A Refreshed Digital and Data Strategy for FSS

1 Purpose of the paper

1.1 **This paper is for information, discussion and agreement**. It advises the Board of progress that has been made in enhancing FSS's digital and data capability over the past three years, and our proposals for a refreshed workplan which will help us to deliver the organisation's strategic objectives for 2026-31.

1.2 Our refreshed Digital and Data Strategy aims to ensure our priorities align with the skills, expertise and resources that are likely to be available to us both in the short term and into the future. It also takes account of our experience in delivering this function to date; enabling us to build on our achievements and address key challenges. This paper provides Board members with the opportunity to express their views on digital and data capability in FSS, and to ensure there is a shared understanding of priorities and expectations for our work in this area over the next five years.

1.3 The Board is asked to:

- **Note and discuss** the progress that has been made in developing a data-led and digitally enabled approach to FSS delivery since our proposals for a digital and data strategy were first presented to the Board in 2022;
- **Note and discuss** the limitations associated with this area of work in light of our existing capabilities and the level of resource that can be allocated to strengthen capacity;
- **Agree** to the refreshed Digital and Data Strategy that will support the delivery of FSS's new strategic objectives from 2026-31, and **provide views** on the Board's risk appetite in relation to the development of FSS's technology and innovation abilities.

2 Strategic aims

2.1 Digital and data capability underpins all five of FSS's strategic outcomes for 2021-26; and comprise activities under Goal 3: A research and data science capability which enables us to detect risks, monitor public health trends and consumer behaviours, and translate evidence into action. It has also been identified as a key underpinning delivery function in our new strategy for 2026-31.

3 Background

3.1 FSS's objective to become a fully digitally enabled and data driven organisation was articulated in our strategy for 2021-26, and we have made significant progress towards our Strategic Goal to: Develop and embed an enhanced data science and analytics

capability, employing common standards and secure systems which translate and present FSS data in a way that enables it to be used effectively. The Executive presented our initial proposals for a Digital and Data Strategy at the FSS Board meeting in October 2022, and the Board has had a number of updates since then on how our work in this area has developed.

3.2 As we move into our new organisational strategy, it is timely to take stock of progress to date and refresh our plans for digital and data across FSS; ensuring our ambitions in this area are fully aligned with our future priorities and the resources that we will have to deliver over the next 5 years.

Developing FSS's digital and data strategy – progress to date

3.3 Over the past 5 years, significant limitations on FSS resource allocation and competing priorities have presented us with significant challenges (particularly in terms of pace) in driving the level of organisational transformation required to fully achieve our ambitions for Digital and Data in FSS. However, with a small team and modest budget, we have been able to build a strong foundation for enhancing the collection, management and analysis of data across the organisation to enable smarter decision making and more adaptive services that meet the evolving needs of our staff and stakeholders.

3.4 Our key achievements to date are listed below, and these demonstrate how strategic investments in digital infrastructure, data governance and analytical expertise are already delivering value and positioning us for building the capacity and capability we will need for the future.

- **Establishment of a Digital and Data Steering and Governance Group (DDSGG):** Provides necessary governance and central oversight of all digital and data requirements across FSS, offering strategic direction and expert advice to ensure systems development and methods for analysing and reporting FSS data sets align with organisational priorities and deliver future-proofed, user-focused solutions.
- **Creation of a Cross-Functional Digital and Data Support Function:** Recruitment of new specialists into FSS, including an application developer, digital delivery manager, business analyst and operational researcher; with effective cross office collaboration under the leadership of our Heads of Digital and Statistics/Data Science, to enable a fully integrated approach to delivery across the organisation.
- **Delivery of a Data Maturity Assessment:** A detailed exercise which has enabled us to map how data is currently being used across FSS, the level of existing skills in the organisation, and areas where our processes for the collection, management, governance and use of data need to be improved.
- **Development of a Digital Roadmap:** Facilitated collaboration with Scottish Government (SG) partners to share expertise, explore common platforms, and identify the skills and resources needed to build digital and data capability across FSS.
- **Design and Development of FSS's new Operational Delivery IT Solution (ODITS):** FSS's first in-house system for collecting, storing and analysing data on Official Controls in meat plants across Scotland, enhancing data quality and operational insight.

