



Perspectives on European Chemical Engineering

Professor Richard Darton, EFCE President
Brussels, 30 March 2011

The European Federation of Chemical Engineering

A non-profit association,
formed:1953

Today: 39 member societies
represent 100,000 chemical
engineers in Europe, from
Ireland to Russia.

Newest members: Turkey and Israel.

Corresponding societies in Brazil, Canada, India, Japan,
Nigeria, South Africa and USA.



Objective: to promote co-operation in Europe between non-profit-making professional scientific and technical societies for the general advancement of chemical engineering and as a means of furthering the development of chemical engineering...

What does EFCE do?

A network including 20 working parties and 6 Sections embracing 1000 experts from academia and industry covering:

- Food, Product Design
- Education
- Safety & Loss Prevention, Environment and Sustainability
- Thermodynamics, Reaction Engineering, Separations and more...

Supporting awards, meetings, student mobility, standardisation, sharing/specifying best practice, publications. We aim to help all member societies and their members address issues in **technology, business, education and regulation**



What are the big issues?



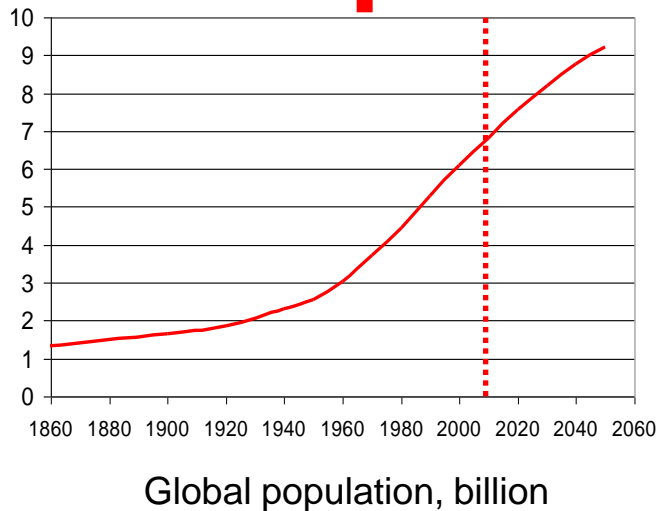
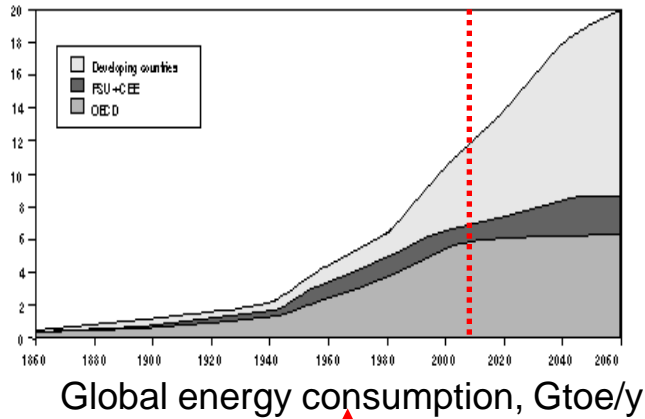
Widnes, mid-1800's. Photo: ICI archive



