



We have the formula for your success

# Chemical Sciences Scotland

Enabling Solutions – the role of Innovation Clusters  
in chemical regions – 27 October 2008

Fiona Soutar  
Scottish Enterprise Chemical Sciences Team  
Reputation and Sustainability Topic Leader, Chemical Sciences Scotland



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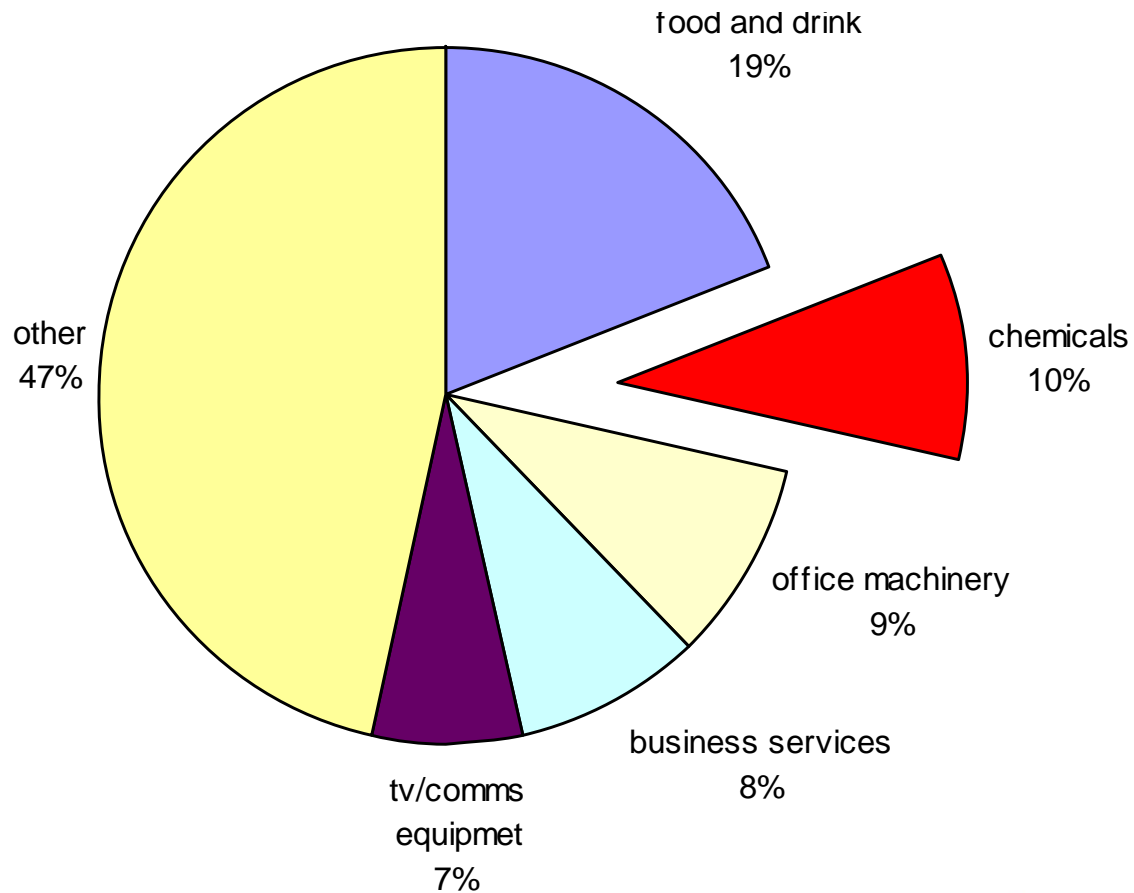
Chemical Sciences  
**SCOTLAND**

- Scotland has a thriving, dynamic and progressive chemical sciences cluster

# The Scottish chemicals industry...

- Accounts for 15% of the UK chemicals industry
- Generates £9.3bn (11.4bn Euro) revenue
- Employs 14000 people (~70,000 dependent on it)
- Includes 150 companies, many of them SMEs
- Has the 2<sup>nd</sup> highest GVA per employee of any industry in Scotland (£181,700) (223,205 Euro)

