TRADE-OFFS FOR A RESILIENT BROILER SECTOR: TRI-SoMe Chicken Stakeholder Workshop Report

Birmingham, October 2025

Compiled by Dr Paul Hurley and Prof Emma Roe, University of Southampton

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TRI-SoMe Chicken is a three-year research project funded by UK Research and Innovation and Defra to strengthen the resilience of the UK food system. The project launched in December 2024, and our second stakeholder workshop – *Trade-offs for a Resilient Broiler Sector* - was held in October 2025. This report covers some of the key topics and discussions from that workshop.

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1. The Problem

Chicken is more than dinner – it's central to the UK food system. Around 1bn broilers are grown in the UK every year, and we rely on chicken (UK grown and imported) to provide around 50% of the meat eaten in the UK. It has come to be seen as a cheap, healthy and sustainable protein source, but managing such a complex system necessitates trade-offs.

We have seen in recent years increasing shocks and challenges to the food system and the broiler sector. These range from socio-biological factors like avian influenza, to geo-political ones like consumer activism, and environmental ones like extreme heat and flooding. The scale of such challenges are felt from the day-to-day operations of a processing site to the logistics of global feed supply chains.

There is growing attention on efforts to strengthen the resilience of the UK food system and to understand the role of industrial broiler production and the nation's appetite for chicken in the context of these efforts. We need to find strategies for the UK food system to better manage both short-term shocks and longer-term dynamics - whether geopolitical, economic, or climate related. And we need to do so whilst providing the population with socially-just access to sufficiently nutritious food and whilst protecting animal welfare and ecosystems.

The complexity of the resilience challenge for the UK food system means that there are multiple trade-offs involved. We have recently seen, for instance, many UK retailers opting-in to the Better Chicken Commitment's lower stocking density of 30 kg/m² from 38 kg / m². This brings enhancements to animal welfare but significant challenges around available space for production. The TRI-SoMe Chicken project is trying to understand and model some of these trade-offs, in order to inform future policy and practice.

2. The Project

In 2024 UK Research and Innovation ran a call for research projects that would strengthen the resilience of the UK food system, by taking a food systems approach and considering cascading risks. TRI-SoMe Chicken (Towards Resilient Industrial Socio-Metabolics of Chicken) was awarded £1.7m as part of this, to bring together researchers (from Universities of Southampton, Gloucestershire and Bristol, and City St George's University of London) with industry partners (Applied Group and FAI Farms) for a three-year project.

This illustration and all others in this report were produced by artist Sam Church, who live-scribed the presentations at the workshop. https://www.samchurchillustration.com/

TRI-SoMe Chicken aims:

i. To understand human and chicken vulnerability and resilience in relation to natural, socio economic and geo-political shocks

ii. To model past, present and future chicken production and processing in relation to welfare, environments, markets and trade, to enhance human and ecological resilience

iii. To develop an ethical policy-instrument and framework to address UK food system resilience risk-management.

3. The Workshop

In October 2025 TRI-SoMe Chicken held a hybrid stakeholder workshop in Birmingham and online. It brought together 40 delegates that included stakeholders from the broiler sector, industry bodies, agri-tech, environmental NGOs, government agencies and academia.

The workshop included presentations by industry representatives and members of the project team. These presentations were documented by a live scribe Sam Church in the form of illustrations, some of which are included in this report. There were also a number of small group discussions and a system dynamics modelling workshop that explored the relationships between different elements of the broiler system and how they might change over time.

The aims of the day were to:

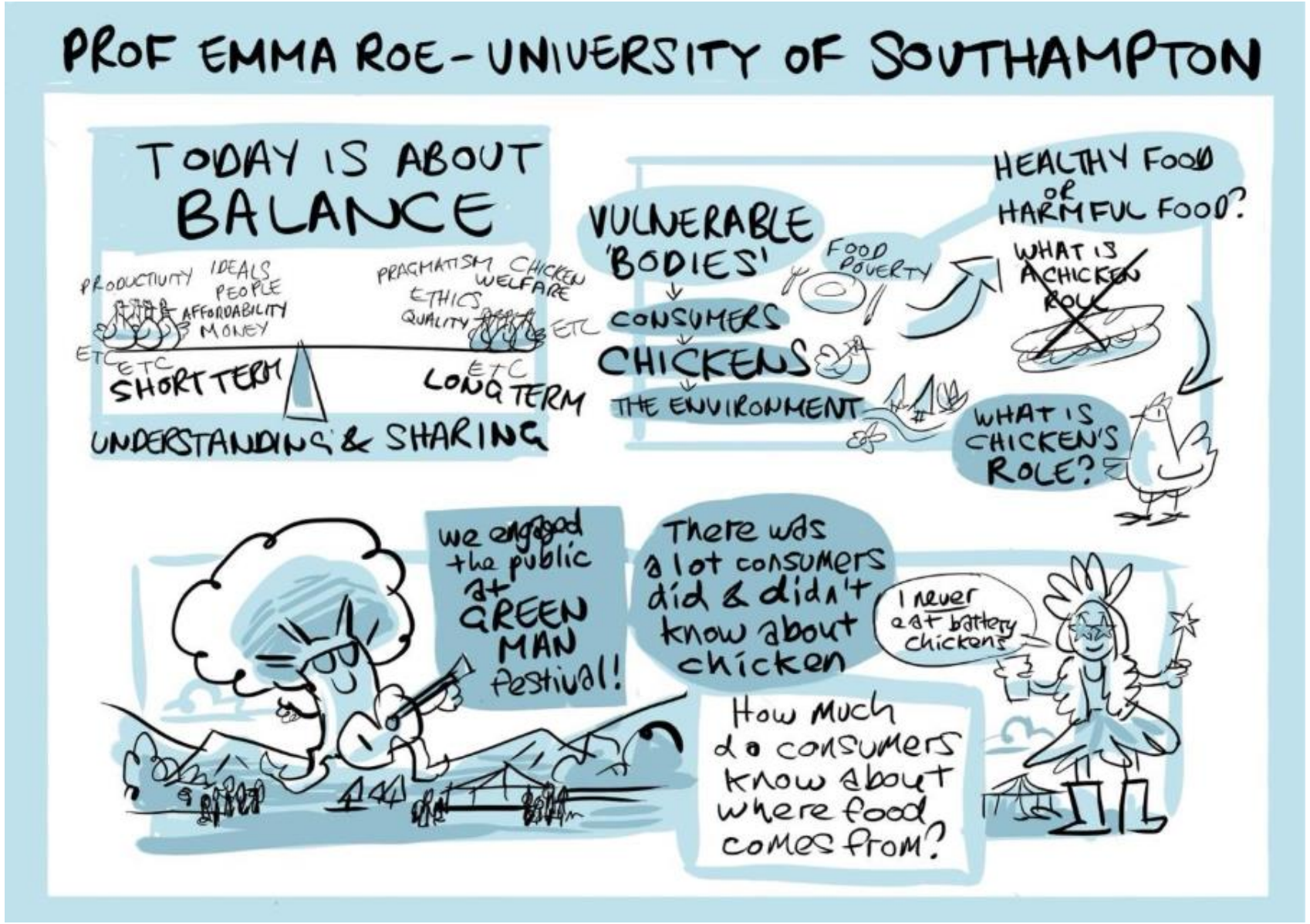
- build connections between individuals and organisations
- hear different perspectives about trade-offs and resilience in relation to the broiler sector
- take first steps in developing a model of the broiler sector that is relevant to stakeholders
- shape the next steps of TRI-SoME Chicken.

4. What we heard

The workshop kicked off with a welcome and overview by **Prof Emma Roe, University of Southampton**, who is leading the TRI-SoMe Chicken project. This set the scene for the day's topics and the interdisciplinary food systems approach that the project is developing.

We heard about the importance of thinking of the broiler system not just in different timescales but also in scales of vulnerable bodies – be they human, animal or environmental. We also heard Emma's thoughts about the role of chicken as food for different consumers, and about conversations that she and the team had had with members of the public at events across the country.

After Emma's introduction, we welcomed Ian Pick, MRICS, from Harrison Pick Ltd to give a keynote, followed by expert presentations from: Dr Pippa Simmonds, University of Gloucestershire; Kerry Maxwell, British Poultry Council; David Tunks, Applied Group; and Dr Theo Stanley, University of Southampton, in conversation with James McCulloch, Agricultural Industries Federation and Prof Emily Burton, Nottingham Trent University.


