the science strategy

The science strategy encompasses FSAI scientific work in the areas of risk assessment, risk management, communication and regulation. It includes a wide range of scientific disciplines such as microbiology, chemical safety, food science and technology, veterinary science, environmental health and public health nutrition. It also supports the FSAI's enforcement policy, audit and investigation functions.

The activities and decisions of the FSAI must be based on sound science and this requires our scientists to be at the forefront of their fields of expertise, actively engaged with their peers and thoroughly networked nationally and internationally. But it also means that science at the FSAI must be visible and communicated appropriately to different groups of stakeholders. This will help to engender understanding and trust in our work to protect consumers' health.

The science strategy is designed to underpin the regulatory activities of the FSAI and articulate the scientific and technical expertise necessary to promote compliance by the food industry, enhance the enforcement activities of risk managers and Official Agencies and address the concerns of consumers with respect to food safety.



Our mission

“To build on our scientific and technical expertise to support and strengthen consumer protection.”

The mission and strategic goals are summarised in [Figure 1](#) below and operationalised by 36 aligned activities under 12 objectives shown in [Table 1](#).



Figure 1 FSAI Science Strategy 2020-2024 mission and goals

Table 1 Strategic goals, objectives and actions

Strengthening Science through Collaboration		
Goal	Objectives	Activities
1. Proactively strengthen existing scientific partnerships and networks	1.1 Identify the best candidates for the Scientific Committee structure and deliver an ambitious work programme	1.1.1 Develop, agree and progress a selection procedure for candidates for the new Scientific Committee
		1.1.2 Develop and deliver an ambitious draft work programme for the Scientific Committee
		1.1.3 Identify the skills necessary to deliver the work programme, select skilled candidates and create subcommittees
	1.2 Build on current national and international networks for the development of food legislation and standards	1.2.1 Provide expert input into the work of international standards bodies e.g. Codex and OECD
		1.2.2 Provide expert input into the development of legislation at EU and national level
		1.2.3 Maintain current and explore new collaborative relationships with key European and international food safety enforcement bodies
	1.3 Develop targeted collaborative initiatives with risk assessment bodies, academia and research organisations	1.3.1 Seek opportunities and apply to international expert panels developing food safety risk assessments
		1.3.2 Expand FSAI collaboration with EFSA
		1.3.3. Identify and participate in collaborative research with academia

Expanding the Evidence Base through Research

Goal	Objectives	Activities
<p>2. Continue to develop the evidence base and improve the use of data</p>	<p>2.1 Maintain FSAI influence on the national research agenda and look for new opportunities to promote FSAI research priorities</p>	<p>2.1.1 Provide FSAI expertise to national funding bodies for the development and oversight of food safety research agendas and research proposals</p>
		<p>2.1.2 Identify gaps in food safety research that would benefit FSAI risk assessment and proactively submit these priorities to funding bodies as appropriate</p>
		<p>2.1.3 Develop a process to commission priority research when and if a research budget is established in FSAI</p>
	<p>2.2 Actively participate in national and international research projects and undertake food studies in key areas</p>	<p>2.2.1 Engage with researchers to offer expertise to ensure optimum management and oversight of their research projects</p>
		<p>2.2.2 Participate in European and national research consortia either as full partners or on steering /oversight groups</p>
		<p>2.2.3 Consider specific data needs and conduct food studies to address these needs</p>
	<p>2.3 Engage with the FSAI data strategy and explore better ways to capture and utilise available data</p>	<p>2.3.1 Ensure scientific input into the implementation of the FSAI data strategy</p>
		<p>2.3.2 Identify internal and external data sets that are essential for risk assessment</p>
		<p>2.3.3 Create new approaches to capture and analyse data in support of science at FSAI</p>

Scientific Excellence through Investment in People

Goal	Objectives	Activities
3. Ensure the knowledge and skills of our staff enable them to address new challenges and developments	3.1 Identify key expertise and training needs and integrate them into staff personal development plans	3.1.1 Identify scientific skill sets in FSAI that are necessary for our regulatory science work
		3.1.2 Enhance and expand the skill set through technical and scientific training with quality providers
		3.1.3 Ensure that scientific staff organise and partake of training in agreed annual plans
	3.2 Explore all avenues for training through a blended learning approach	3.2.1 Improve understanding of the food industry through study visits and other such practical approaches
		3.2.2 Identify and avail of online training opportunities for scientific staff
		3.2.3 Explore possibilities for short term staff exchanges with third level institutes and/or other food safety organisations
	3.3 Promote opportunities for cross functional working	3.3.1 Encourage the involvement of science staff in non-science corporate cross functional committees.
		3.3.2 Develop cross functional projects as part of FSAI business planning
		3.3.3 Ensure appropriate levels of FSAI wide collaboration are built into single functional area projects

Visible Science through Communication

Goal	Objectives	Activities
4. Improve the visibility and dissemination of FSAI science	4.1 Identify opportunities for the communication of FSAI science at national and international events	4.1.1 Provide scientific contributions to national and international meetings
		4.1.2 Promote FSAI science and scientists through written papers, posters and articles
		4.1.3 Identify key conferences and encourage participation through applications to present poster and/or oral contributions
	4.2 Increase the food safety knowledge of second and third level students through teaching opportunities	4.2.1 Continue FSAI involvement with 2 nd level curricula development in the area of food safety
		4.2.2 Provide lectures for third level students through targeted relationships with their academic supervisors
		4.2.3 Provide challenging projects for third level students and supervise their training inside or outside of FSAI
	4.3 Explore and exploit opportunities to actively communicate FSAI science to stakeholders in a tailored approach	4.3.1 Explore the publication of FSAI scientific outputs through the European Open Science platform and/or EFSA's Knowledge Junction
		4.3.2 Develop a suite of suitable communication approaches for different stakeholder groups and apply them strategically to key FSAI scientific outputs
		4.3.3 Identify opportunities to publicly launch key scientific outputs from FSAI and its Scientific Committee

Annex 1: Corporate goals and objectives that directly or indirectly require the use of science

Strategic goal 1: enforcement and compliance

- Manage risks in the food chain and respond effectively to any national or international food incident or crisis
- Lead and support Ireland's food safety regulators to implement a fair, consistent and effective system of enforcement

Strategic goal 2: science, expertise and evidence

- Support risk-based decision-making and policy with high-quality, independent expertise.
- Expand the evidence base through research, coordinated studies and scientific collaboration.
- Advance risk assessment practice to promote trust and engagement.
- Grow our ability to identify emerging risks and threats to the food chain.
- Influence the development of food standards and enforcement approaches at European and international level.

Strategic goal 3: engagement and communication

- Provide clear and evidence-based advice and information to promote food safety and build compliance with food law.

Strategic goal 4: organisational excellence

- Enhance recognition of the FSAI's identity, influence and reputation among staff, stakeholders and customers

Annex 2: Strategy refresh process

- Review of Science Strategy 2016-2019 action plan.
- Internal consultation with FSAI scientists and CEO on Science Strategy 2016-2019 and call for input.
- Draft Science Strategy 2020-2024 developed by FSAI senior scientists based on inputs (1 and 2).
- Internal consultation with all FSAI staff on draft Science Strategy 2020-2024.
- External consultation on draft Science Strategy 2020-2024 with Scientific Committee.
- Amendment of the Science Strategy 2020-2024.
- Sign off on the Science Strategy 2020-2024 by the FSAI Chief Executive Officer.
- Presentation of the Science Strategy 2020-2024 to the Board.



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