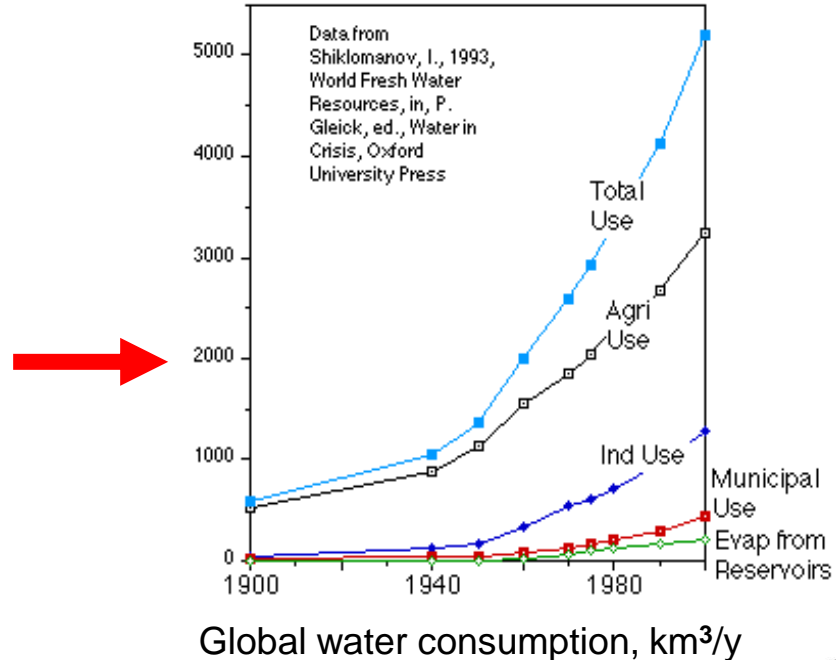
Ludwigshafen, 2007. Photo: BASF

We convert resources on a massive scale, cleanly, safely, and with respect for the environment, to create wealth and welfare for people, but...

What are the big issues?



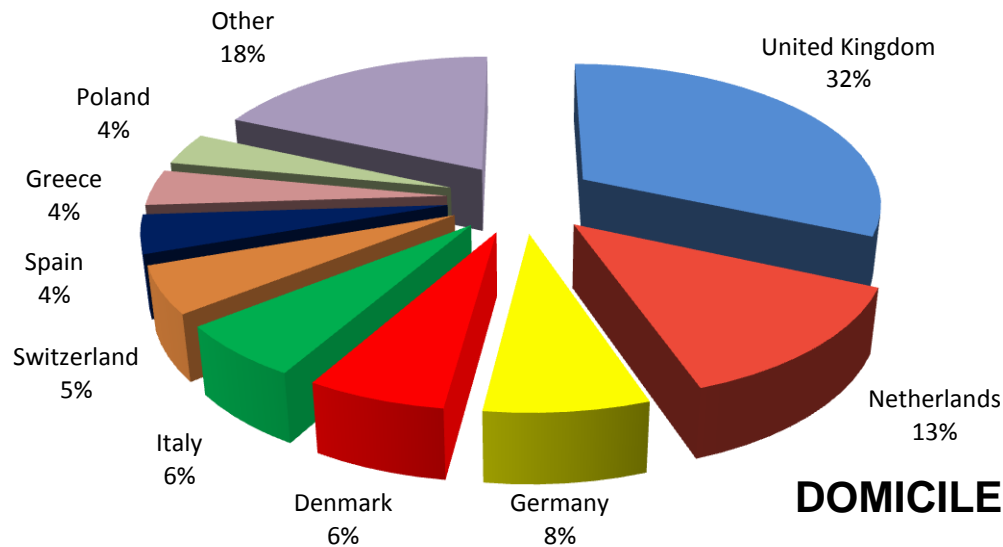
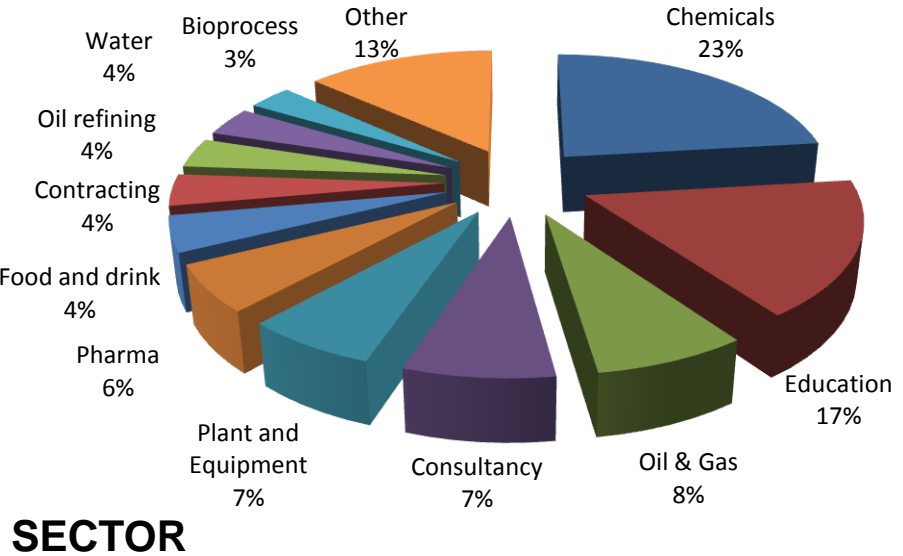
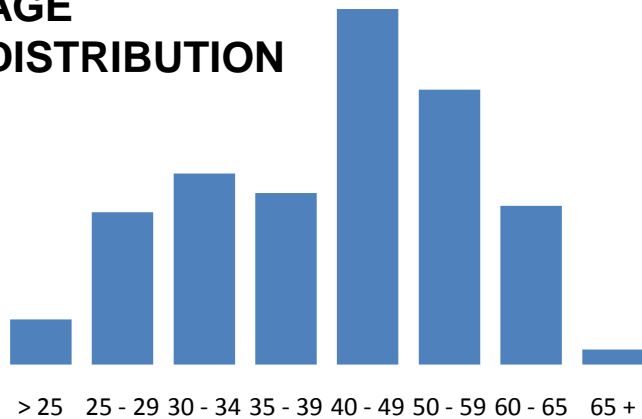
Concern is not enough: we need to engage, and act.
EFCE needs a strategy