PROF EMMA ROE - UNIVERSITY OF SOUTHAMPTON
TODAY IS ABOUT
BALANCE
PRODUCTIVITY
IDEALS
PEOPLE
AFFORDABILITY
MONEY
ETC
SHORT TERM
PRAGMATISM
CHICKEN WELFARE
ETHICS
QUALITY
ETC
LONG TERM
UNDERSTANDING & SHARING
VULNERABLE 'BODIES'
CONSUMERS
CHICKENS
THE ENVIRONMENT
FOOD POVERTY
HEALTHY FOOD OR HARMFUL FOOD?
WHAT IS A CHICKEN ROLL
WHAT IS CHICKEN'S ROLE?
we engaged the public at GREEN MAN festival!
There was a lot consumers did & didn't know about chicken
I never eat battery chickens
How much do consumers know about where food comes from?

Keynote: ***Challenges in the broiler sector from a planning perspective,*** **Ian Pick, MRICS**

We were delighted to welcome a keynote presentation from Ian Pick, Planning Consultant at Harrison Pick Ltd. Ian's presentation gave an overview of some of the very current problems facing the sector, particularly around development and the planning system – a system Ian described as 'broken'. At our first stakeholder workshop in 2024, we heard from Richard Griffiths, British Poultry Council, about a desire among some in the industry to expand. Ian suggested that many producers are simply attempting to backfill lost growing space needed to maintain production volume if working within the framework of the Better Chicken Commitment's reduced stocking density. We also heard about experiences of delays in planning permission processes, changes to environmental regulations, and about campaigns of objections and legal action by individuals and organizations.

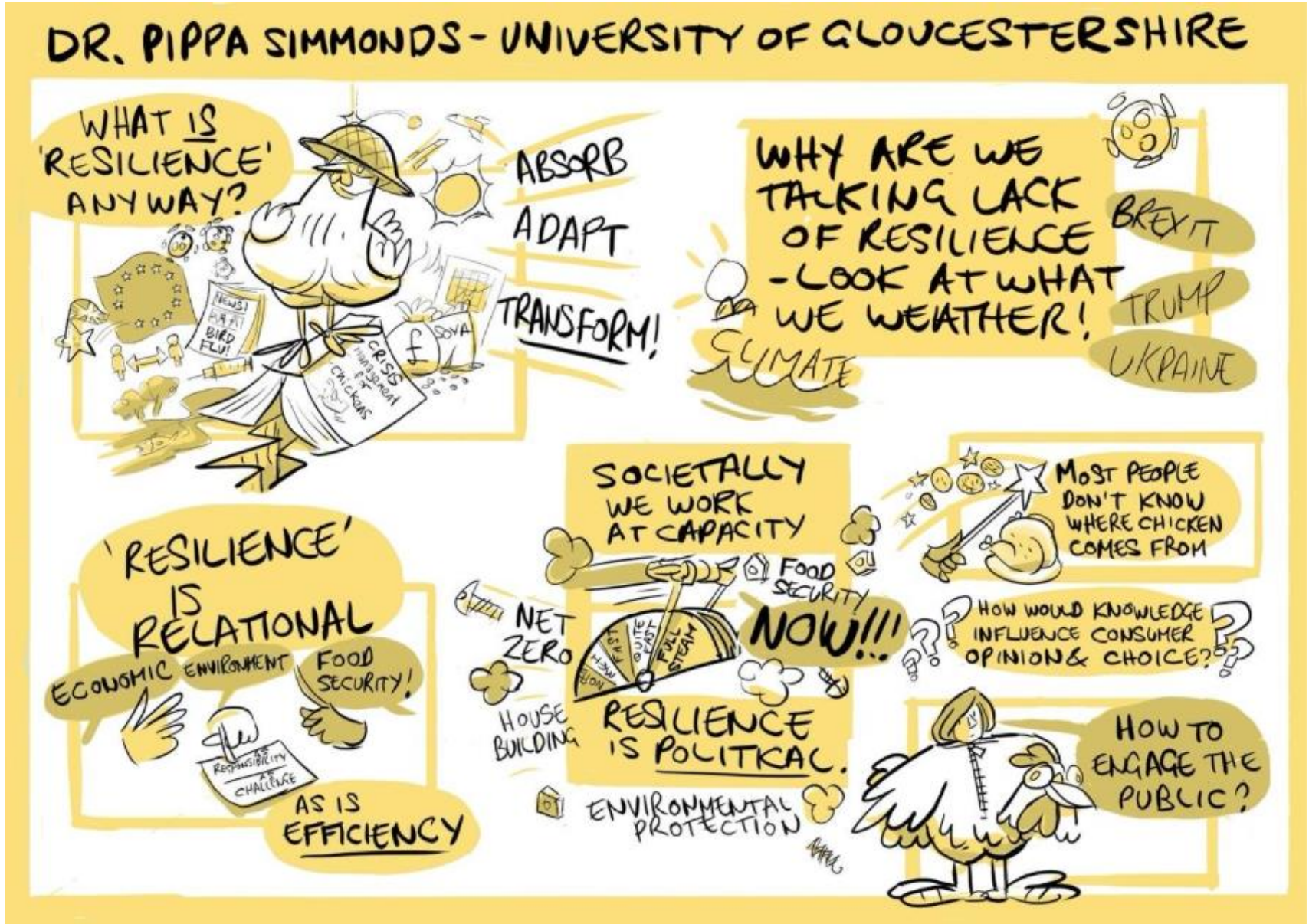
Ian's keynote gave a great introduction to some of the complex trade-offs of the food system. It raised questions about how a resilient broiler sector can be maintained in the context of a consumer-led push for animal welfare standards. To do this, Ian argued, we need to ensure that the planning system is able to balance welfare, environmental protection, and food security, and that we have clearer science-based ammonia thresholds and mitigation pathways. He also spoke about the importance of a regulatory environment that supports investment in sustainable infrastructure, like manure-to-energy, and the role of greater public understanding of the sector's proactive role in environmental stewardship.

