

WATCH Committee Horizon Scanning Workshop

Report of session held on 23 October 2008 at Crowne Plaza, NEC

Introduction

Aims and Objectives

Aims

To introduce WATCH members to HSE's futures activities and to present some of the findings. To explore the possible effects of the REACH legislation over ten years on the UK chemical industry, using the HSE scenarios.

Horizon Scanning

Peter Ellwood from the HSL Futures Team gave a presentation covering:

- horizon scanning
- the HSE horizon scanning system's key findings (see Annex 1)
- HSE's Scenarios for the Future of Health and Safety in 2017 (see Annex 2);
- an introduction to the exercise for the session.

Predetermined Elements and Critical Uncertainties

First Exercise

Given the number of participants, it was decided that only three of the four HSE scenarios would be used. Delegates dispersed into three groups, each of which worked on one of the HSE scenarios.

Participants were asked to break into twos or threes and to consider issues that would affect the impact of REACH on the UK chemical industry. Five issues per pair was a guideline.

They were then asked to place their issues on either side of a line dividing 'High Impact' and 'Low Impact' issues. Then as a group they were asked to separate these into 'Likely to Occur' and 'Less Likely to Occur'.

The outputs from this exercise are given in Annex 3.

Second Exercise

In this exercise, delegates considered the 'High Impact/Likely to Occur' issues. They were asked to assess each issue against the following headings:

Description
Impact
Indicators

Effect on WATCH WATCH/Other's Response

The results from this exercise are presented, by scenario, in Annex 3.

Third Exercise

In this exercise, delegates were asked as a group to consider how REACH might turn out in their given scenario. The outputs are presented in Annex 3.

Feedback and Plenary Discussion

A rapporteur from each group described the top two issues and the scenario exercise.

Group 1 felt that the REACH regulations could result in a fall in the number of chemicals on the market, leading to reduced choice and a rise in illegal imports and the black market. This could lead to a greater role for WATCH.

The group also thought that REACH might tie up SHE staff with a consequent increase in accidents and ill health and poor compliance with other areas of H&S regulation.

In the Virtue of Necessity scenario the group suggested that a move towards smaller companies and an emphasis on local economies and diverse local products might make REACH difficult to enforce in practice.

Group 2 highlighted five key issues:

The costs and time involved with REACH could lead to companies missing registration. If extension was not offered then more production could go overseas.

REACH should improve exposure information but there could be a shortage of the skills needed to do measurements.

REACH could lead to improved practice for poorer performing companies with reduced exposure and reduced ill health.

REACH could improve the public image of the chemical industry.

REACH might result in the removal of some chemicals from production and reduced innovation.

There could be a role for WATCH in advising in many of the above issues.

Group 2 had insufficient time to consider its scenario – Digital Rose Garden.

Group 3 selected two key issues:

REACH might not work because of the burden on regulators and stakeholders, resulting in increased costs. Another scheme might have to replace REACH and WATCH could have a role in that.

Increased globalisation could result in a loss of chemical industry from the UK with a corresponding loss of influence for WATCH.

Group 3 considered the scenario Boom and Blame. The group felt that REACH would be too slow and bureaucratic for such a scenario. The short job tenure would make OH monitoring difficult and short-termism could lead to poor risk assessment. The application of the law in such a scenario would make enforcement difficult.

Evaluation

Participants were asked to complete an evaluation form at the end of the workshop. Eleven from seventeen forms were returned. Details of the responses are at Annex 4.

In terms of overall assessment of the event, one delegate rated the event as Excellent, five rated it good and four, fair.

Individual comments were generally positive, with participants welcoming the open-minded approach of those attending, the opportunity to network away from the normal working environment.

HSE Hot Topics

Social

- Demographics and Ageing
- Obesity
- Flexible working and employment patterns
- Complex and ambiguous occupational health issues

Technological

- Nanotechnology
 - o Molecular manufacturing
- Human Performance Enhancement
- Pervasive Computing
 - o Cyber security
 - o Terahertz technology
 - o Robots and artificial intelligence
 - o Future of keyboards
- Biotechnology
 - o Synthetic biology
 - o Genetic testing
- Rapid manufacturing

Environmental

- Climate Change
- Recycling
- Sustainability
- Effects of environmental and other legislation on H&S
- Emerging pests and diseases
- Energy
 - o Nuclear new build
 - o Clean coal
 - o Hydrogen economy
 - o Wind
 - o Wave
 - o Methane Gas Hydrates
 - o Solar
 - o Gas
 - o Carbon dioxide capture
 - o Compressed air energy storage
 - o Microgeneration/combined heat and power
 - o

