

# Advancing Beef Safety and Quality Through Research and Innovation



FOOD-CT-2006-36241

[www.prosafebeef.eu](http://www.prosafebeef.eu)

This project is funded by the European Commission  
under the Sixth Framework Programme



# ProSafeBeef – A Brief Overview

- Background and motivation
- Why strategically important for Ireland?
- Total food chain approach
- ProSafeBeef objectives
- ProSafeBeef design
- Main deliverables
- Conclusions



# Importance of Beef

## Ireland

- €1.4 billion export market
- 6.2 million cattle
- 28% of gross agricultural output
- Major endogenous industry

## Europe-25

- €75 billion value
- 10% Agricultural output
- 8.1 million tonnes produced
- 8.3 million tonnes consumed



# Changing World

- Dependent on high value markets
- Globalisation
- Reduced commodity prices
- Changing lifestyles- more choice
- Health and safety concerns
- Towards a knowledge based economy
- Beef sector imperative





Source: European Technology Platform –  
Food for Life



# National Priority

- FIRM investment – increased research capacity
- Teagasc priority
- Total Food Chain Approach
- Underpinned with modern science
- Increased innovation, strengthen competitiveness - translating research results into applications



# ProSafeBeef Consortium

- Key drivers: Teagasc, IGER, INRA,
- 42 multidisciplinary partners from 19 countries
- Total value €19m of which E.U. contribution is €10.87m.
- 12 SMEs
- Teagasc, U.C.D., U.C.C., Q.U.B.



# Partner Countries

- Ireland,
- France,
- UK,
- Norway,
- Greece,
- Belgium,
- Germany,
- Poland,
- Denmark,
- Austria,
- Spain,
- Netherlands,
- Norway,
- Serbia,
- Brazil,
- USA,
- Canada,
- Australia,
- New Zealand.



# Partners

- Teagasc
- Institut National de la Recherche Agronomique
- Institute of Grassland and Environmental Research
- Matforsk AS, The Norwegian Food Research Institute
- Agricultural University of Athens
- Association pour le Développement de l'Institut de la Viande University of Ghent
- University College Dublin
- University of Bristol
- Institute of Farm Animal Biology Germany
- Agricultural University of Poznan,
- Aarhus School of Business
- Aristotle University of Thessaloniki
- University of Veterinary Medicine Austria
- National Veterinary Research Institute
- Danish Meat Research Institute
- University of Novi Sad
- L'Organizacion de Consumidores y Usuarios
- RIKILT, Institute of Food Safety
- University College Cork
- Queen's University Belfast
- International Atomic Energy Agency Austria
- British Nutrition Foundation
- Institute of Agro-Food Research and Technology
- Universidad Federale de Sao Paulo
- Universidade de Sao Paulo
- British Nutrition Foundation
- Institute of Agro-Food Research and Technology
- Universidad Federale de Sao Paulo
- Universidade de Sao Paulo
- Microbóticos
- Greifenfleisch GmbH
- Ensors Abattoir Limited
- Celtic Pride
- United Nationale des Cooperatives d'Elevage et d'Insemination Animale
- Josef Strobel und Sohne
- Apostolos Papadopoulos & Sia
- Ecofarm Peloponessos SA
- Furuseth Slakteri AS
- Prima Jæren AS
- Institute of Environmental Science and Research Ltd
- Co-operative Research Centre, Cattle and Beef Quality Australia
- University of Florida, Dept of Animal Science
- Colorado State University
- USDA, Western Regional Research Centre
- Canadian Research Institute, University of Guelph



# Associated Partners

- Meat and Livestock Commission, UK
- KBBL Wijhe B.V., The Netherlands
- Kepak, Ireland
- Dawn Meats, Ireland
- Advanced BioNutrition Ltd., UK
- APIS GENE, France
- Sheelin Meats Ltd., Ireland
- Irish Food Processors, Ireland and UK
- European Meat Association
- Westgate Biological Ltd., Ireland



# Multi-disciplinary Approach

- Molecular biologists
- Microbiologists
- Chemists
- Animal scientists
- Meat scientists
- Engineers
- Nutritionists
- Industry
- Policy makers
- Opinion formers
- Consumer groups
- Producer groups



# The Vision

- *...to enable the beef chain in Europe to thrive and diversify while delivering innovative, novel and improved fresh beef and beef products that are safe, high quality and consumer driven for national, regional and global markets thus allowing for a more competitive and sustainable industry...*



# Strategic Objectives

- *.....to develop through world class scientific research and knowledge transfer a strategically focused beef safety management system, based upon the principles of quantitative risk analysis and new control and intervention strategies that inspire confidence in the beef chain.....*
- *... to enhance quality, choice and diversity in the beef sector consistent with the wider expectations and needs of European consumers.....*

