

Foresight and Horizon Scanning – Annual Update to the Board

FSA 23-06-06 - Report by Sam Faulkner and Michelle Patel, this is an annual update on the FSA's foresight function.

1. Summary

1.1 This is an annual update on the FSA's foresight function, covering:

- The findings so far and our response to them.
- The plan to continue to develop our foresight capability over the coming year.

1.2 The FSA Board is invited to:

- Note the activities undertaken and our response to the insights that we have gained.
- Note the plans to continue to develop our foresight capability.

2. Introduction

2.1 This paper builds upon our previous updates to the Board in [2021](#) and [2022](#). These focused on the early development of our foresight capability, highlighting some of our early success in establishing the foresight function, growing our capability and some of the early insights that we identified, but also reflected some of the challenges that we have faced. This paper will update the Board on activity since the programme started and what we will do next.

2.2 GO-Science defines foresight as “the specific act of [applying futures tools, processes or methods](#)”, with [horizon scanning](#) one of these methods. The FSA has a small team that gathers evidence on what changes might take place across the food system. These might first show themselves as early signals in our tracking, in the media, or in intelligence from business or other departments, or as findings from a more structured scan of the medium to longer term drivers of change, such as a Strategic Assessment (see paragraphs 3.1 and 4.1). This team monitors and analyses the changes, then works with others, such as the Strategy Unit, to ensure that these insights help the Department prepare for them.

3. Our Activity to Date

3.1 In 2021 we produced our first Strategic Assessment. This identified potential changes to the food system over a 10-year period. This was updated in May 2022. This assessment led us to prioritise three broad areas for more detailed evidence gathering:

- emerging Technologies.
- environmental and System Changes.
- future of meat production.

3.2 We have commissioned and are now publishing a series of reports in these areas at Annex A.

3.3 As well as building our internal expertise, we have established knowledge sharing networks with UK academia, bilateral links with other government departments, and international networks.

3.4 Knowledge Sharing with Academia

- in February 2022 we hosted a networking day for our academic collaborators, and hope to repeat this to help develop a regular network.
- from November 2021 to September 2022 we funded a Fellowship with Queen's University Belfast looking at the future of animal feed, publishing an assessment of this in March 2023.
- from April 2022 to May 2023, we funded a Fellowship with the Food Systems Transformation Programme at Oxford University. This provided assessments of specific issues (see Annex A), as well as support for increasing systems thinking capability, which we have drawn on when:
 - planning future iterations of the Annual Food Standards Report
 - understanding sustainability in the food system; and
 - mapping food standards assurance controls in the system for the Achieving Business Compliance programme.
- we are part-funding a studentship with Food Standards Scotland and Cranfield University researching early warning systems and their applicability to the food system, due to complete in 2026.

3.5 Links with Other Government Departments

- we take part in the GO-Science Heads of Horizon Scanning group, and their Emerging Technology Community of Interest. After a successful FSA-Defra joint bid, GO-Science will be undertaking an analysis of the food system to identify longer-term system vulnerabilities.
- we have access to ongoing cross-government monitoring of issues through the Joint Data and Analysis Centre in the Cabinet Office.

3.6 International Networks

Internationally, we are working with the Food Systems and Food Safety division of the United Nations Food and Agriculture Organisation (FAO); we have shared our work with the South Korean Ministry of Food and Drug Safety, FSA New Zealand, Australia's National Science Agency CSIRO, and the Swedish Food Agency; and as far as possible we have maintained links with EFSA.

3.7 The FSA's Science Council and Science Advisory Committees (SAC) undertake periodic foresight exercises, most recently into [Food Safety and Net Zero Carbon](#), with their report published in May 2023. We work closely with the Science Council and SACs, coordinating our work and providing input when required.

4. Strategic Assessment 2023

4.1 We have just published a new [Strategic Assessment](#) drawing on a literature review and a broad international expert panel from government and international organisations, academia, industry, and the third sector. Annex B outlines the issues it identified. A separate briefing is being prepared for the Board to consider later in 2023.