# It's Scotland's #2 export earner... £1.65Bn – 2.08Bn Euro



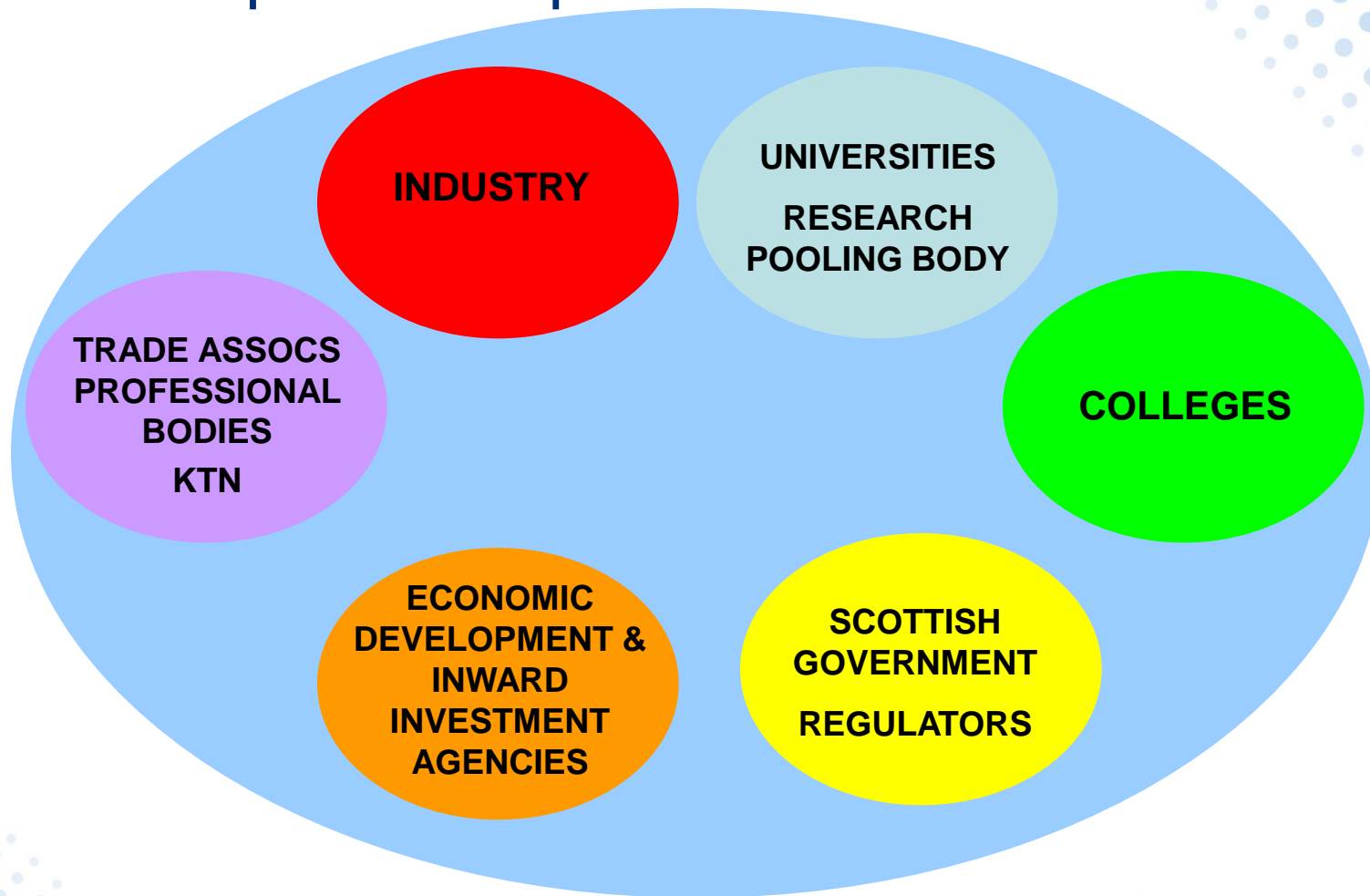
# Did you know that...

- FujiFilm's Scottish business is the world leader in inkjet dyes?
- FMC's biopolymer business in Girvan is the biggest in the world?
- INEOS's refinery and petrochemical plant at Grangemouth is its largest globally, producing
  - 3 million tonnes of fuel pa (9 million litres a day!)
  - 2 million tonnes of chemicals pa
- The chemical sector (including pharma) accounts for 50% of all industrial R&D in Scotland- 1.1% Of turnover
- Many of the world's leading chemical/pharma companies have businesses located in Scotland, including
  - Ciba, Ineos, DSM, GSK, DuPont, Organon, Syngenta, Dow

