Boosting Innovation through Knowledge Transfer within and between sectors

Jayne Brookman, Head of Food, KTN

Knowledge without wisdom is a load of books on the back of an ass." - Japanese proverb
Introduction to the KTN

The KTN is the UK’s innovation network. We bring together businesses, entrepreneurs, academics and funders to develop new products and services.

We help business to grow the economy and improve people’s lives by capturing maximum value from innovative ideas, scientific research and creativity.

Single company handling all market sectors to improve delivery and remove duplication.
Why do we need Knowledge Transfer?

- What’s the problem?
- How can we help overcome these hurdles to success?
  - Tools
  - Resources
  - Funding

"Knowledge is experience; everything else is information."  *Albert Einstein*
KT – who needs it?

- Movement of expertise, knowledge, skills and capabilities - 2 way and dynamic process

- Innovation - who does what? How can I get help? How can I get funding?

- Best practice

- Future horizons - what’s coming? Am I ready? Do I need to know more? Who can help?
Creating new supply chain partnerships for the sustainable intensification of livestock agriculture

Delivering economic and environmental benefits to the UK livestock sector through improved forage crops
Economic & Environmental benefits of existing Aber® High Sugar Grass varieties

Economic impact

Milk production:
- Up to 6% more milk per cow over grazing season
- Dry matter intakes up by 2 kg/head per day
- 3% improvement in diet digestibility

Beef and Lamb production:
- Higher forage intakes (both beef and lamb)
- Dry matter intakes increased by around 25% (beef)
- 18 - 35% higher daily live-weight gains (beef)
- Slaughter weights reached more quickly (beef)
- 10 - 15% higher daily live-weight gains (lamb)
- 20% higher carrying capacity of Aber® HSG award (lamb)

Environmental benefits

Methane (CH₄):
- Livestock account for approximately 37% of all emissions of methane, which has 20-25 times the global warming potential of CO₂.
- Studies undertaken by IBERS demonstrated that on average a lamb fed with the Aber® HSG variety released 20% less CH₄ than a lamb fed with the control variety.

Nitrous oxide (N₂O):
- Livestock account for approximately 85% ammonia emissions, whose breakdown products include nitrous oxide, which is
Anacail example: between sectors

KT across technology areas - astrophysics department spin out
Generates ozone *in situ*

Food industry identified as key target: partners provided opportunities to trial but also knowledge of needs & environment

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**The need**

Total waste in the UK across the food supply chain is 11.3 million tonnes per year. This waste costs the food industry £5 bn p.a. so there is a constant demand for new technologies to increase the shelf life of products and reduce waste.

**The results**

Although ozone is a well known germicide, its use in industry to date has been limited to UV light to generate. Anacail’s proprietary plasma head creates plasma in sealed packaging to convert oxygen into ozone. The Anacail technology was developed in the Technology Strategy Board’s Food Manufacturing and Processing Technology Development programme, and gives an overview of the competition, give interested parties the opportunity to meet the lead technologists running the competition and to also to meet
A UK Roadmap for Algal Technologies

May 2013

Collated for the NERC-TSB Algal Bioenergy-SIG by B. Schlarb-Ridley and B. Parker, Adapt
Food Sector Event

Thursday 23rd May 2013
Painters’ Hall, 9 Little Trinity Lane, London

Early Career Researchers in the Food Sector
Let us help you flex your networks

- Work with partners to provide a network of networks
- Food within AgriFood context is very wide in scope- professional societies, membership organisations and specialist groupings and for academic base
- Better understanding of industry needs, both immediate and longer term, for government, funding bodies and academia
UK Food and Drink Landscape
UK Food and Drink Landscape

£ symbol denotes funding available

Defra

UK Research Capabilities

Levy Boards

National Diet and Nutrition Survey

Department for Business, Innovation & Skills

£ Department for Business, Innovation and Skills

Research Councils UK

Learned/professional bodies

UK National Technology Platform for Food

Serena
UK Food Capability Landscape

- Robotics
- Packaging
- Regulatory Advice
- Advanced Food Training
- Sustainable Production
- Crisis Management
- Materials
- Consumer Studies
- Engineering
- Human Nutrition
- Safety
- Shelf Life
- Serena