We are becoming increasingly concerned about sustainability

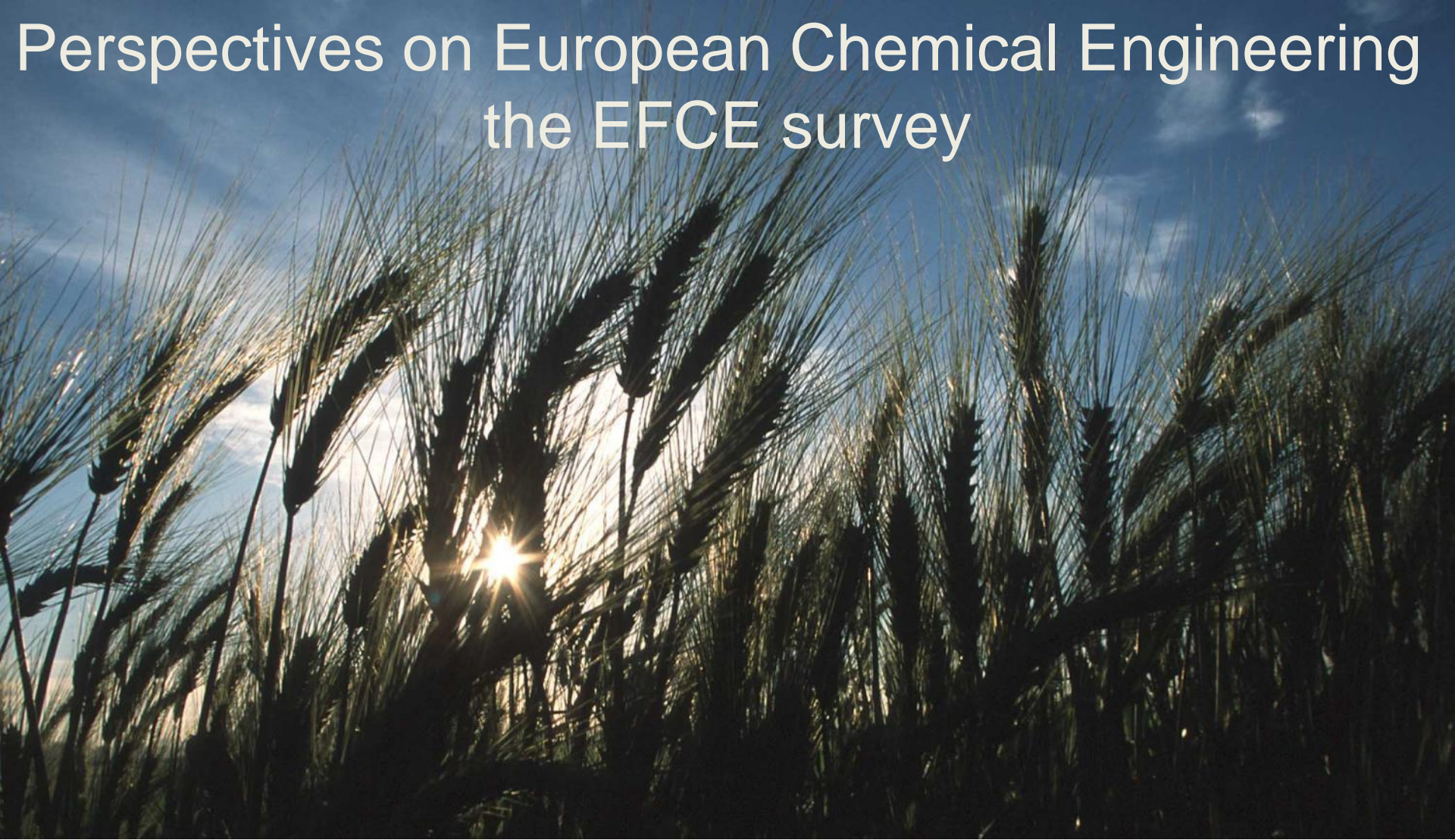
The EFCE 'Perspectives' Survey

AGE DISTRIBUTION



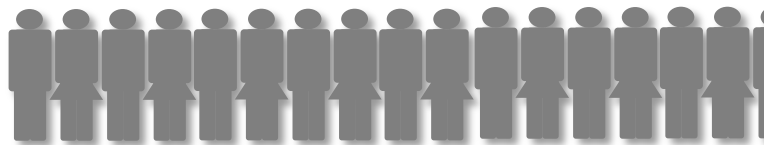
1797
Responses in
35 European
Countries

Perspectives on European Chemical Engineering the EFCE survey

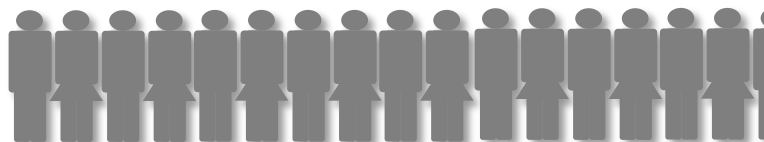


Career Satisfaction

Chemical Engineering is the right career for me...



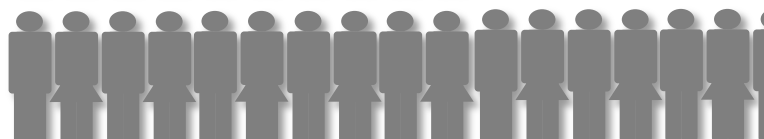