- **Design and Development of FSS's Azure cloud environment**: A cloud hosted environment provisioned on SG cloud platform services to provide a secure and scalable infrastructure to hold FSS applications and data.
- **Creation of a reporting dashboard for food surveillance:** A tool for visualising food sampling data from Local Authorities and FSS-funded surveillance programmes, supporting more effective monitoring and decision-making.
- **Support for the SAFER Programme:** Delivered expert digital and statistical input, including collaboration with the SG CivTech team, on a proof-of-concept platform for food business registration, and a review of the Scottish National Database (SND) to inform strategies for monitoring Local Authority resourcing and performance as the SAFER programme is delivered.
- **Development of a Cyber Security Framework:** Informed by participation in the Scottish Cyber Coordination Centre (SC3), we have implemented robust procedures and conducted a business continuity exercise to assess and strengthen FSS's cyber security posture.
- **Review of Data Platforms for Incidents and Animal Feed Controls:** Preliminary assessment of existing systems to support future integration of intelligence, investigations and incident-related datasets, improving coherence and accessibility.
- **Development of a Shellfish Monitoring Use Case:** Scoping work with operational delivery and science teams to design a project for leveraging data from the Shellfish Monitoring and Classification Database (SMC) to improve targeting of biotoxin sampling programmes, enhancing public health protection and resource efficiency.

3.5 We have delivered this work by engaging across SG and with our counterparts in the FSA to share resources and learning, and identify scope for the co-development of digital platforms and data solutions. This includes a strategic partnership with SG Marine Directorate, which has opened opportunities for us to co-sponsor digital expertise, and draw on the experience they have developed as they progress through their own data discovery journey.

4 Discussion

A refreshed strategy – targeting our resources to optimise impact and alignment with emerging priorities

4.1 In the draft 2026-31 FSS strategy document that was issued for consultation between August and September 2025, we re-iterated our ambition to deliver our work in a more data driven way, committing to the following priority objectives for 2026-31 to enable us to take a more preventative approach to public health protection and offer best value for the public purse. These commitments are fully aligned with the objectives of SG's Public Service Reform Strategy for embedding data and digital tools across public sector delivery:

- continue to strengthen and enhance our digital and data science capabilities
- explore the benefits of Artificial Intelligence and cloud technologies
- optimise the quality and accessibility of the data we collect to inform decisions, measure impacts, and share insights with stakeholders

4.2 Whilst we have built a strong foundation for achieving these objectives through the outputs we have delivered to date, it is clear that FSS is still at a developing stage of data maturity. Further to this our level of ambition has become muted as a result of restrictions on the level of resource we have been able to dedicate to this function, taking into account all of FSS' other financial obligations and statutory commitments. The establishment of the SAFER programme (the delivery of which is reliant on enhanced digital and analytical capability), offers the potential for bringing additional funding and expertise into this critical area of the business, however it is important that we keep our priorities under review so that they stay aligned with strategic objectives and remain feasible in line with the resource constraints we are working within.

4.3 We have therefore undertaken a review of our strategy for digital and data transformation in FSS, which has informed the development of a new delivery plan to enable us to progress our work using existing resources, as we gear up to expand and optimise our digital and data capabilities into the future.

4.4 Our refreshed strategy has three core objectives which will support FSS's organisational strategy and our wider commitments across government, which are shown in Figure 1 below.

