

**Professor Gerry Boyle, Director Teagasc, Ireland**  
**Innovation and collaboration across the agri-food sector**

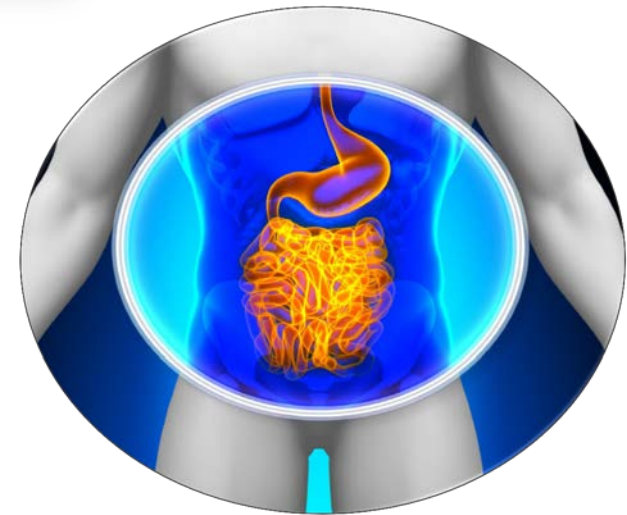
**Westminster Food & Nutrition Forum Keynote Seminar**  
**Next steps for UK agriculture – funding and support priorities, sustainability and the policy framework post-Brexit**

**Congress Centre, 14<sup>th</sup> March, London**

# Teagasc in brief

- Teagasc – pronounced “Chawg-ask” means “instruction”
- Teagasc – The Irish Agriculture and Food Development Authority – research, advisory and education
- Annual expenditure €188 m. and 1260 total staff – 70% State grant
- 248 researchers + 253 Ph.D. students; 76 subject-matter specialists; 66 teachers; 300 farm advisors; 7 research centres; 51 advisory offices and 7 colleges