83%
AGREE



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94%
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96%
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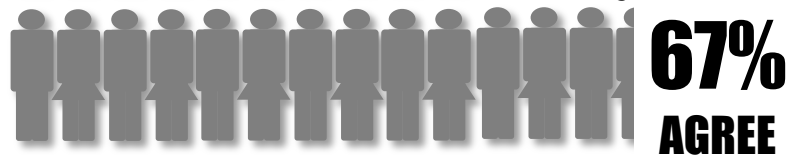
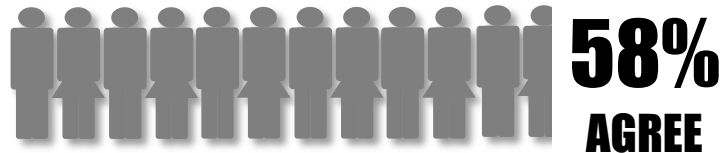
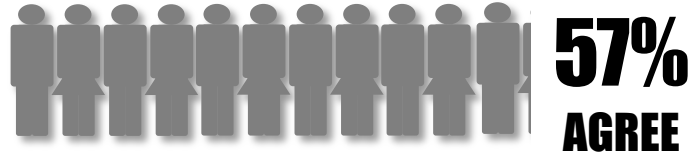
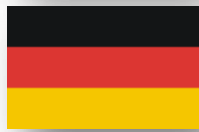
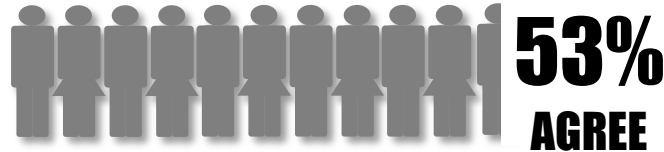
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Industry Support