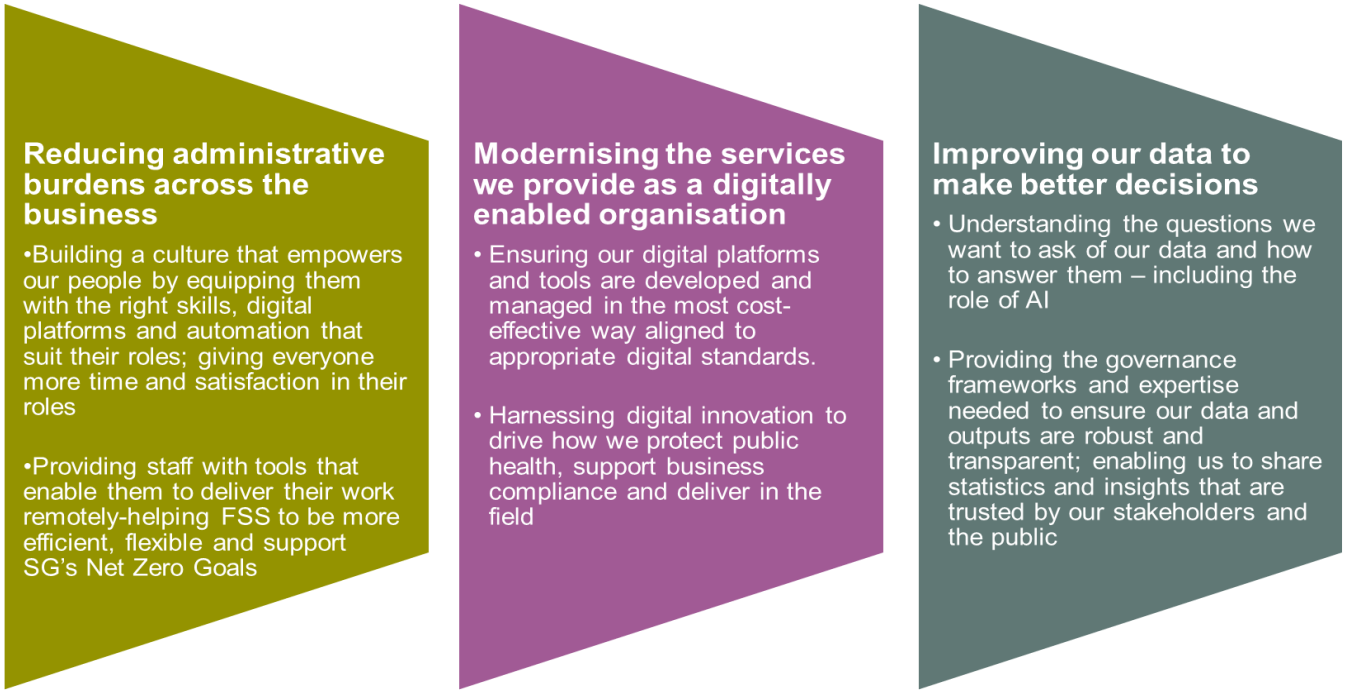

Figure 1 The core objectives for our refreshed Digital and Data Strategy.

4.5 These objectives are intended to ensure there is a distinction between; i) the technical support needed to improve our organisational efficiency by empowering our staff with tools and training that reduce administrative burdens, support remote working and enable them to harness digital innovation, and ii) the skills and expertise that will be essential in ensuring robust scientific rigour and governance around the analysis of our data, and how we report and share the outputs. This includes understanding the role of Artificial Intelligence (AI); promoting an informed approach which is fit for purpose and

does not run the risk of undermining the statistical integrity and transparency that are key to our role as a science and evidence based organisation.

4.6 Delivery of these objectives will be based around seven pillars of work which have been designed from recommendations that were made by our data maturity assessment and a review of data and digital strategies developed by a range of public sector organisations worldwide:

PILLAR 1 - Supporting Capability and Empowerment by fostering digital confidence and data literacy through role-specific training, providing effective tools, encouraging innovation and collaboration, and building networks with government partners to share expertise.

PILLAR 2 - Building Digital Infrastructure by developing strategic, cost-effective digital solutions that enhance connectivity, support remote operations through scalable cloud-first platforms, and enable the creation of digital tools aligned with organisational goals.

PILLAR 3 - Optimising Data by identifying key questions, improving quality and accessibility, applying expert analytical methods, ensuring transparency and reproducibility, and enabling system interoperability through data standards and APIs.

PILLAR 4 - Harnessing AI by identifying opportunities for automation, staying informed on relevant applications, fostering multidisciplinary collaboration to ensure AI is used ethically, and developing applications that enhance organisational efficiency, support risk prediction and improve public health outcomes.

PILLAR 5 - Establishing robust governance to provide strategic oversight of data and digital initiatives, ensuring ethical use, data integrity, adherence to statistical standards, and accountability across all FSS operations.