Knowledge Transfer Network
Technology Strategy Board
Driving Innovation
UK Food Capability Landscape

Food legislation advice service
Maintaining an awareness of current legislation, understanding its implications and remaining alert to likely changes is, increasingly, challenging. To help meet these needs, Campden BRI’s experienced Food Law Advisory Team offers a valuable, extensive and authoritative information and advisory service, on:

- Current UK and EU food law and related standards
- Guidance documents, codes of practice, planned and proposed legislation
- Environment legislation, relevant to the food supply chain
Maps

- These maps are living documents. Please help us to make them the best they can be by:
  - Reporting any broken links
  - If there any omissions
  - Suggestions for any changes

- The main contact for these maps is Serena Broadway
  serena.broadway@ktn-uk.org
  07826 505756
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Faster horse – Henry Ford
Working with industry and government to help support society’s needs
Innovate UK (new name for TSB) is working out what to do in the next phase of the Sustainable AgriFood Innovation Platform.

The High Value Manufacturing strategy is also being looked at and Innovate UK is seeking feedback from industry.

Defra (Steve.Aston@defra.gsi.gov.uk) mapping private R&D for the Agritech strategy.

http://www.smartsurvey.co.uk/s/UKRDspend
Delivery mechanisms

- AgrilInnovation Centres
- Agritech Catalyst
- AgriFood KTP
- R&D competitions: recent example - Improving Food Supply Chain Efficiency Innovation vouchers
- Industrial Biotechnology Catalyst - food waste consortium building workshop 27th January!
Cohort of AgriFood KTPs

Agri-food supply chain

Status: Open

Key features: Investment of up to £2.3m to establish Knowledge Transfer Partnerships (KTPs) to improve the competitiveness, resilience and responsiveness of the agri-food supply chain.

Programme: Knowledge Transfer Partnerships

Award: Up to £2.3m

Opens: 19 Jun 2014

Registration closes: No deadline

Closes: 11 Feb 2015

Support phone number: 0300 321 4357

LINKS FOR THIS

COMPETITION

Offer businesses the opportunity to work with academic institutions to gain access to new knowledge.

Learn more
Process Industries North East Launchpad

**Status:** Open

**Key features:** Investment of up to £1m in innovative research and development projects, with a focus on the cluster of manufacturing process businesses in the North East, grouped around the Wilton Centre, Seal Sands and Billingham.

**Award:** Up to £1m

**Opens:** 01 Sep 2014

**Registration closes:** No deadline

**Closes:** 15 Oct 2014

**Support phone number:** 0300 321 4357

**Programme:** Launchpad

Supporting innovative projects by high-tech companies that are clustered around specific themes and geographical locations.

Learn more

**LINKS FOR THIS**

**COMPETITION**

Applicant guidance

Important information
## EU opportunities

### Sustainable Value Chains - European Funding for Innovation in Sustainable Use and Supply of Resources

KTN in Partnership with SusChem UK  
Wednesday, 8 October 2014 from 10:00 to 16:30 (BST)  
Manchester, United Kingdom

### Registration Information

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<th>TYPE</th>
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<td>7 Registrations</td>
<td>3 Oct 2014</td>
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<tr>
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<td>15 Registrations</td>
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<td>Organiser / Speaker / Facilitator</td>
<td>8 Registrations</td>
<td>3 Oct 2014</td>
<td>Free</td>
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Contact

07957 543753
Jayne.brookman@ktn-uk.org

Innovate UK website:
https://www.gov.uk/innovation-get-support-and-advice
"Alchemists turned into chemists when they stopped keeping secrets."

*Eric Raymond, programmer and open-source software advocate*

“In a knowledge-driven economy, talk is real work."

*Thomas H. Davenport and Laurence Prusak, KM gurus*

“Knowledge is like money: to be of value it must circulate, and in circulating it can increase in quantity and, hopefully, in value.”

*Louis L’Amour, author*

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