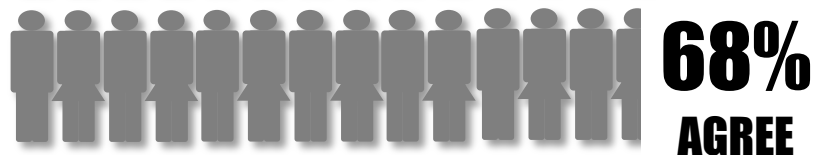
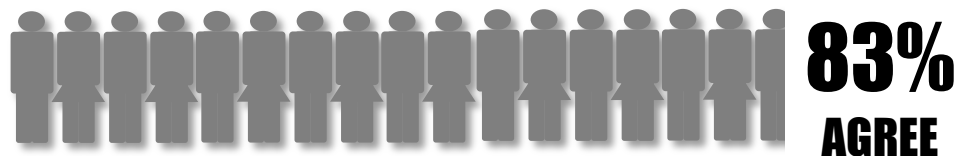
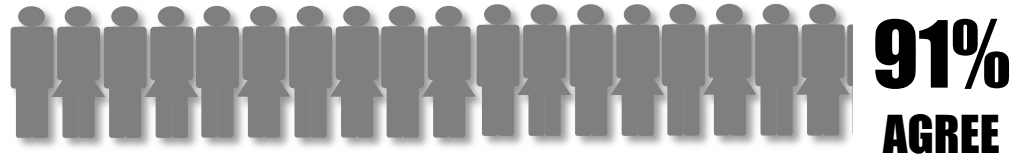
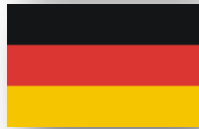
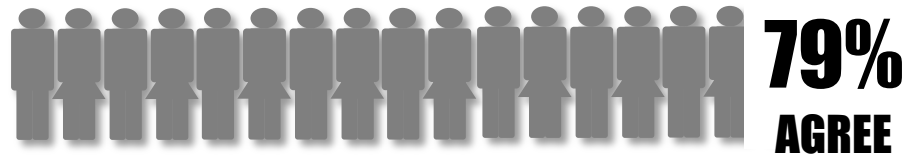
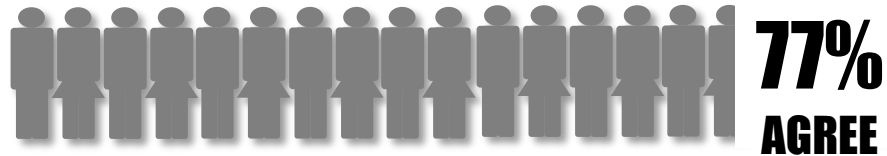
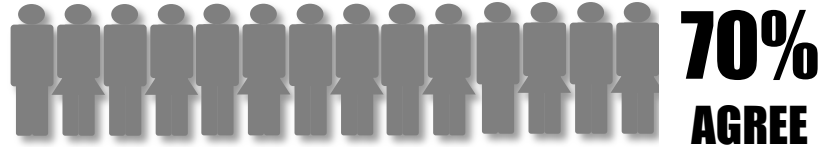
I was helped by industry during my education and training...



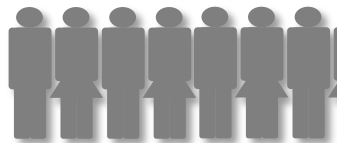


Prospects and Mobility

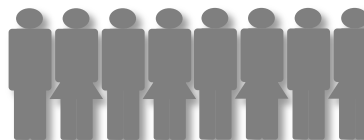
There are good opportunities for chemical engineers in my country...



I may be working in another country in five years time...”



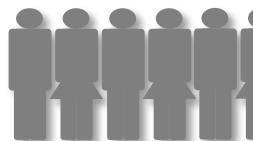
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22%
AGREE