PILLAR 6 - Improving transparency and usability by expanding open data access, publishing official statistics to support informed decision-making, and exploring cross-sector data linkages to deliver broader public benefits.

PILLAR 7 - Strengthening Cybersecurity by aligning with national and international standards, implementing zero-trust models and continuous monitoring, conducting regular risk assessments, and ensuring robust disaster recovery and data protection protocols.

4.7 Further details on our objectives are provided in Annex A of this paper, and highlight the significant body of work and organisational transformation that will be required for FSS is to become fully digitally enabled and data focussed across the business. Whilst many of these aims are already well progressed across all seven pillars of our strategy, there remains a considerable amount of work to deliver, with a pool of skills and expertise which is currently limited to 7 digital and 2 data specialists spread across two divisions.

4.8 In order to ensure further work in this area is achievable, our delivery plan (shown in Figure 2) is broken down into three stages which will enable us to drive momentum, target effort and track our progress as we embed digital and data approaches in our work to deliver FSS's strategic objectives over the next five years.

4.9 The first two stages of delivery will be focussed on consolidating the work we have carried out over the past 2-3 years to develop a strong foundation for our digital and data strategy, with expansion of skills and infrastructure in key areas where this is possible, depending on organisational priorities and resourcing.

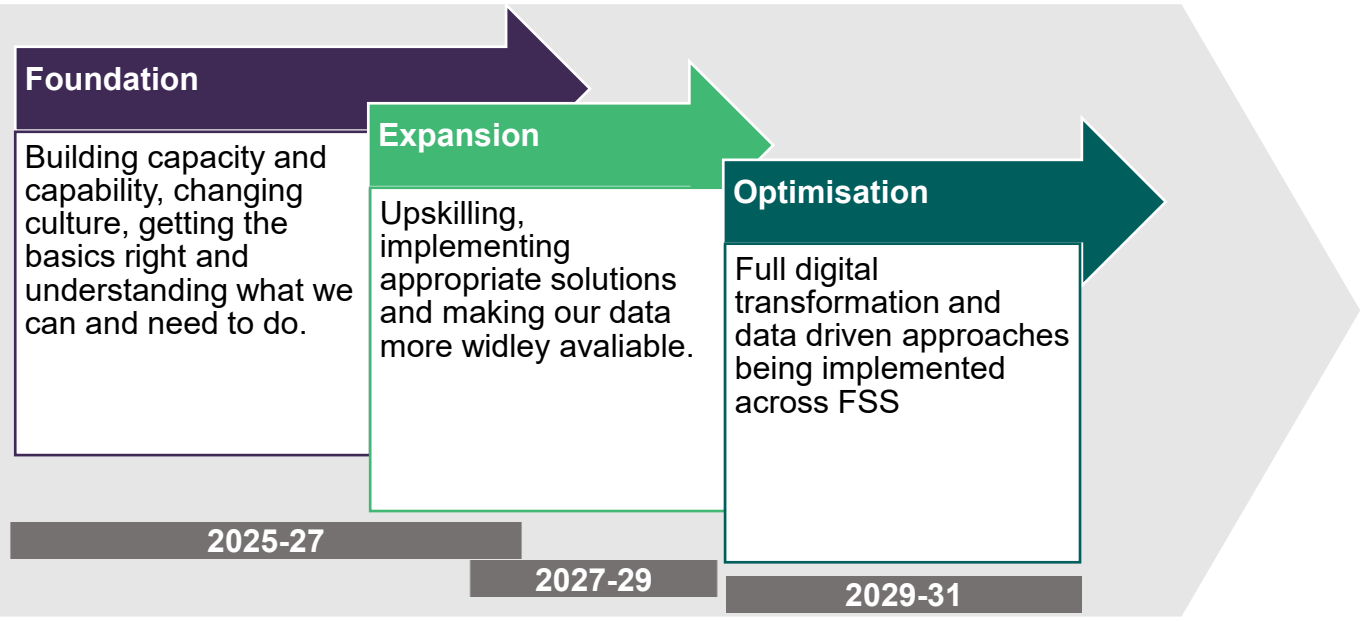

Figure 2 The three stages of our proposed delivery plan.