# Scotland's Chemical Sciences Cluster

- Background
  - Fragmented industry
  - No networking
  - CIA member companies network
  - Scottish Enterprise priority industry
  - Appetite
- Setup
  - Facilitated industry workshops October 2005
  - Strategy Developed March 2006
    - Chair appointed – Dr Sandy Dobbie
    - Operating Structure formed and delivering projects
  - Cluster Brand and strategy launched October 2007

# Chemical Sciences Scotland is a unique, inclusive partnership...



## ...that has a simple mission

- To ensure that a vibrant and competitive chemicals industry exists in Scotland in 20 years time
- Scotland must “punch above its weight” to
  - Keep and improve what it already has
  - Develop indigenous new businesses much faster
  - Attract new investments
- 10 key objectives to be implemented through 5 Topic Groups
  - Sustainability; Innovation; Skills; Reputation; Investment



## ...that has 10 key Objectives

- Ensure **unit cost** of output is globally competitive
- Build greater **interdependence** to create cluster benefits
- Develop a **regulatory climate** that is a competitive advantage
- Increase the proportion of **speciality/pharma** businesses
- Increase **applications/product R&D** conducted here
- Increase **innovation/start-up rate**
- Develop **world-class skills**
- Increase the **attractiveness** of the industry as a career choice
- Improve **public perception** of the industry and its impact
- Encourage **new investments** in chemicals

## ...that has the following structure

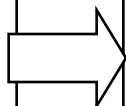
- Industry Chairman – Chair and leadership role
- 5 Topic groups – 100 senior leaders actively involved - Meet every two months
- 
- Leadership Group – Governance - includes topic group chairs and Regulator, and Chair of ScotCHEM - Research Pooling body
- Scottish Enterprise is a strategic partner, assists the industry to deliver industry plan

# Responsive?

## SUSTAINABILITY

### Industry need

- Unit cost competitive
- Regulatory climate that is a competitive advantage



### SE response

- Use of SMAS/ PICME
  - Global benchmarking Survey
  - Sustainability research
- Engagement with Scottish Government Regulatory Review Group

## INNOVATION

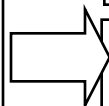
- Product & application innovation
- University/education sector: linked to business need
- More chemical businesses



- Innovation through collaboration
  - SPIRIT PHD Studentships 51 apps; 39 approved
  - Proof of concept – 10 received; 6 approved: £850K; 1M Euro
  - Innovation 1: 1 audits using CIKTN
  - Conferences, Heterocyclic Chemistry, IUPAC;
  - Industrial Biotech

## SKILLS

- More availability of high quality candidates
- Candidates match needs of sector



- Endorsed skills strategy
- Involve all delivery partners
- Curriculum; careers; workforce development; future skills

# Responsive?

INVESTMENT

## Industry need

- New investment in existing business/ research base
- Inward Investment- particularly R & D

## SE response

- Winning of mobile projects- RSA Investment: 15 projects, £15M; 19M Euro offered, £106M levered; 133M Euro
- SE research grant (R & D+) investment: 9 projects, £11M; 14M Euro offered, £117M levered; 147M Euro
- SDI on board - International Operating Plan
- Exhibited internationally for first time 2008

REPUTATION

- Perception change
- Cluster Benefits
- Industry advisory group

- Marketing & communications plan
- Website/ Newsletter
- Industry directory
- Networking events

## ....next Steps

- Recruitment of PR Agency to promote key messages and good news stories
- Reaching out to more Stakeholders
- Inaugural Conference - 25<sup>th</sup> March 09
- Exhibiting internationally, attracting investment
- ECRN member and MEP Evening
- .....