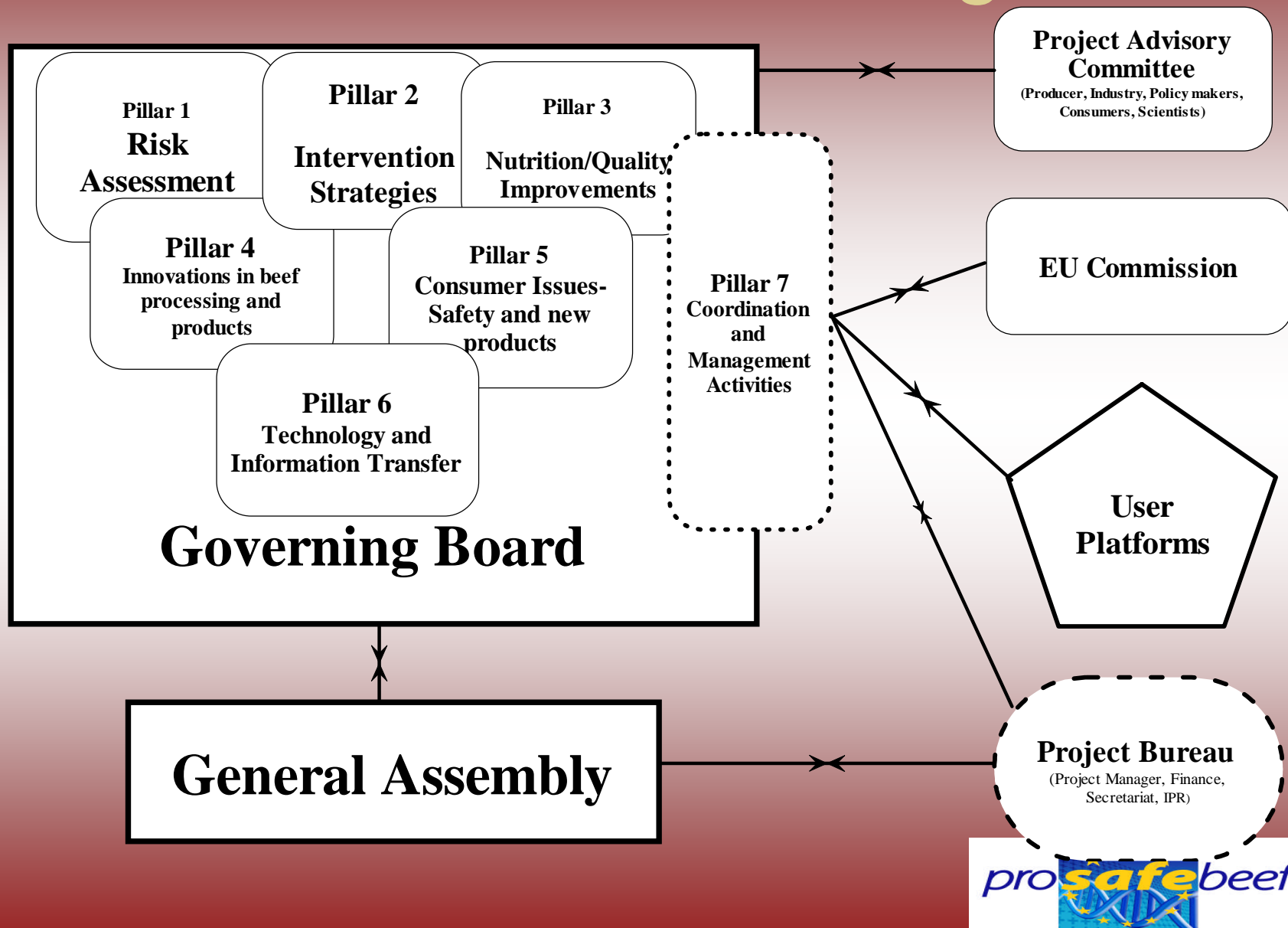


# Research Strategies

- Development of quantitative risk assessment models to measure, trace and reduce microbial/ chemical contamination
- Development of novel control and intervention systems to maximise beef and beef product safety
- Satisfy consumer demand for diversity and choice and add value to the beef chain by developing innovative techniques and products
- Assessing consumer expectations with respect to beef safety and on consumer acceptance of new technologies and novel beef products and processes
- Engage with the beef sector in its broadest sense including policy makers



# ProSafeBeef Design



# Deliverables

- Quantitative risk assessment models for microbial pathogens.
- Determination of the physiological and molecular basis of pathogen survival.
- Novel intervention strategies at specific points along the beef chain.
- Assessment of the risk posed by key chemical contaminants.
- Strategies to enhance the health benefits of beef and beef products.
- Development of new approaches to increase diversity and quality of value-added beef products.
- Guidelines for the provision of safety information for the European citizen.
- Creation of a a generic tool for testing consumer acceptance of beef new products

*.....delivered to stakeholders through a strategic work plan integrating demonstration, technology transfer, dissemination and training activities...*



# Horizontal Activities

- **Demonstration**
- **Technology transfer –IP and commercialisation opportunities**
- **Training**
- **Dissemination**

# Impacts Foreseen

- Assist EU, national policy makers, regulatory authorities (including INCO countries) and the beef industry to reduce the burden of microbial related gastro-intestinal illness due to consumption of beef and beef products.
- Improve the nutritive value and eating quality of fresh beef and beef products by developing consumer focused strategies
- Increase competitiveness and innovative manufacturing technologies.
- Build trust with consumers in science and technology.
- Improve the quality of life in rural and less favoured areas.



# Conclusions

- Privilege to lead and be involved in ProSafeBeef
- Highly valuable and appropriate
- Excellence of our research and its application for the benefit of society is in line with Strategy for Science, Technology and Innovation.
- Contribute to the sustainable development and competitiveness of the sector



# Acknowledgements

- European Commission
- DAF
- Partners