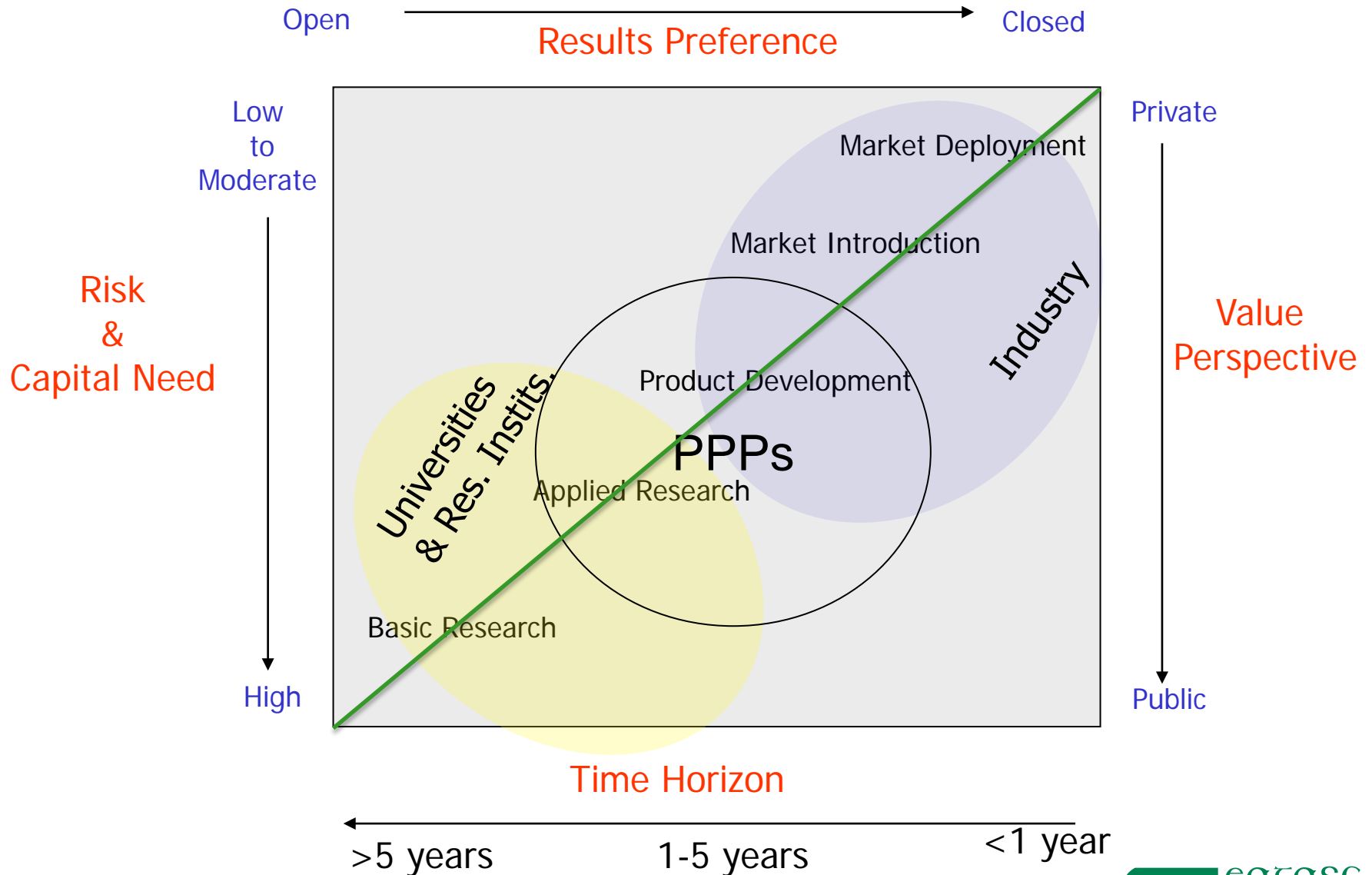
# Teagasc research: from farm to gut



# Collaboration is the new innovation

- Collaboration (PPPs) frees up barriers to innovation intrinsic to public and private organisations
- Public and private organisations need to adapt to maximise their innovation potential
- Our mantra “we prefer to work *with* companies (collaboration) rather than *for* companies (service providers)”
- Support structures to foster innovation through collaboration ... some examples from Ireland
- Innovation needed in how public research organisations market technology

# The innovation pipeline and PPPs



# Inverting the traditional innovation paradigm



# Examples of industry led public (Teagasc and universities)-private food research collaborations

## Multi-annual programmes

- *Meat Technology Ireland ... €8m & 9 companies*
- *Dairy Processing Technology Centre ... €22m & 8 companies*
- *Food for Health Ireland ... €8m & 8 companies*
- *Prepared Consumer Foods Centre ... €10m*
- *Alimentary Pharmabiotic Centre Ireland ... €80m & 9 companies*
- *VistaMilk (Precision Dairy) ... €40m & 40 companies*

# Innovation in marketing technology



FOOD  
INNOVATION  
**GATEWAYS**



# Technology Portfolio



- Web based, hard copy, USB, DVD forms available.
- Updated on a six monthly basis and re-issued before a Food Innovation Gateways event.

**Technology**

OFFER

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**Technology**

UPDATE

Advan  
Anti-P

**Technology**

EXPERTISE

**Sum**  
A novel probiotic has been validated as a great storage and great medicinal product encapsulation.

**Prob**  
Health must be achieved through support of upper respiratory tract through probiotic encapsulation.

**Solu**  
The use of matrix stabilizers so as gastritis stabilizers through probiotic encapsulation.

**Key Ex**  
Dairy, beverage processing

**Practic**  
Excellent screening of immunodetectors in this project benzimidazole chemical success in success classes a specialist

The milk in this technology carries out scope of flukicide resistance demands

**Main Res**

- Three new developed residues
- A novel method detecting residues
- The new meet EC
- These are screening chemical laboratory

**Opportu**  
Teagasc can produce through our

**Why**  
Teagasc why is a character and this

**Technology**

SERVICE

**Backgr**  
Why probiotic health a functional product

**Bio**  
Teagasc unique Teagasc other

**Technology**

PROFILE

**Technology**

CRM

**Benefits**  
Teagasc can end-users formulated a development transfer of centrifugal should allow nutritional and scientific

**Areas o**

- Separate pilot scale
- Optimize separation
- Analytical electroanalysis

basic research developed in of experience reduce the third Clostridium and has success detect all this

**Competi**

- T-Bio® general service.
- It is unit Clostridium
- It is 100
- Test results

**Testing**  
This T-Bio® whether a success and costs €

**Education**

Ph.D. in Analytical Chemistry, University College Cork 2003  
B.Sc. Industrial Chemistry, University of Limerick, 1997

**Career**

2002–Present: Teagasc Food Researcher  
1997–1998: R&D Chemist, Gerard Laboratories  
1998–2002: PhD student – \*Teagasc Walsh Fellow\*

**Expertise**

- Analytical chemistry: Chromatographic separations, sample purification, mass spectrometry, biosensors and immunoassays.
- Residue analysis: Agrochemical, environmental, natural toxins and medicinal adulterants.
- Development of biosensors and immunoassays

**Selected Publications**

- O'Mahony, J., Moloney, M., McConnel, R.J., Benckikh, E.O., Lowry, P., Furey, A., and Danaher, M. (2011). Simultaneous detection of four nitrofurans metabolites in honey using a multiplexing biochip screening assay. *Biosensors and Bioelectronics* 26 (10), pp. 4076–4081.
- Vinogradova, T., Danaher, M., Baxter, A., Moloney, M., Victory, D. and Haughey, S.A. (2011). Rapid surface plasmon resonance immunobiosensor assay for microcystin toxins in blue-green algae food supplements. *Talanta*, 84 (3), pp. 638–643.
- Whelan, M., Kinsella, B., Furey, A., Moloney, M., Cantwell, H., Lehota, S.J. and Danaher, M. (2010). Determination of anthelmintic drug residues in milk using ultra high performance liquid chromatography-tandem mass spectrometry with rapid polarity switching *Journal of Chromatography A*, 1217 (27),

**Thank you**