

AHDB Research and Knowledge Exchange 2017–2020



**Accelerating innovation and
productivity growth through
coordinated R and KE**

AHDB's purpose is

'To inspire our farmers, growers and industry to succeed in a rapidly changing world'

An introduction to our new approach to research and knowledge exchange

AHDB is the major funder of applied agricultural and horticultural research and knowledge exchange (KE) in the UK. About 50% of the levy collected is invested in this technical programme. As a result of recent strategic changes in AHDB, research and KE programmes are now being re-aligned to address the new AHDB three-year strategy, set out in the document 'AHDB Strategy 2017–2020: Inspiring success'. This identifies four high-level strategic priorities which will be delivered via sector-specific activities covering the full range of AHDB's operations.

The technical research and knowledge exchange components of those sector activities will be delivered via work programmes grouped under six outcome-based themes (see the AHDB Research and Knowledge Exchange Framework opposite). This will see a move towards most research projects being commissioned via competitive tender. Although there will still be some opportunities for responsive mode proposals, these will require a strong business case and/or offer significant co-funding opportunities.



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Chief Technical Officer



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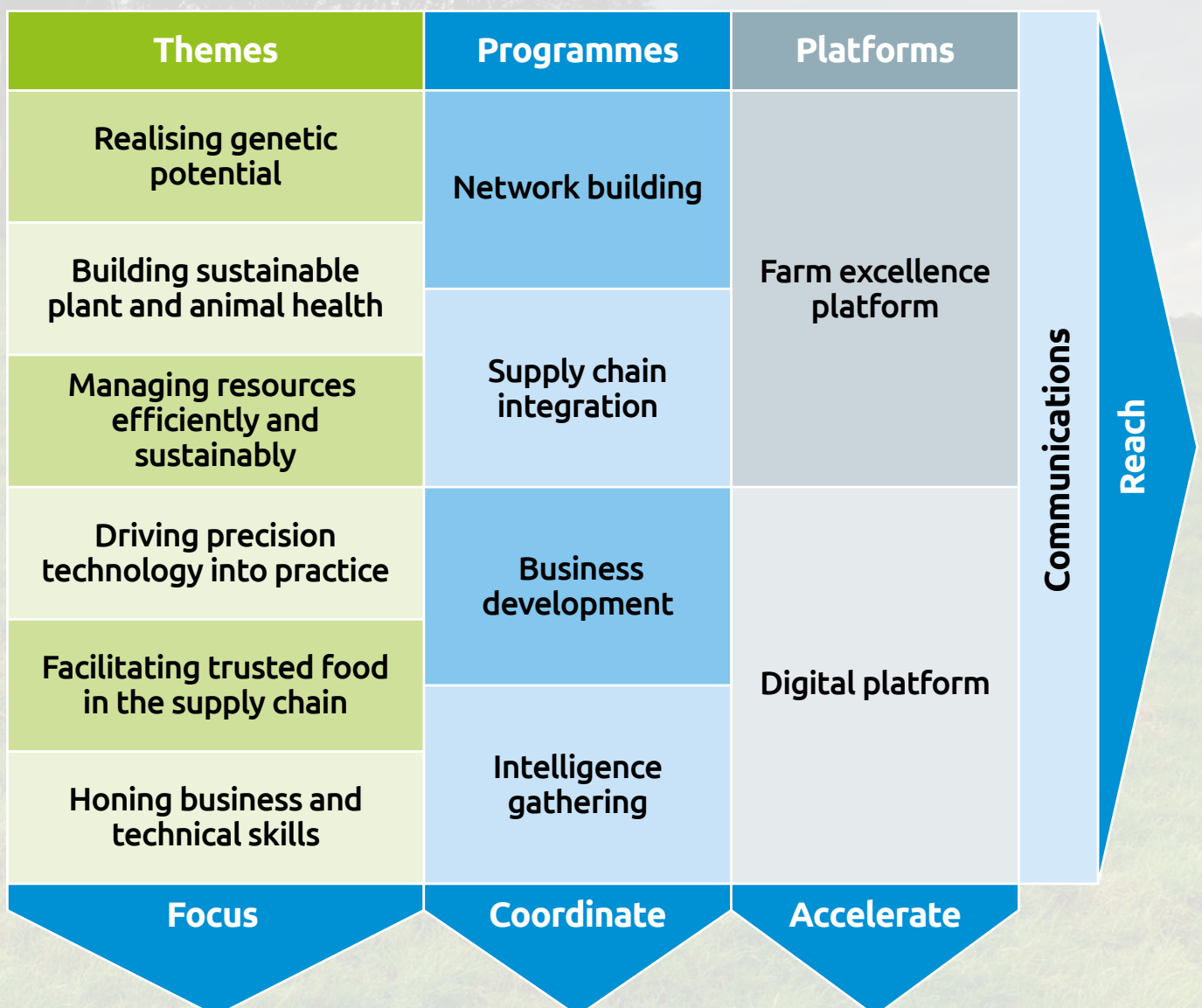
Susannah Bolton
Knowledge Exchange
Director