Economic

- Globalisation
-

Political

- Public perception of new technologies

Summaries of the HSE Scenarios for the Future of Health and Safety in 2017

A Virtue of Necessity

This is a scenario in which people are happy to embrace new technology, but in an economy where they can't necessarily afford to. They buy things that will last, and there is an emphasis on the local economy, on community and on self-sufficiency. As UK competitiveness declined, many young people emigrated for work, so there is an increasingly aged population. There is great interest in well-being and work/life balance and people take responsibility for their own welfare and that of the environment.

In health and safety terms, we see fewer large companies and many more small enterprises whose workers have a wide range of working patterns and work environments. Home and work are increasingly blurred. Pervasive computing is used to monitor workers' health and stress levels and people look out for themselves because 'no-one else is going to do it'. We see exemplary health and safety practices, but also companies who fly under the regulatory radar to save costs. Many British companies have been bought by overseas owners who bring their own views of H&S with them.

The Digital Rose Garden

This is transformational scenario. Britain has harnessed the creativity of its diverse society. New businesses in biosciences, materials sciences and nanotechnology attract the best brains resulting in a brain gain. Offshoring is declining as increasing labour costs in emerging economies make it less attractive, so British graduates are staying at home.

In health and safety terms, there is no work/life boundary. Immersive computing means workers are 'always on' always available. Human performance enhancement technologies are readily adopted. There is an emphasis on local offices facilitated by communications technology but consistency of design makes for easier regulatory compliance, but in manufacturing the huge number of innovative production methods gives government agencies and health and safety personnel problems in deciding what the risks are.

Boom and Blame

In this scenario we see increasing privatisation, a free market, with Britain economically successful for the time being, but people worry about how stable that position is. Sustainability has taken a back seat to competitiveness and the environment has suffered. Offshoring of production to reduce costs continues and waste is being offshored to minimise disposal and remediation expenses.

Companies routinely do genetic profiling of prospective employees and subcutaneous RFID sensors monitor health. Working hours are long and companies offer a range of performance enhancing drugs.

Tough Choices

In this doom and gloom scenario, a declining economy has driven the brightest and the best overseas and innovation has slowed as a result. Unemployment is high and social divides have amplified. Deregulation in Europe designed to jump-start the economy has resulted only in an increase in air, soil and water pollution. The black market is thriving.

Businesses are struggling and worn-out workplaces create health hazards and the potential for accidents. Accidents and a blame culture are leading to increased litigation. Stress and violence are rife. There is much under-reporting of health and safety failures.

GROUP 1 FIRST EXERCISE

LIKELY TO OCCUR

LESS LIKELY TO OCCUR

LOW IMPACT

HIGH IMPACT

Lead to a deselection of chemicals sold to the general public

Limiting Uses

Substitution

Should improve the use of chemicals

Loss of products

Improved exposure control

Fall in development of new chemicals

Better information on chemicals

Move out of EU

Tie up resources in SHE that could be put to better use

Loss of business to China/Brazil etc

GROUP 1 SECOND EXERCISE - HIGH IMPACT/CERTAIN

DESCRIPTION	IMPACT	What are the indicators that this is happening?	What does it mean for WATCH?	How can WATCH/Anyone respond?
Lead to a deselection of chemicals sold to the general public Loss of products Limiting uses	Reduced choice Black market/illegal imports	Tracking of registration Grey lists already here Enforcement on REACH Picking up of illegal imports	Looking out for new chemical risks – ↓ More work/more responsibilities via ACTS?	Greater role?
Tie up resources in SHE that could be put to better use	↓ H&S ↓ H&S resource (inappropriate prioritisation)	Nos working on REACH ↑ Incidents, accidents and ill health Poor compliance with existing (other) H&S legislation	No work/no responsibility	Lesser role?

GROUP 1 SCENARIO - VIRTUE OF NECESSITY THIRD EXERCISE – WHAT WILL BE THE IMPACT OF REACH IN THIS SCENARIO?

Companies will get smaller – retrenchment

Regulations like REACH won't work? – more 'bonkers conkers' unless the guidance/RMMs become accessible to all.