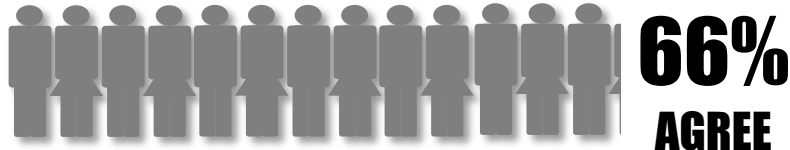
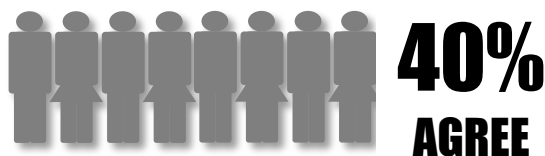
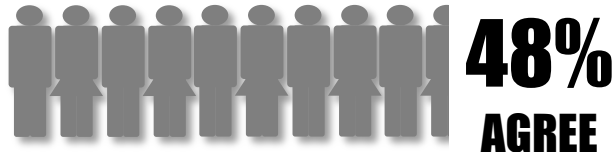
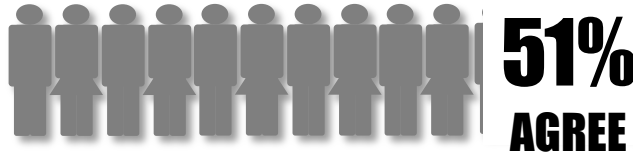
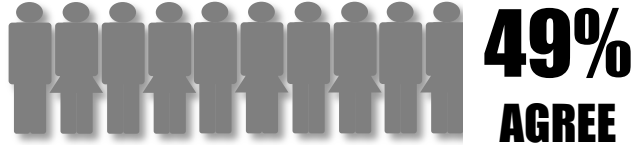
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Ethical Standards

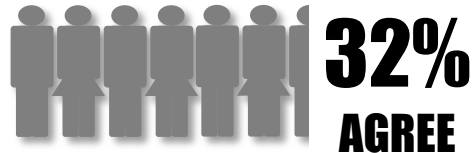
Ethics

“My education and training gave me a strong understanding of ethical standards and behaviours...”



Ethics

“I require training to help me deal with ethical issues...”

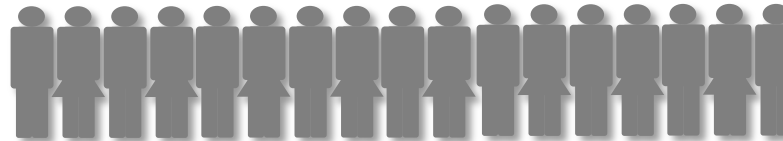


Ethics

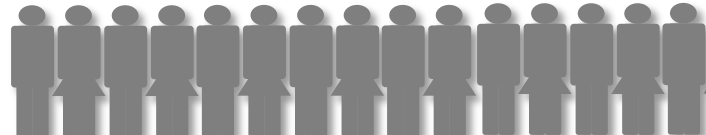
“I am confident that my management has a genuine commitment to ethical standards...”



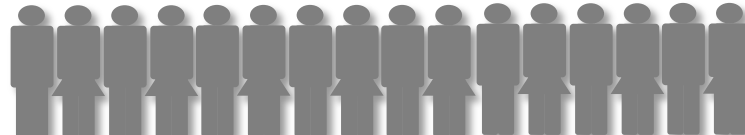
74%
AGREE



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AGREE



76%
AGREE



81%
AGREE



78%
AGREE



44%
AGREE



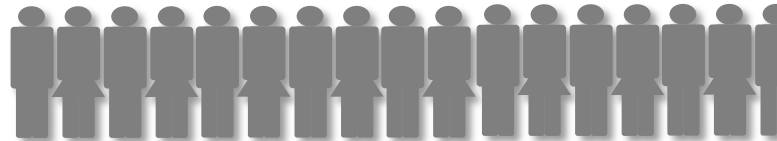
Energy & Climate Change

Energy & Climate Change

“Climate change is a big challenge for the future of humanity...”



81%
AGREE



83%
AGREE



74%
AGREE



82%
AGREE



90%
AGREE

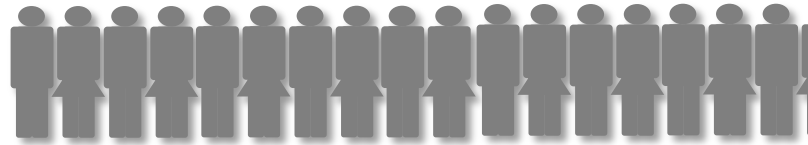


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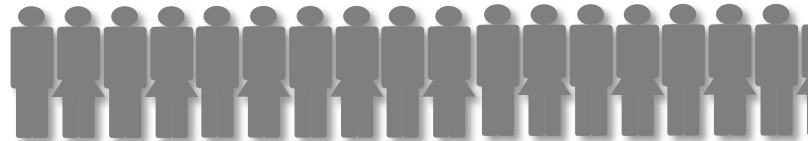


Energy & Climate Change

“My country must do more to reduce its reliance on fossil fuels...”



