

## European Mutual Learning Exercise

**AgriChem Whey – A Joint Undertaking conceived in an  
Innovation Partnership**

**March 23<sup>rd</sup>, 2018**



## Global Ambition

If you've got the ambition we'll help you take it global.

- Enterprise Ireland helps companies start, innovate and scale internationally
- Work with 5,000 Irish owned businesses across all sectors of manufacturing and internationally traded services, approximately 200 of which are large companies
- Annual budget of €343M
- Offer leadership, competitiveness, innovation, networking and financial supports made to match ambition at every stage of company development
- Mandate to drive collaboration and commercialisation of state-funded research
- Mandate to drive Irish participation in H2020
- Innovation activities across all Irish industry (Micro SME, SME, Large Indigenous, Foreign MNC)
- 32 international offices; 10 offices throughout Ireland
- Responsibility for FDI in food

# Strategy to 2020

## Foster Innovation

Key to export success  
and scale

## Drive Competitiveness

Key to winning market  
share

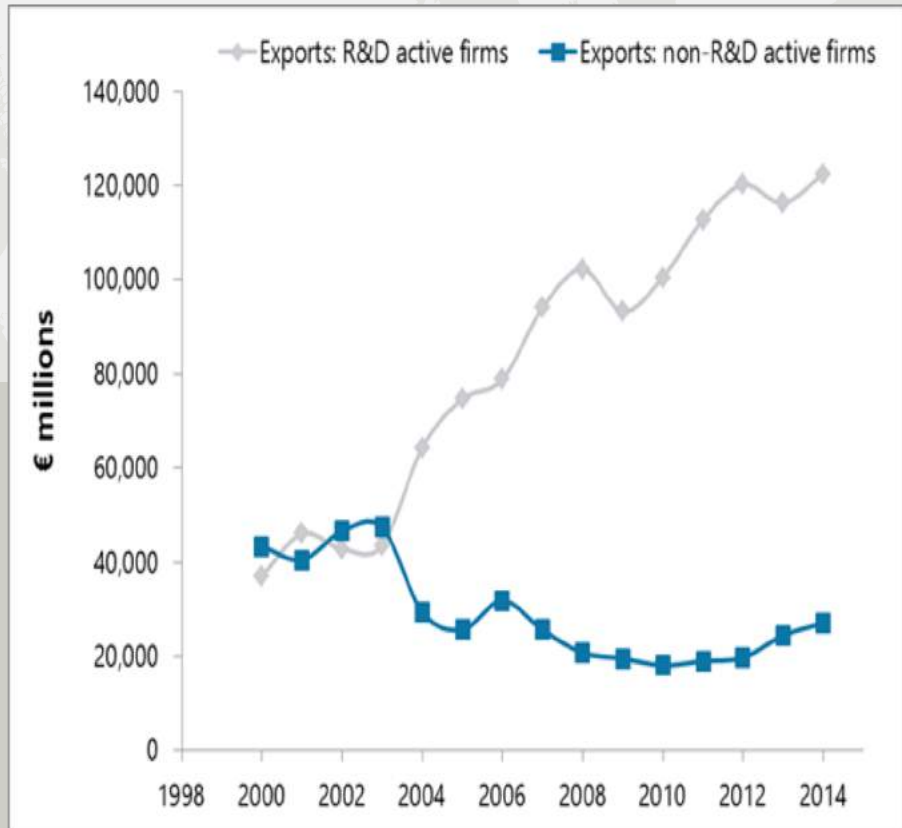
## Diversify Markets

Expand Irish export foot-  
print

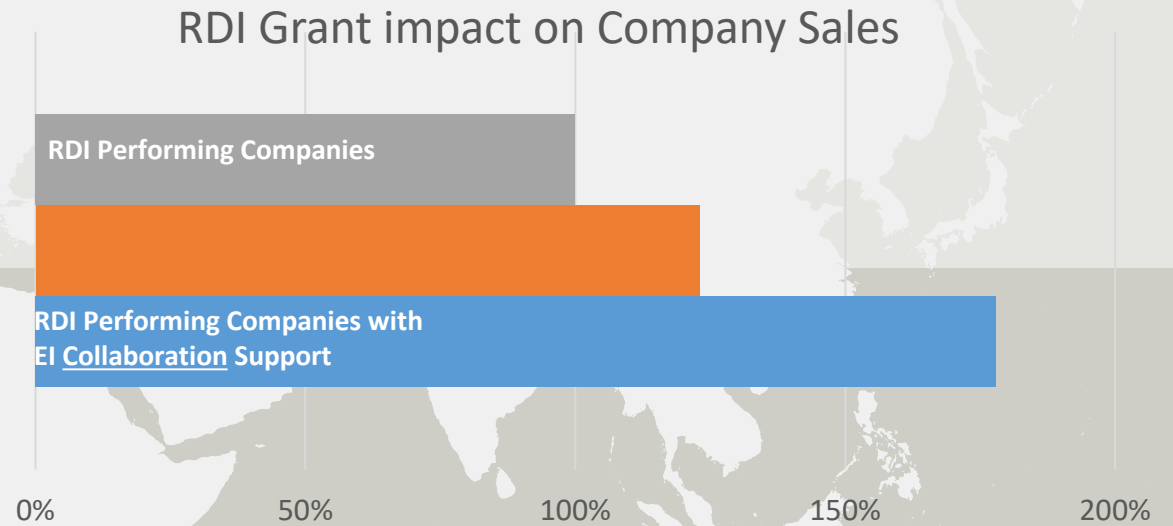
**Build Scale**

**Expand  
Reach**

# Innovation Impacts on Business



R&D Active Firms achieve more exports than non-R&D Active Firms





# Innovation Partnerships



A manufacturing or internationally traded services company with an operating base in the Republic of Ireland. The company must be a client of EI, IDA, LEO, Údarás.



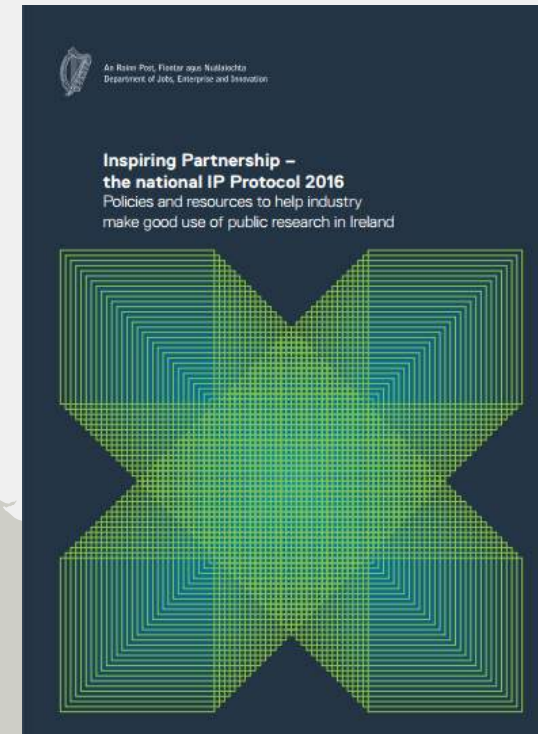
The company has identified a commercial opportunity for an innovative product, process or service that it needs to develop and an Irish academic research group has the R&D capability to help the company.



The Innovation Partnership Programme supports the company through co-funding the research group costs for an “Industrial Research” project.