IAN PICK - HARRISON PICK PLANNING CONSULTANTS
BETTER CHICKEN COMMITMENT
BUT WE MUST MAINTAIN PRODUCTION!
BETTER WELFARE = MORE SPACE
IT'S NOT INDUSTRY EXPANSION
... IT'S A RACE FOR SPACE!
116 MILLION CHICKENS NEEDING 20% MORE SPACE
500 SHEDS NEEDED
MORE SHEDS... MEANS LESS COUNTRYSIDE
SO MUCH TO FACTOR IN...
HELP FARMERS!
SAVE OUR RIVERS
END FOOD POVERTY!
SAVE OUR GREEN SPACES
PLANNING APPLICATIONS ARE COSTLY & TIME CONSUMING
SSSI RULES
... & FRAUGHT!
THE BETTER CHICKEN COMMITMENT NEEDED 5 YEARS TO IMPLEMENT...
YOU'VE GOT 3 WEEKS!
RETAIL BOSS
THE PLANNING SYSTEM IS BROKEN
CONSUMER
RURAL PROTEST
"WE ARE TRYING"
WE NEED POLITICAL CHANGE
RETAIL
REGULATION
"BUT WE'RE PULLED TOO MANY WAYS!"
ENVIRONMENTAL IMPACT ASSESSMENT
what happens to the manure?
waste to energy?
BIOGAS
HEAT
POWER
ANAEROBIC DIGESTION PLANT
DIGESTATE FERTILISER
WHO'S THAT SOLD TO & WHAT IS THE IMPACT?
If chicken manure is BAD... are SYNTHETIC fertilisers better?
CROPS HAVE TO BE FERTILISED WITH SOMETHING)
AMMONIA THRESHOLD
WHERE CAN WE BUILD THAT ISN'T WITHIN 5KM OF AN SSSI?
GUIDANCE CONFLICTS...
DO SPREAD YOUR MUCK
NET ZERO
DON'T SPREAD YOUR MUCK!
PLANNING SYSTEM
AS DO DESIRES FOR BETTER WELFARE & STEADY LOW COST
COMPLEXITY & UNCERTAINTY COST THE ENGLISH
DO YOU BUY UK UK CHICKEN WITH HIGH WELFARE STANDARDS?
OR CHEAPER IMPORTED CHICKEN WITH LOWER WELFARE STANDARDS?