4.10 As we continue to develop the foundation and expansion stages of our workplan into 2026/27, our focus will be on the following areas of work:

- **Growing capability –** Continuing to build our digital expertise, cloud infrastructure, and cybersecurity framework, alongside completion of ODITS as our first in-house digital project.
- **Understanding our data** – Commission a data discovery project to identify the datasets being collected across the business, the quality of our data and how it is currently being used to support delivery across the business.
- **Mapping our assets** – Carry out a review of our data and digital platforms and how they are currently being managed, and the cost/benefit of in-house vs supplier development and maintenance (drawing on experience with ODITs to inform our approach).
- **Addressing user needs**– Establish what users need from data to deliver on strategic objectives. Identify where existing in-house skills meet those needs and

where additional support may be required. Develop a skills matrix to map current capabilities and highlight areas for upskilling or where expert input may be needed to optimise data use and ensure high-quality, impactful analysis.

- **Consolidating our governance frameworks –** Refresh our DDSGG to provide oversight of digital and data projects across the organisation, providing a defined governance structure for prioritising projects, strengthening guidance and promoting best practice.

- **Selling the benefits of digital and data across FSS** – Develop and deliver an internal communications strategy to generate staff buy-in and promote culture change.

- **Understanding the art of the possible** – identify where digital and data solutions can provide the most benefit to our work, and develop a pipeline of data projects for reports, dashboards and AI use cases that will enhance delivery.

4.11 Our current focus is on ensuring we have a suitable level of qualified digital, statistical and data science expertise and that our delivery structure enables us to optimise this for the benefit of the whole organisation. We have recognised that whilst our frameworks for prioritising and steering work through cross office collaboration have been effective in driving progress to date, on-going success will rely on strong leadership and resourcing that will support the level of expertise, co-ordination, oversight and governance needed to deliver our objectives over the longer term. For this reason, we have developed proposals for the future delivery of our digital and data functions; consolidating expertise into a dedicated division, with appropriately experienced leadership, to provide a service that will promote digital enablement and data optimisation across all areas of FSS business.

4.12 A further short term goal is to deliver a data discovery project across FSS. Discovery is a standard phase in government projects to develop digital and data services, and the processes are well established. It is considered to be an essential first step in any digital transformation programme, as it enables organisations to map, catalogue, and classify its data assets, and understand data quality, user needs and ways of working. The outputs are used to inform policies and processes for managing its platforms, promoting culture change, improving data quality, ensuring robust governance and transparency, and ultimately enabling the organisation to optimise its use of data across the business.

4.13 Since presenting our first digital and data strategy to the Board in 2022, we have seen a rapid increase in the availability of AI across government; with FSS staff gaining particular experience in the use of Large Language Models (LLMs) such as Co-pilot in the delivery of a wide range of different tasks. We have also recognised the significant potential for employing more complex machine learning tools in our work, including the analysis of public health and compliance data, to identify trends which can help us to predict risks and evaluate the impact of interventions. However, as a science and evidence based organisation it is critical for us to ensure these tools are applied in an ethical and transparent way. Therefore a key objective over the next 12 months will be to engage with staff and external stakeholders to strengthen our understanding of the benefits, opportunities and risks of deploying AI across all of FSS's work. This will be

critical in enabling us to identify where it adds value, and develop appropriate governance and standards which will support our staff in using it responsibly.

Next steps

4.14 This refresh of our digital and data strategy has provided us with the opportunity to evaluate progress to date and re-prioritise our work in line with FSS's organisational strategy for 2026-31. We have devised a new set of objectives, underpinned by pillars of work that we aim to deliver over the next 5 years, and have already started to make progress across all of these. An important next step will be to stage delivery based on current resourcing to ensure our plans remain feasible in the short term, while advancing our proposals for re-structuring our digital and data function to strengthen future delivery. Consideration is also being given to a strategy for promoting staff buy-in and eliminating siloed approaches to the management and use of data across the business in order to drive the changes in organisational culture we will need to achieve our ambitions in this critical area.