4.2 There was broad consistency with our previous research in terms of the key drivers of change in the food system. Experts were more concerned than before with nearer term acute risks as opposed to chronic risks, mainly due to the broader geopolitical context (the Russian invasion of Ukraine in particular), and an increased uncertainty around international relationships.

This uncertainty made it challenging for the expert panel to predict longer-term changes across the system.

5. Our responses

5.1 Resourcing challenges across the organisation limit our ability to fully consider our insights, and design and deliver our response. Further work to respond to the 2021 Strategic Assessment and associated evidence was deprioritised as part of the FSA's [reprioritisation exercise](#) in November 2022.

5.2 Nevertheless, our foresight programme has informed some important things for the FSA, for example:

- it directly informed the [2022-2027 strategy](#) and the [three-year corporate plan](#) presented to the Board in March 2023. The Strategic Assessment and scenarios were used in workshops to discuss and balance our priorities, which led to the our evidence highlighted the growth of household food insecurity, and we acted in response. We considered whether sampling could be directed at responses to the cost of living, whilst the National Food Crime Unit has undertaken analysis of how the cost of living would impact food crime. We will present more detail on this area in a paper to the Audit and Risk Committee in June 2023.
- we developed evidence on a number of new food production technologies, such as alternative proteins. The findings encouraged us to reconsider our existing regulatory framework, informing our plans for reform of the Regulated Products and Novel Foods processes.
- evidence on new ways of buying and selling food online informed ABC's work on the Aggregators Food Safety Charter.
- evidence gathered on Personalised Nutrition and 3D Printing provided assurance that no large-scale active intervention was needed at this time. We considered further actions such as gathering more evidence on personalised nutrition but will not, given this is a relatively low priority (little food safety risk with any potential impact several years away).

5.3 Our evidence has strengthened the FSA's reputation and role in wider discussions, for example:

- we provided briefings on emerging technologies in the food system to the GO-Science Emerging Technology Community of Interest.
- the Government Chemist's Strategy 2023-26 has been directly informed by our work on alternative proteins, helping to prioritise research funding.
- our identification of the risks from Animal By-Products provided a critical input to a cross-government working group.
- we were consulted as part of [Nesta's work on Innovation Sweet Spots](#), informing their understanding of emerging technologies in the food system.
- we have been asked to participate in a United Nations FAO Foresight Panel later this year looking at emerging technologies within the food system.

6. Next steps

6.1 As far as is possible to tell as we look into the future, we are confident that we have sought evidence on the right things, but there is more we could do to exploit this knowledge.

6.2 Firstly, we want to develop a more coherent and efficient approach to sharing insights on emerging risks and opportunities across the FSA, how we make decisions about them, and how we task actions across the organisation in response.

6.3 We have developed a capability to help FSA management teams test proposed changes against what the future may hold, to find out where the vulnerabilities are. We will work with teams across policy, operations and regulatory reform teams to help test ideas and interventions to make sure they are resilient and flexible enough to cope with what the future might hold.

6.4 Later in 2023 the Strategy Unit will work with teams across the department to look at the new Strategic Assessment and decide what to do next. This will include priorities for future evidence gathering, as well as responses to what we already know.

7. Conclusions

7.1 The first two years of this programme has informed work across the FSA at strategic level and will inform key areas of reform. It has also allowed us to support actors in the wider food system.

7.2 However, while we have been able to develop our evidence base, urgent pressures on our strategy and policy teams have meant that we cannot exploit it as fully or as quickly as we would like. These pressures remain, and we will need to make realistic decisions on what we can and cannot do. Guided by the refreshed Strategic Assessment we will take this approach when prioritising our foresight programme later in 2023.

7.3 The FSA Board is invited to:

- note the activities undertaken and our response to the insights that we have gained.
- note the plans to continue to develop our foresight capability.