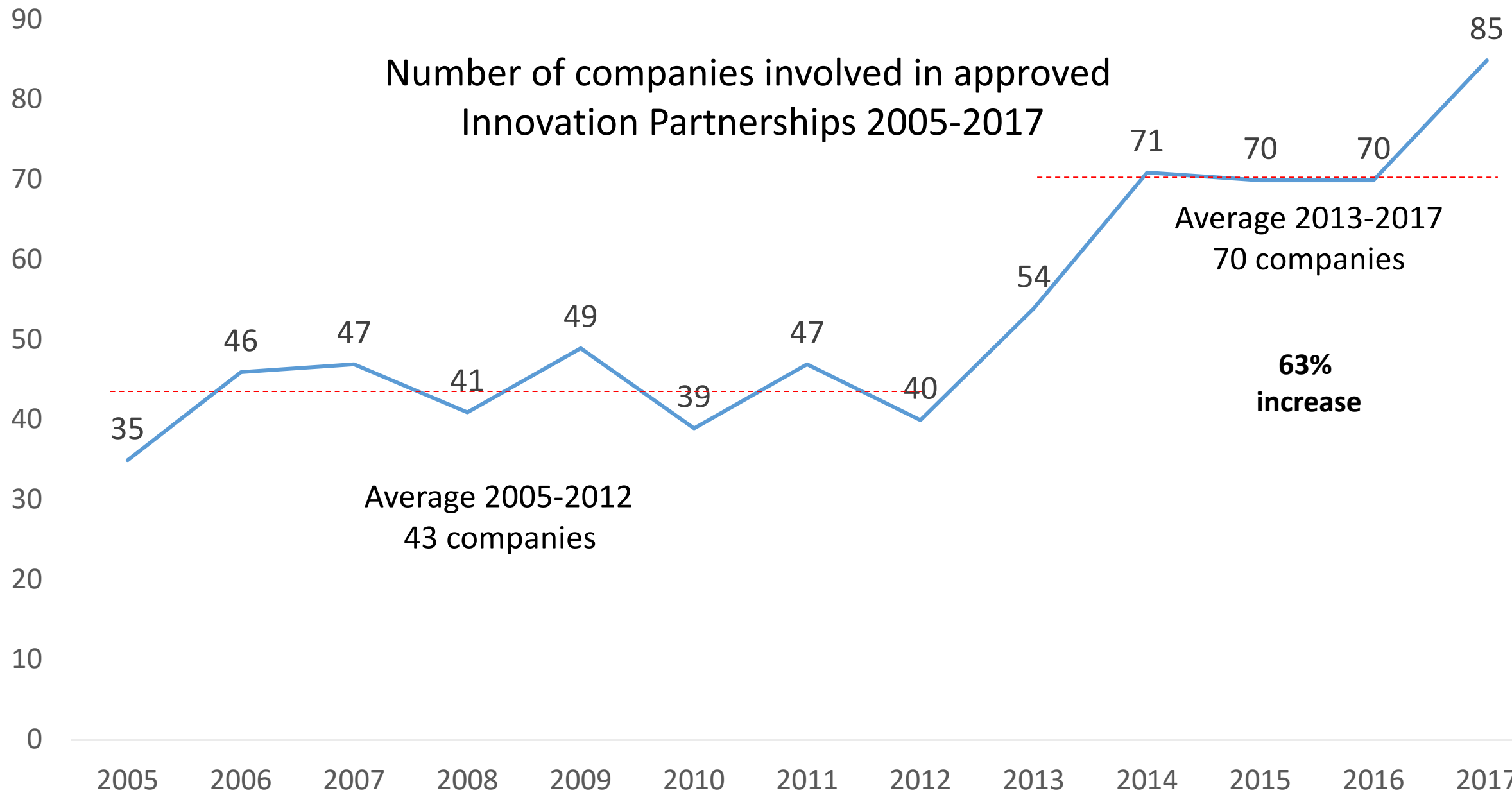
- The Innovation Partnerships Full proposal Form contains a template Intellectual Property ‘Heads of Agreement’ for discussion between the company and the research institute.
- Developed with Knowledge Transfer Ireland and compliant with IP Protocol
- The signed Heads of Agreement must be submitted to Enterprise Ireland as part of the project approval process.



*National IP Protocol*

# Number of companies involved in approved Innovation Partnerships 2005-2017

COMPANIES INVOLVED IN IPPS



Average 2005-2012  
43 companies

Average 2013-2017  
70 companies

**63%  
increase**

YEAR

- Applies to the broad publicly funded research system
- Evolution over time
- Programme evaluation cycle
- Impacts
- Good regional spread of companies and research performers
- Spillover benefits





Kevin O'Connor Ramesh Babu Padamati

2014 Innovation Partnership Project  
(€138 K from Enterprise Ireland)

has led to:

€30m EU project  
*integrated biorefinery for the  
conversion of dairy side streams to high  
value bio-based chemicals*



