

# **Teagasc Technology Foresight Project 2015**

## **Technology Cluster Working Groups**

### **Terms of Reference**

Technology cluster working groups, comprising Teagasc and external experts, under the supervision of the Steering Committee, will undertake the main foresight exercise and will advise Teagasc on the implementation of the outcomes. A Technology Cluster Working Group will be formed for each key area of technology or for technology clusters identified in the initial technologies scoping study. The Groups are expected to identify new technologies with potential for enhancing the competitiveness/sustainability/quality/safety of Ireland's agri-food and bioeconomy sector; identify the likely time scale, costs and research challenges to the introduction of these technologies; identify the main barriers to their introduction; and assess their long-term implications for the sustainable growth of Ireland's agri-food and bioeconomy and potential to underpin growth in other economic sectors.

The specific terms of reference of the Technology Cluster Working Groups are to:

- Using different foresight methods, conduct a detailed analysis of key emerging generic technologies which could have application in the agri-food and bioeconomy sector over the next two decades and beyond.
- Provide a critical assessment of how these technologies could impact on specific areas of agri-food in Ireland and the challenges and opportunities arising
- Identify the likely time scale and costs involved in the uptake of these technologies in the sector in Ireland and the likely barriers to adoption
- Identify the likely implications of these new technologies for future national research, education and knowledge transfer programmes
- Prepare a short document summarising the Group's findings for inclusion in the draft foresight report.
- Contribute to the organisation of a national foresight conference in 2016 to present the results of the exercise.
- Advise on the implementation of the outputs in the development of Teagasc's agri-food R&D programme.
- More generally, review the existing literature, prepare synthesis and scoping documents, select and nominate expert panel members, integrate and summarise reports and present them to the Steering Committee.
- Undertake such other tasks as requested by the Steering Committee.

**Groups:**

1. **Digital Technologies:** including sensors, data analytics, robotics, artificial intelligence, 3D printing and precision agriculture.
  
2. **Biotechnology:** including genomics, proteomics and epigenetics, synthetic biology.
  - 2.1 Crops
  - 2.2 Animals
  - 2.3 Food
  
3. **Agriculture and Food Technologies/Farming Systems**
  - 3.1 Agricultural technologies and Farming Systems
  - 3.2 Food technologies
  
4. **Nanotechnology.**
  
5. **Environmental Technologies**
  
6. **Socio-Economic Sciences**
  
7. **Energy and transportation**
  
8. **Horizontal Group:** comprising the chairs of the foregoing groups to coordinate across the different technologies.