Annex A

Current and forthcoming publications

1. [Emerging Technologies that will Impact on the UK Food System](#), June 2021. Institute for Manufacturing, University of Cambridge.
2. [Food in the Digital Platform Economy](#), February 2022. University of Cambridge.
3. [Alternative Proteins for Human Consumption](#), June 2022. Institute for Manufacturing, University of Cambridge.
4. [Evolution of Personalised Nutrition](#), March 2023. Institute for Manufacturing, University of Cambridge.
5. [3D Printing Technologies in the Food System](#), March 2023. Camrosh Ltd.
6. [The Future of Animal Feed](#), April 2023. Fellowship with Queen's University Belfast.
7. Strategic Assessment, March 2023. Camrosh Ltd. Completed, due for publication June 2023.
8. Alternatives to Single Use Plastics in the Food System. RSM UK Consulting. Completed, due for publication July 2023.
9. Animal by Products System Fraud Risks. Oxford University. Completed, due for publication July 2023.
10. The Impact of Labour Shortages on Food Availability and Safety. N8 Agrifood. Completed, due for publication July 2023.
11. Mechanically Separated Meats Overview. Oxford University. Completed, due for publication Autumn 2023.
12. Characteristics of Novel Products and Processes Indicating Regulatory Complexity. Oxford University. Ongoing, due to complete Summer 2023.
13. The Impact of Climate Change on the UK Food System. Oxford University. Ongoing, due to complete June 2023.

Annex B

Issues and opportunities identified in the Strategic Assessment 2023. A fuller briefing on the main findings from the Strategic Assessment will be prepared for the Board.

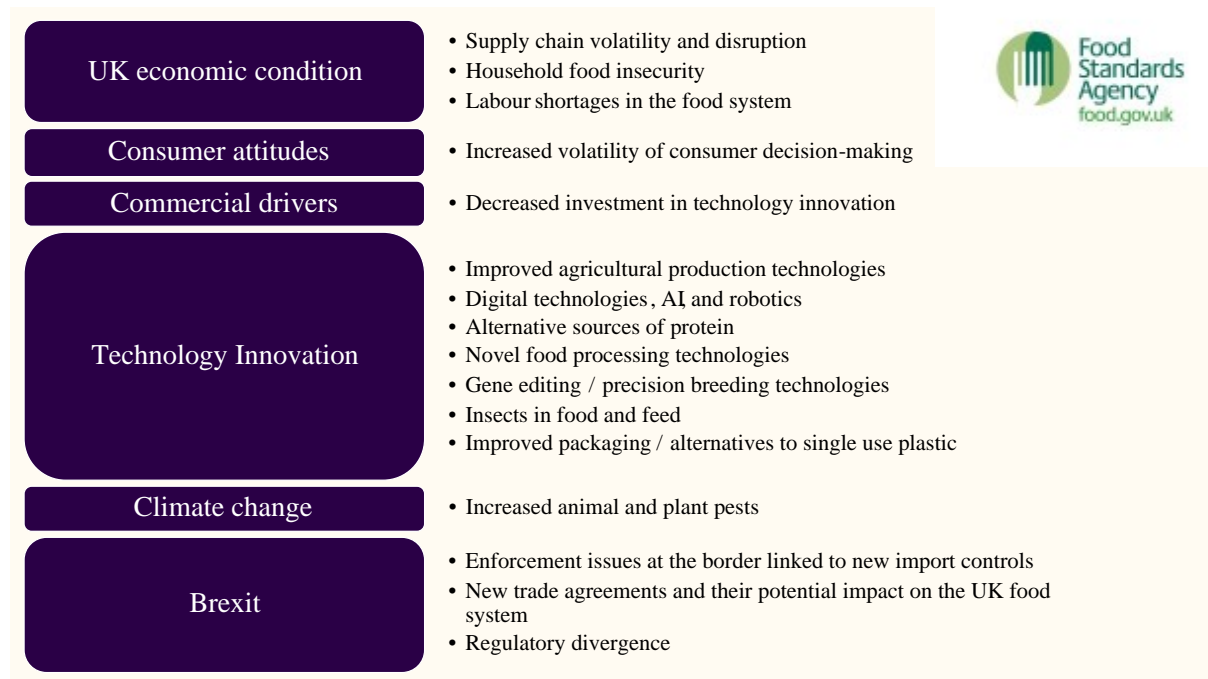


Figure 1: issues for the UK food system identified in the Strategic Assessment 2023