**European Union**  
European Regional  
Development Fund

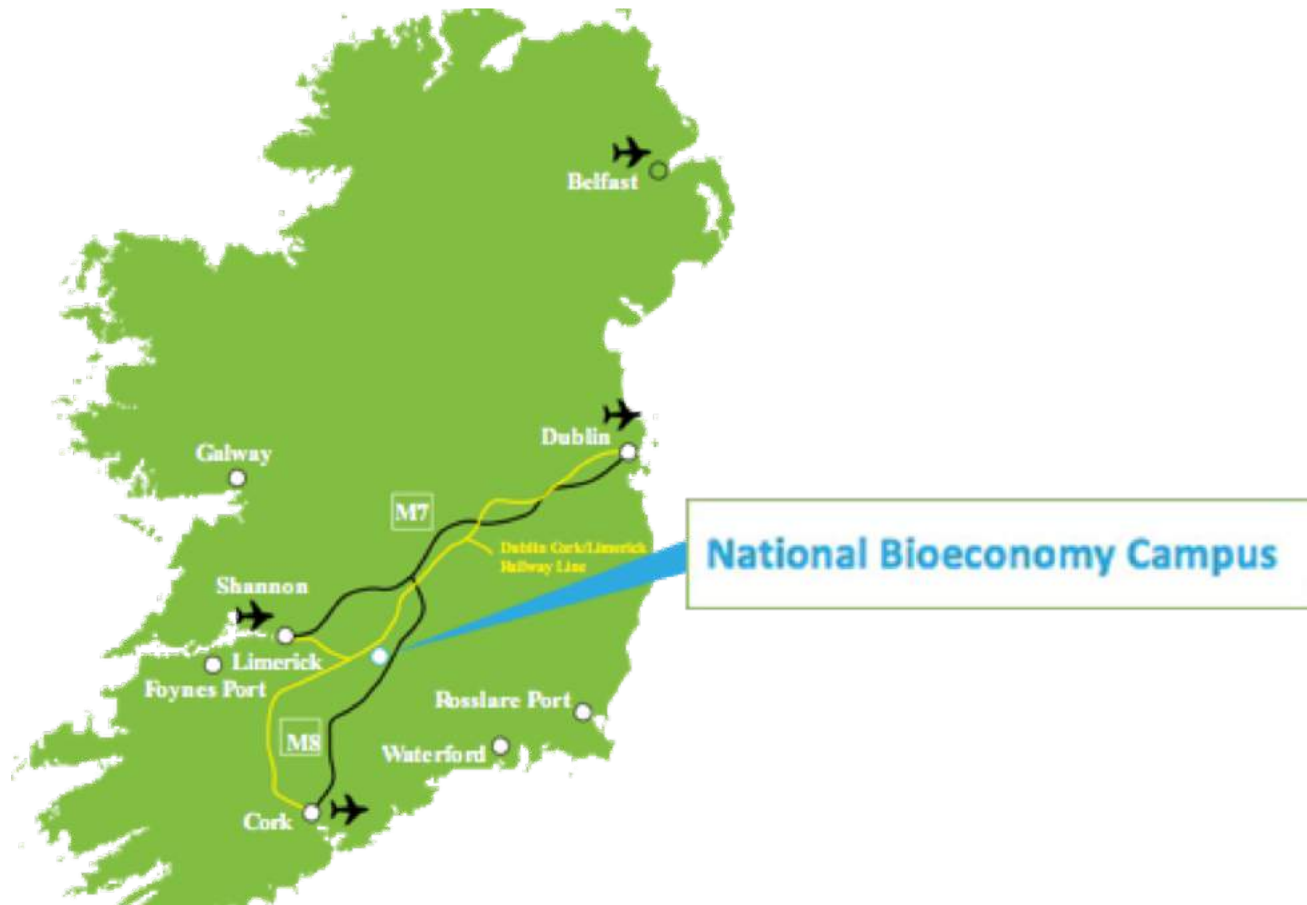
- Glanbia is a major producer of lactose (derived from whey). A substantial by-product waste stream of lactose production is de-lactosed concentrate (DLC).
- DLC is an excellent potential source of the industrial chemical “lactic acid”, (both L and D lactic acid).
- The market opportunity for commercially viable L-Lactic and D-Lactic acid from DLC is compelling for the company.
- Both lactic acids are employed in the bio-degradable plastics and medical device industry.
- The project could result in new jobs and additional sales and will enhance Glanbia's credentials as an innovative and sustainable food company

# Moving to Pilot Scale

## Bio-based Industries Joint Technology Initiative (BBI-JTI)

- Glanbia Ingredients is to coordinate a BBI-JTI project called AgriChemWhey
  - This is a €30m project.
  - With Partners in Ireland (5), Belgium (2), Germany and Austria.
  - Partners representing the industry and the research system
- AgriChemWhey will build a first-of-a-kind, industrial-scale biorefinery with integrated symbiotic industrial and agricultural value chains that will valorise more than 25,000 tonnes per annum of excess WP (Whey Permeate) and DLP (de-lactosed concentrate) to added value products.
  - E.g. lactic acid, polylactic acid, minerals for human nutrition and bio-based fertilizers.
- The plant will investigate the techno-economic viability of the innovative technology.
- AgriChemWhey will also develop a blueprint of an economic sustainability concept and replication plans for other regions across Europe, aligning with sustainability targets.

# AgriChemWhey Project location



- On the site of the former Lisheen mines
- Lisheen mine began operations in 1999 and employed up to 400 people at full production.
- Makes final shipment in January 2016
- Irish Bioeconomy foundation including Tipperary local authority and the mine owners



# Lisheen - National Bioeconomy Campus



# “Funding gained to turn former mine into Irish bio-economy innovation and piloting facility”

- €4.6 million to support the Irish Bioeconomy Foundation to develop a new bioeconomy innovation and piloting facility at Lisheen, Co. Tipperary has been announced by Heather Humphreys TD, Minister for Business, Enterprise and Innovation.
- The facility will aim to enable industry, entrepreneurs and researchers to scale technologies that convert Ireland’s natural resources to products of high value for use in a wide variety of sectors.
- This is one of 21 regional projects to receive funding through the first round of Enterprise Ireland’s new €60 million competitive Regional Enterprise Development Fund