AHDB Research and Knowledge Exchange Framework

AHDB KE builds on the fact that we are unique in being able to blend farm economics and skills development with technical advances and innovation. KE activities will take the outputs arising from work done under the six themes and deliver them to the industry via four new programmes that themselves contribute to two new delivery platforms (see below). Feedback on industry priorities from the sector-orientated KE programmes will inform the direction of future research and KE programmes within the context of the AHDB strategy.



AHDB Strategic Priorities



Theme 1: Realising genetic potential

Turning data into genetic information by:

- Understanding the genetic basis of resistance and resilience to animal and plant pests and diseases
- Developing and evaluating new plant variety and animal traits
- Understanding quality traits for healthy food
- Coordinating activity in animal breeding research and evaluation
- Understanding novel genetic techniques and their practical application in plant and animal genetics
- Coordinating and sharing knowledge on research tools and techniques



Theme 2: Building sustainable plant and animal health

Improving knowledge exchange and practice by:

- Understanding, monitoring and management of animal and plant pests and diseases
- Developing Integrated Pest Management (IPM) systems
- Evaluating practical methods to understand and minimise pest, weed and disease resistance risk
- Developing animal disease control strategies, including new initiatives and diagnostics and decision support tools
- Developing and evaluating strategies and tools to reduce the threat of anti-microbial resistance (AMR)
- Understanding disease epidemiology and pest population dynamics
- Developing monitoring tools and analysing and interpreting data from them
- Identifying gaps in the current plant protection product armoury, emergency use of pesticides and regulatory issues



Theme 3: Managing resources efficiently and sustainably

Becoming more competitive and sustainable by:

- Developing nutritional strategies for livestock, including neonatal nutrition and young stock rearing
- Evaluating novel animal feeds and feeding systems
- Improving grazing and conversion
- Investigating alternative forages and novel forage traits
- Understanding and monitoring of crop physiology, crop nutrition, agronomy and crop storage issues
- Understanding and monitoring of environmental issues
- Maintaining and improving soil health
- Facilitating the development of responsibly sourced growing media
- Developing more resilient farming systems



Theme 4: Driving precision technology into practice

Independent, evidence-based information and evaluation of tools and technology by:

- Linking sensor data to biological processes to influence management decisions
- Analysing and exploiting large data sets to understand current practice and future impact on farm practice and economics
- Identifying novel technologies in other industries for application in agriculture and horticulture
- Demonstrating innovative robotics and their practical application
- Evaluating the use of telemetry in precision livestock farming
- Evaluating on-site and remote sensor applications
- Understanding data ownership, quality and curation



Theme 5: Facilitating trusted food in the supply chain

Understand and deliver what customers will buy by:

- Improving raw product quality to meet current and future supply chain needs
- Understanding and monitoring food safety issues and changes in legislation
- Evaluating the impact of new production methods on food safety
- Understanding factors affecting meat and crop quality
- Promoting the nutritional value and specific human health benefits of meat and crops
- Developing systems for understanding the provenance and verification of food
- Understanding nutrient utilisation in plants to maximise storage quality



Theme 6: Honing business and technical skills

Improve and grow businesses and build the agriculture and horticulture industry profile by:

- Supporting PhDs, bursaries and fellowships
- Technical and business up-skilling of farmers, growers and consultants through CPD schemes
- Understanding the drivers and influencers of farmer decision-making
- Understanding attitudes and perceptions to risk and understanding behaviour change
- LEAN management systems
- Farm management accounting and decision support
- International competitiveness and competitor production costs and performance
- Analysis and review of farm production costs



KE Programme 1: Network building

Achieving more by working together by:

- Collaborating with third parties to deliver KE (eg discussion groups and technical events)
- Developing a suite of activities targeting third party knowledge providers (eg vets, nutritionists, consultants, agronomists) so they access “state of the art” knowledge and information



KE Programme 2: Supply chain integration

Building connectivity through supply chains to improve marketability by:

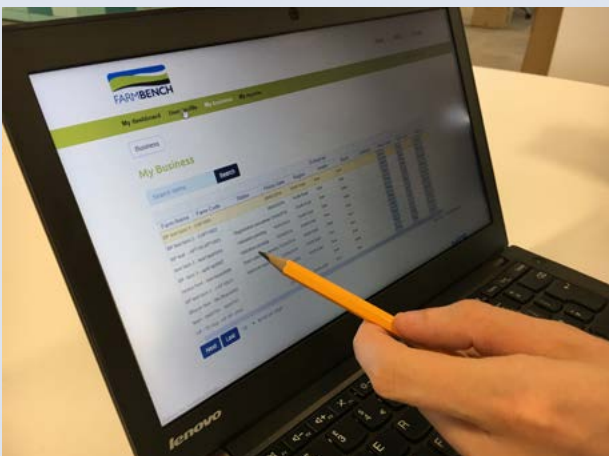
- Developing and supporting processes for improved traceability
- Identifying and measuring consumer and processor quality
- Enabling better feedback to producers to support them in meeting market specifications



KE Programme 3: Business development

Developing an industry fit for the future by:

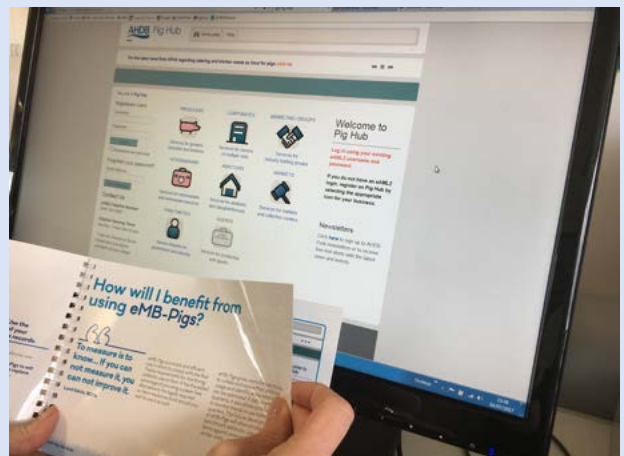
- Developing a fully integrated business skills development programme
- Enabling access to statistical data on farm costs
- Promoting careers for the agri-food and horticulture industries
- Developing a broad skills initiative to provide a joined up approach to accreditation, development and delivery



KE programme 4: Intelligence gathering

Listening, learning and sharing by:

- Collecting data on key industry performance indicators
- Keeping an ear to the ground in the regions for industry priorities and concerns
- Enabling early warning of critical issues
- Understanding the international technical, business and market landscape



Farm excellence platform

A new approach to harness the proven benefits of “farmer to farmer” learning by:

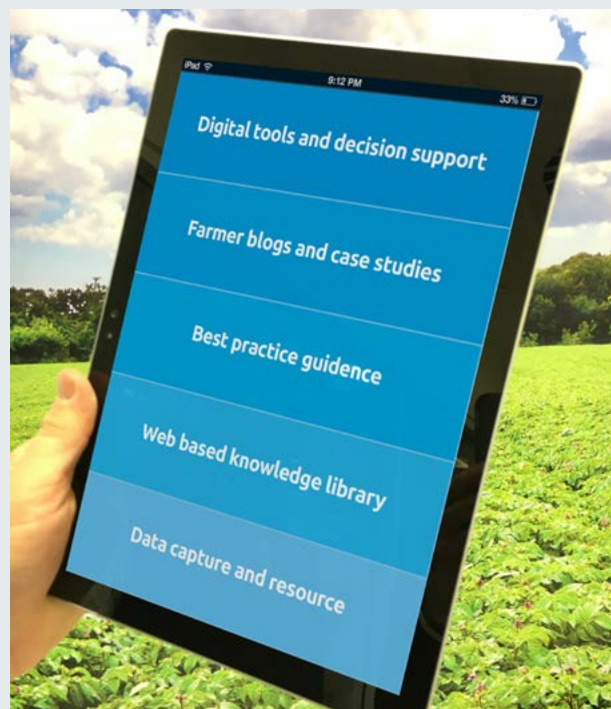
- Focussing activities on individual’s needs
- Improving regional coverage and access to information
- Accelerating innovation via on-farm trials
- Developing new partnership approaches



Digital platform

Providing access to innovation by:

- Developing a dynamic and continuously updated data resource
- Promoting faces of farming through blogs and social media
- Developing a range of digital tools and support systems
- Building up an evidence based document archive



By working with others we will...

- Be an enabler for all four of the new Agri-Tech Centres of Agricultural Innovation to help them focus on the issues that will deliver the biggest impact for farmers and growers
- Equip and empower farmers and growers with the technical, business and leadership skills to get the best out of their production systems and their staff
- Coordinate effectively with public and commercial delivery partners such as agronomists, vets, farm business consultants and the grocery supply chain to overcome the fragmented KE landscape





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