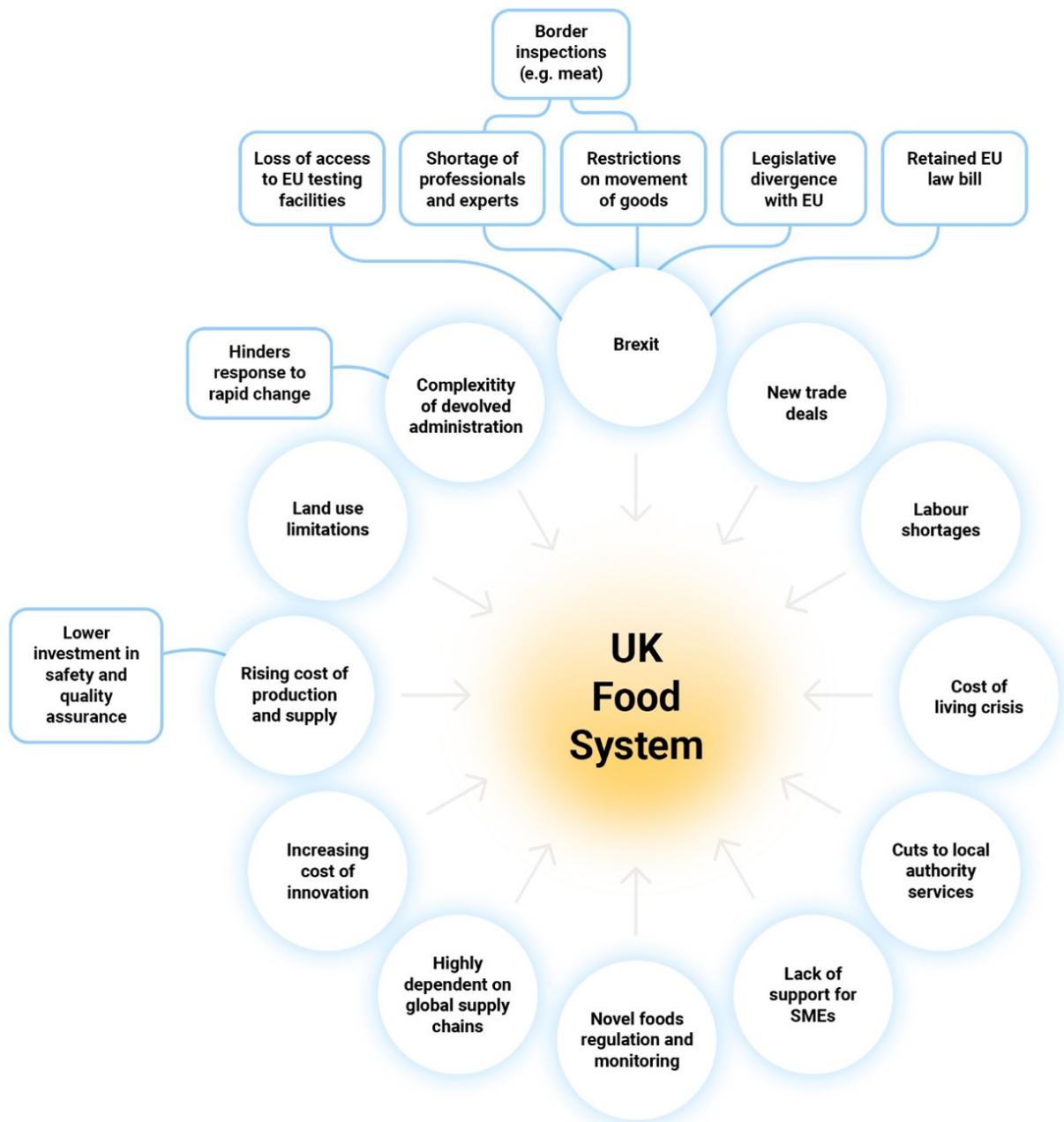


Figure 2: Opportunities for the UK food system identified in the Strategic Assessment 2023