87%
AGREE



89%
AGREE



89%
AGREE



81%
AGREE



85%
AGREE

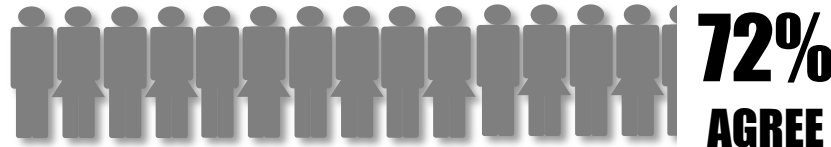
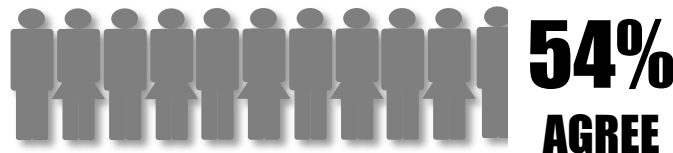
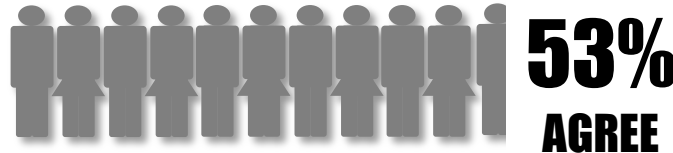
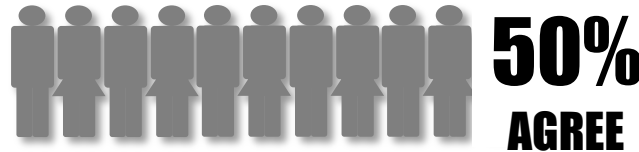
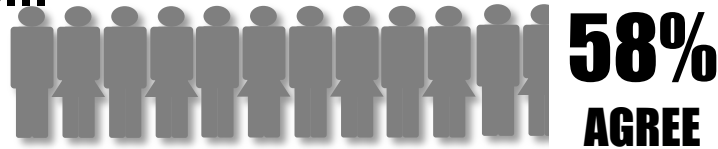