What is resilience anyway? Understanding disruptions to the sector, Dr Pippa Simmonds

Pippa Simmonds', University of Gloucestershire, presentation explored what we mean by the term resilience in the context of different disruptions and relationships in the broiler sector. This is based on Pippa's ongoing research in the TRI-SoMe Chicken project, in which she has developed an impressive map of stakeholder relations across the UK broiler sector, and undertaken nearly 30 interviews and site visits. We heard that resilience is defined by some as the abilities of a system to absorb losses, adapt through learning, and / or to transform through radical changes in the face of stresses and shocks (Béné et al. 2020). This, Pippa proposed, is in contrast to ideas of efficiency that have dominated the development of the broiler industry since the mid-20th Century.

From the interviews and site visits, Pippa found common themes around economic sustainability, environmental sustainability and national food security or self-sufficiency. We also heard from Pippa about the importance of public perceptions around broilers, that most people do not know where chicken comes from, and that most attempts to educate the public are from an animal rights angle. In this way, consumer knowledge and beliefs can be considered another trade-off factor, alongside more obvious ones such as avian influenza, extreme heat, labour, animal welfare and environmental pollution. Pippa's presentation argued that resilience is political, whether we see it as a way to maintain the status quo or as something that allows us to think differently.


DR. PIPPA SIMMONDS - UNIVERSITY OF GLOUCESTERSHIRE
WHAT IS 'RESILIENCE' ANYWAY?
ABSORB
ADAPT
TRANSFORM!
WHY ARE WE TALKING LACK OF RESILIENCE - LOOK AT WHAT WE WEATHER!
BREXIT
TRUMP
UKRAINE
CLIMATE
SOCIETALLY WE WORK AT CAPACITY
FOOD SECURITY NOW!!!
NET ZERO
HOUSE BUILDING
RESILIENCE IS POLITICAL.
ENVIRONMENTAL PROTECTION
MOST PEOPLE DON'T KNOW WHERE CHICKEN COMES FROM
HOW WOULD KNOWLEDGE INFLUENCE CONSUMER OPINION & CHOICE?
HOW TO ENGAGE THE PUBLIC?
'RESILIENCE' IS RELATIONAL
ECONOMIC ENVIRONMENT
FOOD SECURITY!
AS IS EFFICIENCY

Resilience, Kerry Maxwell

We then heard from Kerry Maxwell, Communications Manager, British Poultry Council (BPC), who delivered a thought-provoking presentation from her unique perspective within the UK poultry sector. BPC represents two-thirds of poultry meat production in a sector that supports over 35,000 jobs and operates entirely unsubsidised and market-driven, contributing 0.3% to national GDP. The presentation emphasized that resilience is not just about "bouncing back" but about "building forward," requiring a shift in mindset and infrastructure that fosters trust, innovation, and productivity. Kerry prompted us to think not only about national infrastructure as part of UK food system resilience but about the poultry sector itself as an important infrastructure for the nation. Key challenges such as avian influenza, COVID-19, Brexit, and market volatility were highlighted as drivers for change, underscoring the need for systems that work because people see themselves reflected in them.