5 Identification of risks and issues

As we start to implement the next phase of our digital and data programme alongside the launch of our new organisational strategy, it is timely to review the Board's risk appetite in this area. In the revised statement presented at today's Board meeting, we have proposed that our **risk appetite for technology, data and innovation** is:

- **Very high** and we are eager for opportunities to use innovation and technology to deliver wider business benefits and to leverage innovation to enhance our regulatory frameworks, operational efficiencies and enhance our ability to monitor food safety, predict risks, and respond swiftly to emerging issues, but;

- **We remain cautious** to ensure we do not develop at a pace that impacts on capacity and capability at an organisational and individual level. We also remain **cautious** in ensuring our exploitation of data, and use of technology, is not at the expense of data security or the use of sensitive/personal information.

Board members are therefore asked to confirm that they are content with these statements in light of the information presented in this paper.

6 Equality Impact Assessment and Fairer Scotland Duty

6.1 Equality Impact (EIA) and Fairer Scotland Duty (FSD) assessments are not considered necessary for this paper, as it aims to provide an update on our approach to the development of digital and data capability in the organisation. Through our Digital and Data Strategy, we will ensure our governance procedures for the collection, management and reporting of data for policy making take full account of our obligations under EIA and FSD requirements.

6.2 Conclusion

6.3 The Board is asked to:

- **Note and discuss** the progress that has been made in developing a data-led and digitally enabled approach to FSS delivery since our proposals for a digital and data strategy were first presented to the Board in 2022;
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Annex A: The seven pillars of our Digital and Data Strategy

Capability and Empowerment

Build a digitally confident and data literate workforce training staff in the skills that are commensurate with their roles.

Equip staff with the tools they need to use data effectively.

Create an environment where staff feel enabled to use digital solutions in their work.

Foster a culture of innovation, continuous learning and collaboration.

Promote the development of networks with other government partners and stakeholders to share expertise and insights.

Digital Infrastructure

Understand our systems and the best way of managing them in terms of feasibility and value for money.

Ensure all digital developments employ a strategic, multi-disciplinary approach to ensure they support delivery across all areas of the business.

Optimise digital connectivity for staff and delivery partners.

Invest in cloud-first infrastructure and scalable platforms to support remote operations and data storage.

Promote the development of apps and digital tools where appropriate to deliver FSS objectives.

Data

Understand the questions we want to ask of our data and its limitations.

Drive improvements to data quality and accessibility across FSS; promoting the use of organisational data standards where possible.

Utilise specialist data expertise to identify the appropriate statistical methods and tools for analysing data.

Ensure data analysis is reproducible, transparent, efficient and maximises the value of our data.

Enable interoperability across systems through the development of data standards and APIs.

Harnessing AI

Understand where AI has the potential to optimise and automate our **internal** processes and make us more efficient.

Maintain an up to date awareness of AI applications in food policy and regulation and other areas that are relevant to FSS's remit.

Promote multidisciplinary collaboration to design AI applications which have the potential to strengthen our capability to predict risks and target interventions that will benefit public health and consumer protection.

Governance

Implement a robust governance framework for the funding and management of all data and digital projects across FSS.

Establish governance policies and processes to ensure the data collected across FSS is robust and reliable.

Ensure data and AI technologies are employed ethically; with a strong emphasis on data privacy, fairness, transparency and accountability.

Promote good practice and awareness of the UK Code of Practice for Statistics to ensure the outputs of our analysis are good quality, trustworthy and valuable.

Transparency

Expand our open data policy; creating structures which improve access to FSS data sets and enable them to be re-used in ways that maximise their potential for public benefit.

Promote the publication of Official Statistics to provide assurance over FSS datasets and enable their use in decision making across government.

Actively explore datasets within the public sector that can be linked to FSS data; offering the potential to deliver wider cross government objectives.

Cybersecurity

Ensure all of our data and digital work is secure, resilient, and aligned with national and international standards.

Understand current cybersecurity threats and strengthen protocols to build resilience and minimise impacts.

Implement a zero-trust security model and continuous monitoring to protect sensitive data.

Conduct regular cyber risk assessments and incident response simulations.

Ensure disaster recovery and backup systems are fully incorporated into FSS business continuity protocols.