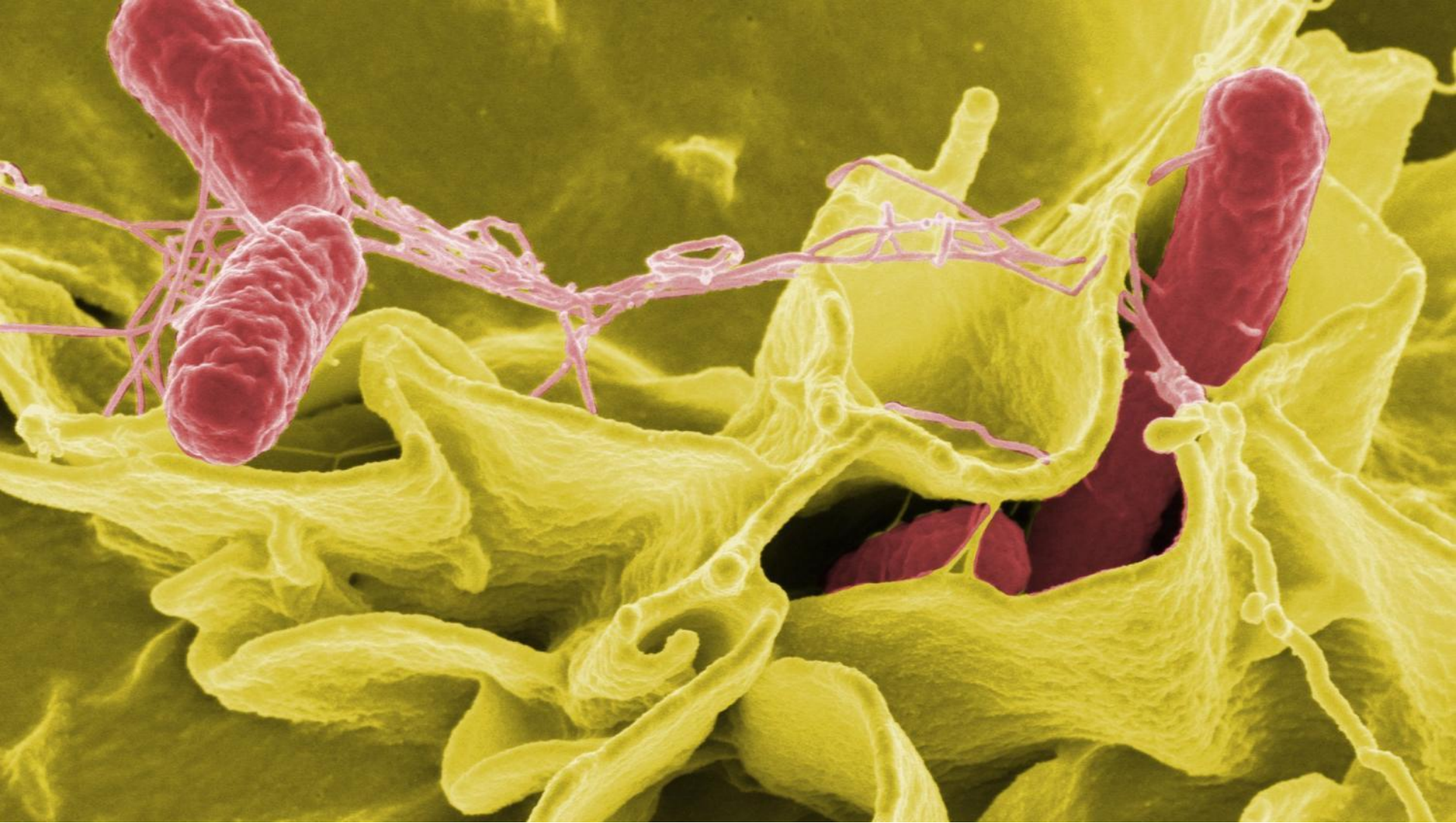
89%
AGREE



Energy & Climate Change

“I need more factual information to understand energy and climate issues...”

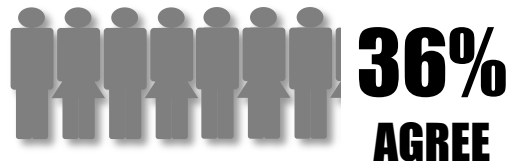
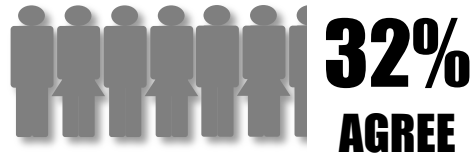
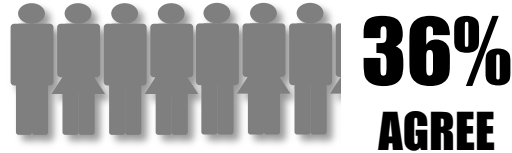




Biological Engineering

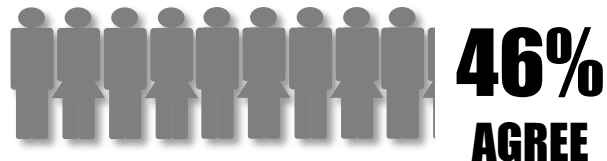
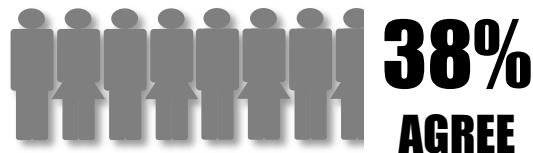
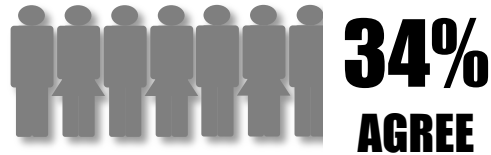
Biological Engineering

“Bioscience is important in my current role...”



Biological Engineering

“My future lies in bioprocess engineering...”





From survey to strategy

- the low carbon economy
- sustainable wealth creation
- harnessing the bio-revolution
- ethics and standards
- to increase greatly the EFCE's contribution
- to engage more with industry and policy makers



Perspectives on European Chemical Engineering

Professor Richard Darton, EFCE President
Brussels, 30 March 2011

For further information on the EFCE Perspectives Survey

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