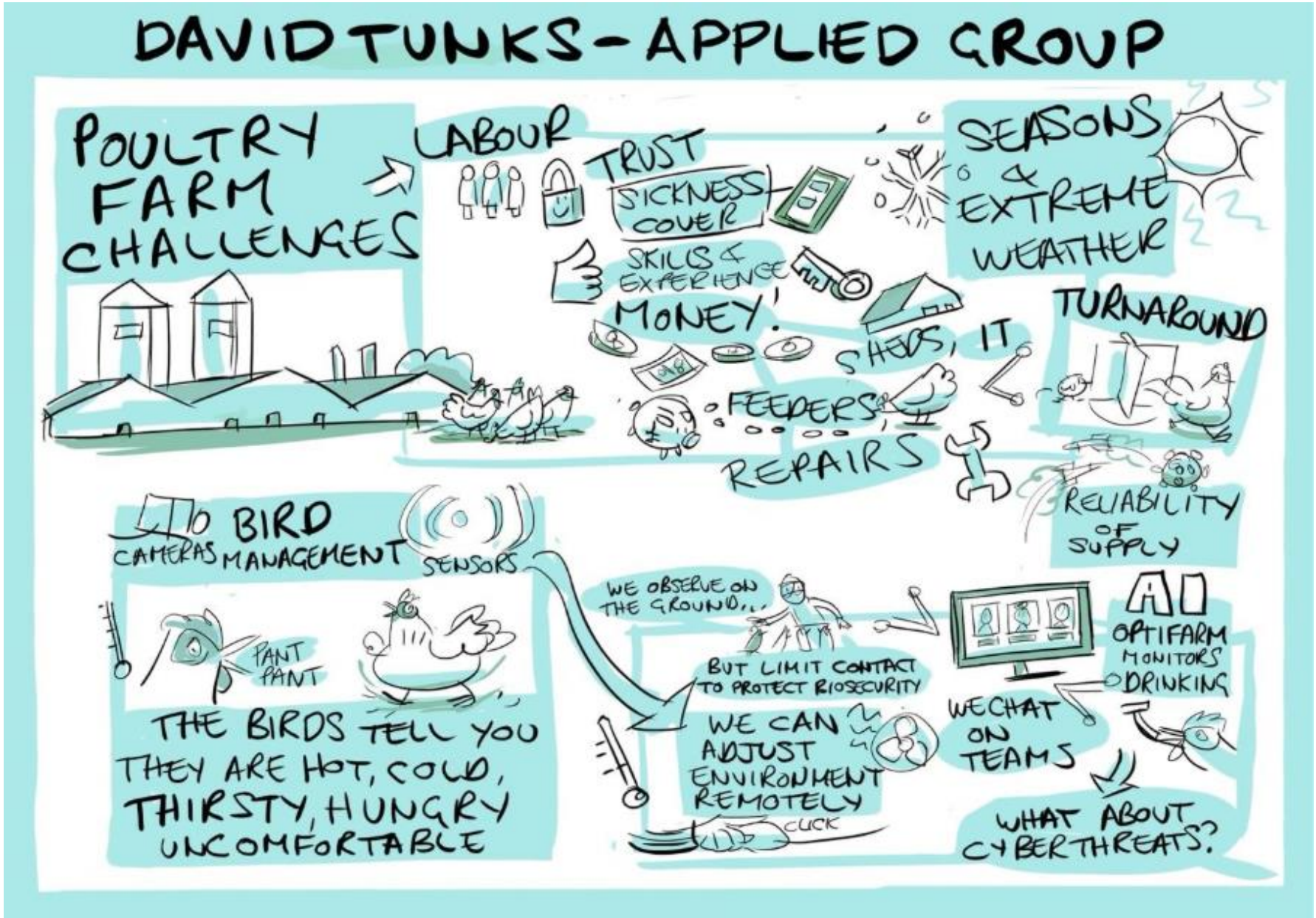
A central insight from Kerry was the tension between affordability and innovation. While investment in advanced infrastructure and forward-thinking strategies strengthens resilience, these measures often come at a cost, challenging the sector's commitment to keeping poultry affordable for consumers. Similarly, prioritizing national-scale solutions can risk overlooking local realities, creating a trade-off between uniformity and flexibility. The BPCs approach advocates for meaningful change that balances these competing priorities—ensuring that resilience is not an abstract concept but a practical framework enabling sustainable growth and trust across the supply chain.

KERRY MAXWELL-BRITISH POULTRY COUNCIL

What I think resilience is within our farming business, David Tunks

David Tunks', Area Manager at the Applied Group, offered a comprehensive view of resilience in poultry farming, emphasizing its role in navigating challenges such as labour shortages, volatile weather, financial pressures, and supply chain disruptions. The Applied Group operates eight sites with 46 sheds and approximately two million birds at any one time, supported by a large team of farm and relief staff. David defined resilience as the ability to withstand or recover quickly from difficulties, and his presentation showcased the value of technological tools like Optifarm. This enables David and his team to employ proactive strategies like real-time monitoring of bird drinking activity, predictive analytics, and rapid data interrogation to identify and address anomalies. These measures reflect a strong commitment to operational stability, animal welfare, and staff support, ensuring the business remains agile in a dynamic environment.

A key theme in David's presentation was the balance between technological investment and operational simplicity. While advanced monitoring systems and predictive tools enhance resilience, they require significant upfront costs and ongoing training for staff—posing a trade-off between efficiency and resource allocation. Similarly, prioritizing bird health through intensive data analysis can sometimes slow decision-making, as managers weigh immediate interventions against long-term sustainability. These trade-offs underline the importance of strategic planning and show that resilience is not just about reacting to shocks but about making informed choices that balance cost, complexity, and long-term value.