# Chemical Sciences Scotland recognised as a significant voice for the Scottish Chemicals Sector

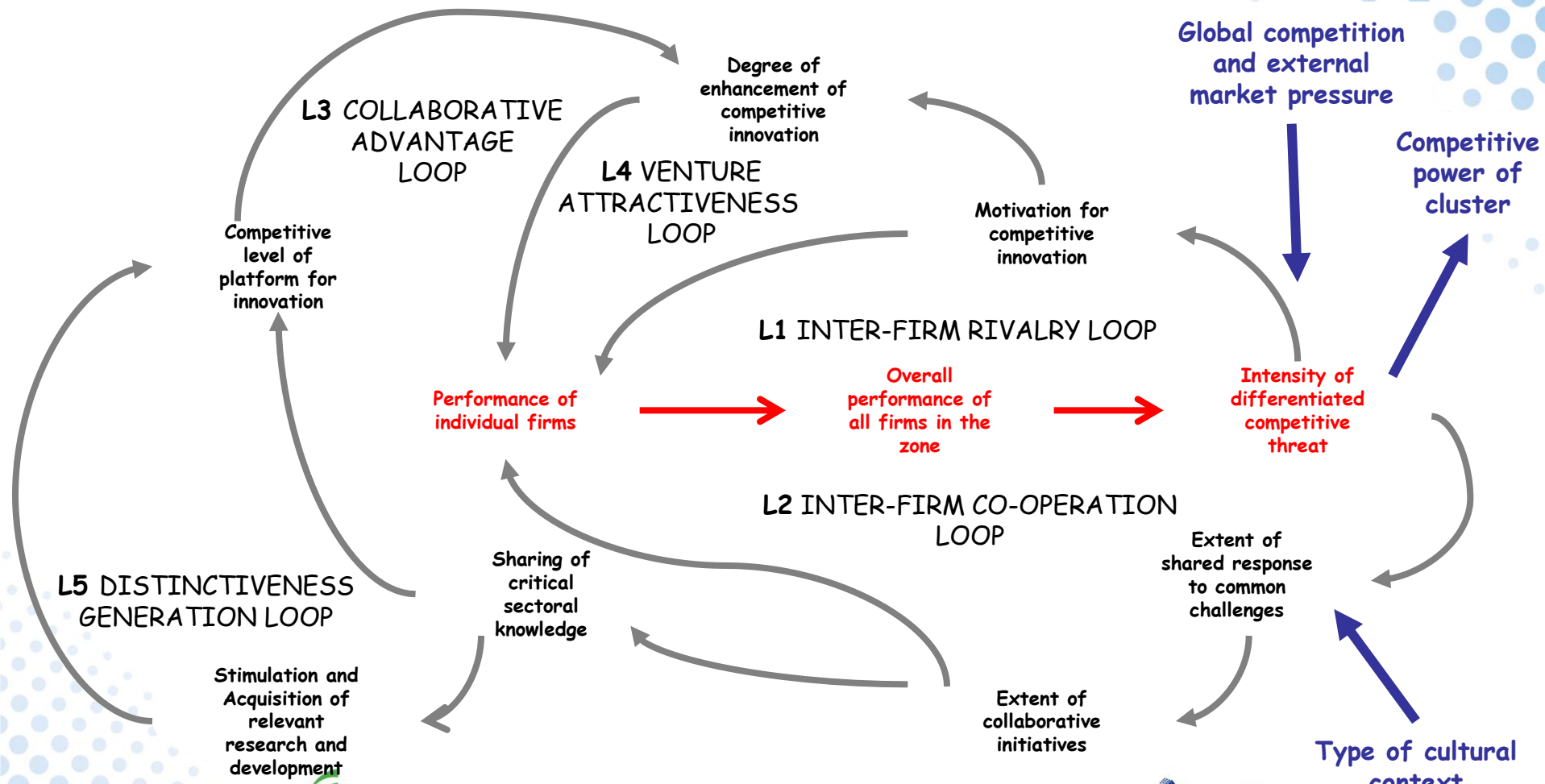








# The Principal Dynamic Loops



# Economic 'value add' from Chemical Sciences Enterprise

'chemical sciences sector having GVA at £76,400 per employee is the most highly productive sector Scotland has'

## Innovation

'Innovation is rife in this sector. Currently 1.1% of t/o compared to Scottish average of 0.6%'

## Investment

Government supported investment produces leverage ratio of 1: 8

## Outcomes

- Company account management from 25-43
- SMAS- generated 3 projects and £320K savings
- Proof of concept: 10 received; 4 approved: £850K
  
- **R & D +** investment: 9 projects, £11m offered, £117m levered  
135 s/g, 355 new
- 12 collaborations underway.
- 20% of all Interface enquiries with this sector
  
- **RSA** Investment: 15 projects, £15m offered, £106M levered  
423 s/g, 286 new
- Propositions being developed: R & D, University/ college strengths, Industrial Biotech

# Some highlights so far...

- Skills topic group
  - Involve all delivery partners
  - Curriculum; careers; workforce development; future skills
- Sustainability topic group
  - Global Benchmarking project with industry partners and specialists
  - Regulatory Forum established and engaged with Scottish Government
  - Research on Energy, Resource and Waste Efficiencies for the sector
  - Establishment of key performance indicators

# The Principal Dynamic Loops