DAVID TUNKS - APPLIED GROUP
POULTRY FARM CHALLENGES
LABOUR
TRUST
SICKNESS COVER
SKILLS & EXPERIENCE
MONEY!
SHEDS, IT
FEEDERS
REPAIRS
SEASONS & EXTREME WEATHER
TURNAROUND
RELIABILITY OF SUPPLY
10 BIRD CAMERAS MANAGEMENT SENSORS
PANT PANT
THE BIRDS TELL YOU THEY ARE HOT, COLD, THIRSTY, HUNGRY UNCOMFORTABLE
WE OBSERVE ON THE GROUND...
BUT LIMIT CONTACT TO PROTECT BIOSECURITY
WE CAN ADJUST ENVIRONMENT REMOTELY
CLICK
AI OPTIFARM MONITORS DRINKING
WECHAT ON TEAMS
WHAT ABOUT CYBERTHREATS?

Soya Lock-In: Understanding vulnerabilities and resilience in the UK chicken feed industry, Dr Theo Stanley

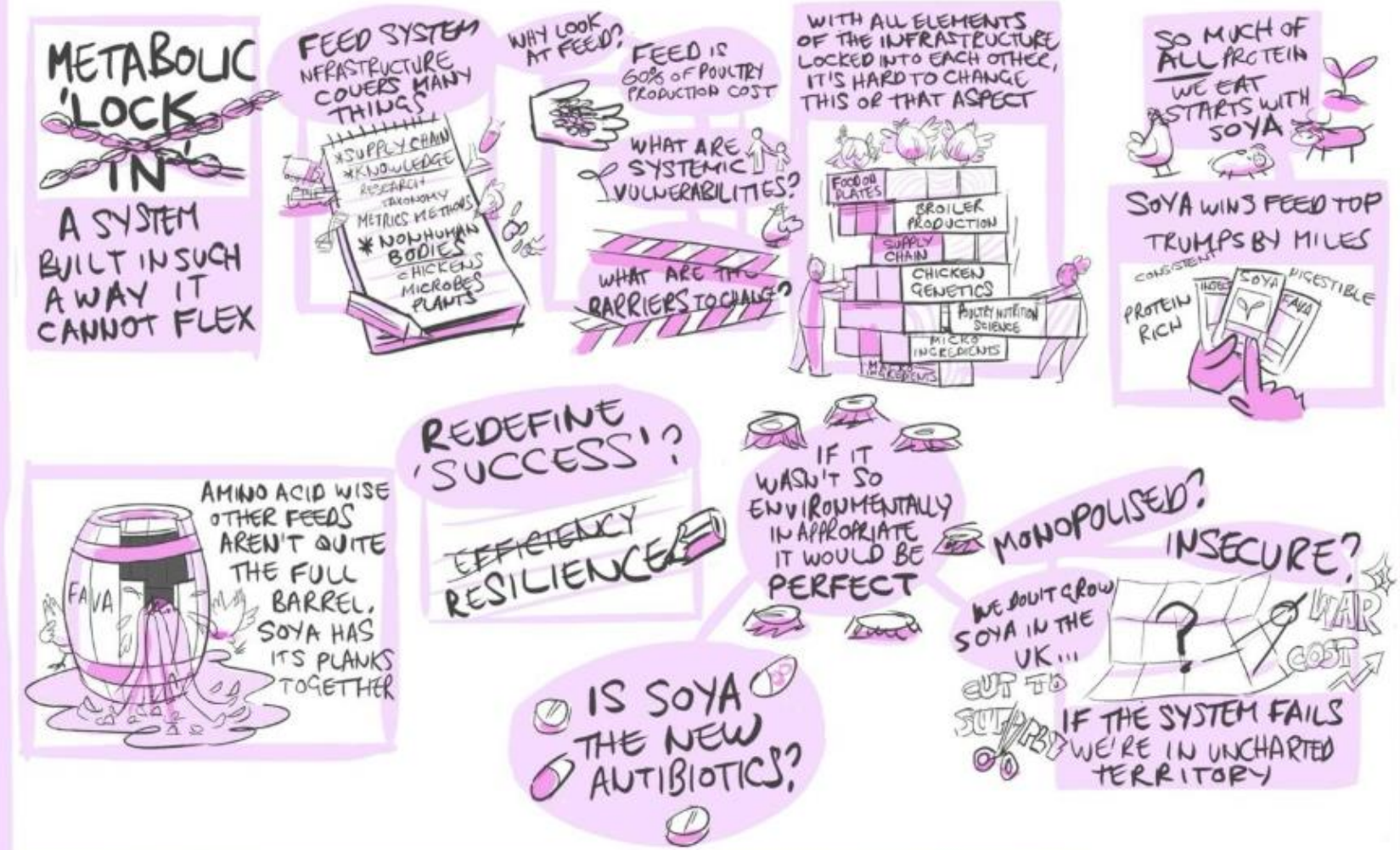
Theo Stanley's, University of Southampton, presentation was based on a series of in-depth interviews and site visits. It explored the critical role of feed, which accounts for around 60% of total costs in poultry production. The discussion highlighted how decades of research and infrastructural investment have optimized feed efficiency, reducing feed conversion ratios dramatically (from c. 4.4 to c. 1.5) in the last century. Soya has emerged as the dominant protein source due to its high nutritional value, digestibility, and consistency, supported by global supply chains and processing infrastructure. However, this efficiency-driven system has created a "metabolic lock-in," making the industry highly dependent on imported soya and vulnerable to geopolitical shocks, trade restrictions, and environmental scrutiny. The presentation emphasized the need to rethink resilience beyond short-term coping, toward building flexibility and diversity in feed systems – as we have seen in the sector's work to reduce antibiotic use.

A key insight from Theo's research is the tension between efficiency and resilience. While soya-based diets deliver unmatched performance and cost-effectiveness, reducing reliance on imports by adopting UK-grown alternatives—such as legumes, co-products, or insect protein—involves trade-offs. These alternatives often have lower protein quality, inconsistent supply, and require investment into new infrastructure, which can increase costs and complicate feed formulation. Shifting diets without adjusting poultry genetics risks health and welfare issues, highlighting that resilience strategies may compromise efficiency and affordability.

As part of the same session, there followed a panel discussion with **James McCulloch, Head of Feed at the Agricultural Industries Confederation** and **Emily Burton, Professor in Sustainable Food Production at Nottingham Trent University**, who both brought decades of knowledge and experience about poultry feed. The conversation began with questions about whether the pursuit of food system resilience can help us create new markers of 'success' in poultry science and broader visions of environmental resilience.

We also heard about how we might integrate small-scale novel protein sources into an existing larger-scale system, and how we might ensure development of sector resilience without putting further pressure on farmers who already feel undervalued and under attack. James described the economic difficulties faced by private companies looking to diversify their animal feed, whilst Emily outlined how feed additives such as enzymes and amino acids can improve the sustainability of feed: they make a wider range of nutrients available to a chicken, which decreases the amount of overall feed required.

DR. THEO STANLEY - UNIVERSITY OF SOUTHAMPTON



5. What we discussed and what we did

The afternoon of the workshop began with an interactive session – 'What do you need to build a chicken?' – led by Dr Paul Hurley, University of Southampton. The workshop was based on The Chicken Exchange a public engagement activity developed by the team about broiler production, processing and consumption. The activity 'The Chicken Exchange' has been engaged hundreds of members of the public at University events in Southampton, and at Green Man Festival in Wales.

Workshop participants in Birmingham were given the opportunity to make a chick or a nugget out of felt, whilst reflecting on some of the morning's discussions and responding to prompts on 'chicken passports' that accompanied the activity.

Dr Pippa Simmonds, University of Gloucestershire, and Dr Ali Parsa, University of Southampton led an interactive workshop focused on building a resilient broiler sector through system mapping and stakeholder engagement. The session guided participants through identifying key variables, connecting them into clusters, and exploring feedback loops and leverage points that influence resilience. Emphasis was placed on framing resilience as a dynamic, interconnected system rather than isolated challenges, with activities designed to clarify variable definitions and relationships.

The outputs will feed into a digital model and a broader dynamic systems framework, supporting evidence-based strategies for resilience planning across the UK broiler sector. This will be developed by the team and presented at the next TRI-SoMe stakeholder event.

6. What's next

The project will continue until 2027, during which time we will develop the conversation with our expanding stakeholder group, and build routes to impact in industry, policy and among consumers.

We will be hosting further workshops and meetings across the UK and continuing our programme of expert interviews and site visits with industry, government and third sector stakeholders.

To learn more about the project, visit resilientchicken.com

If you would like to get involved, please get in touch with the team at resilient.chicken@soton.ac.uk