Local invention/adaptation in breach of REACH

Fewer, more basic chemicals (high vol)

Diversity of local supply and demand → H&S risks

Natural (don't need testing) vs man-made chemicals

Cottage industries evolving

Improve education/technology and remove limiting/restricting legislation such as REACH!

Other Issues not used on axes

Limiting innovation

Reducing innovation for smaller users

Increased costs

Green chemistry

Better info for consumers

Reducing lists

Widespread development of COSHH Essentials approaches

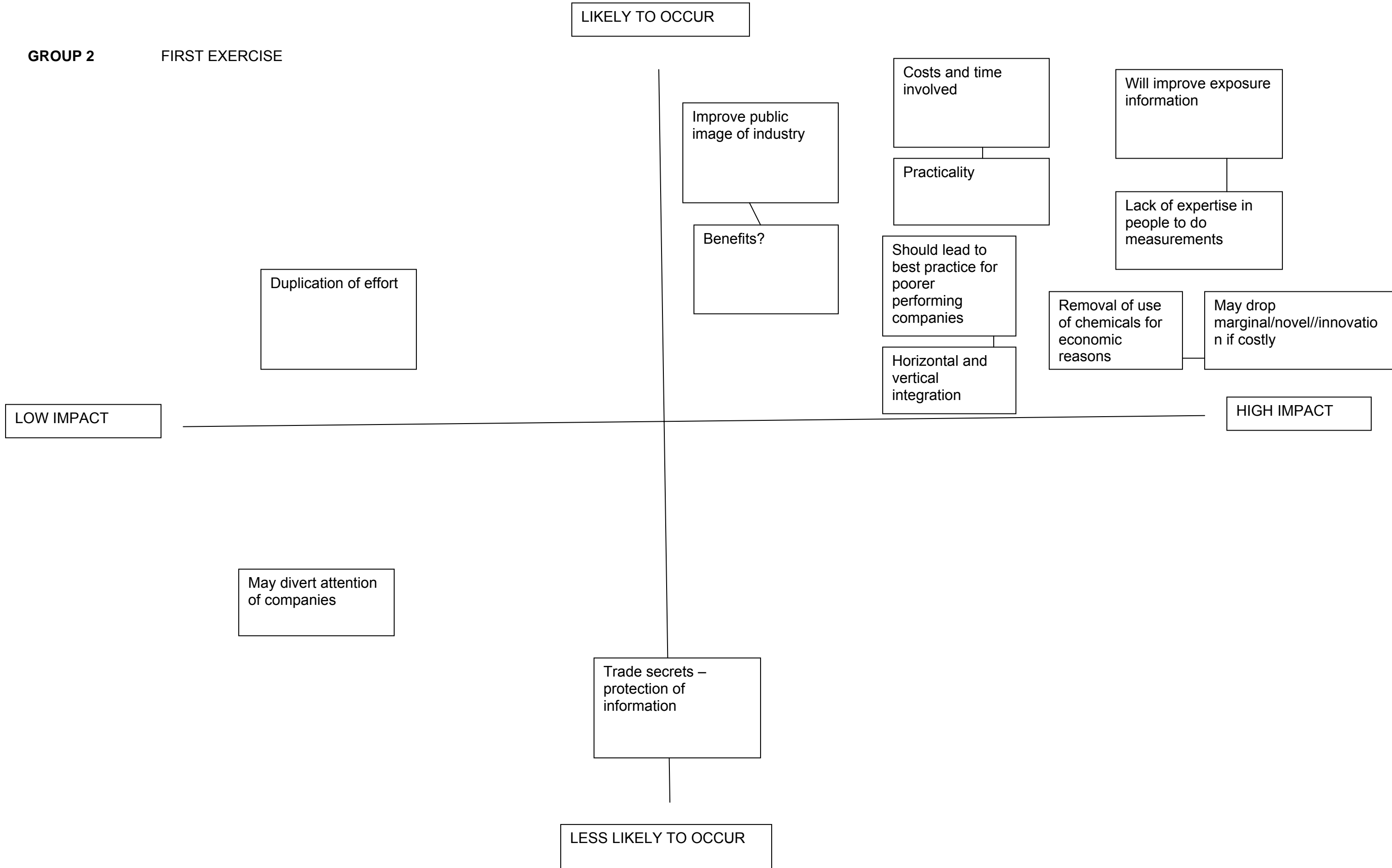
Improved practical risk assessments

Sharing knowledge

Regulatory conflicts

GROUP 2

FIRST EXERCISE



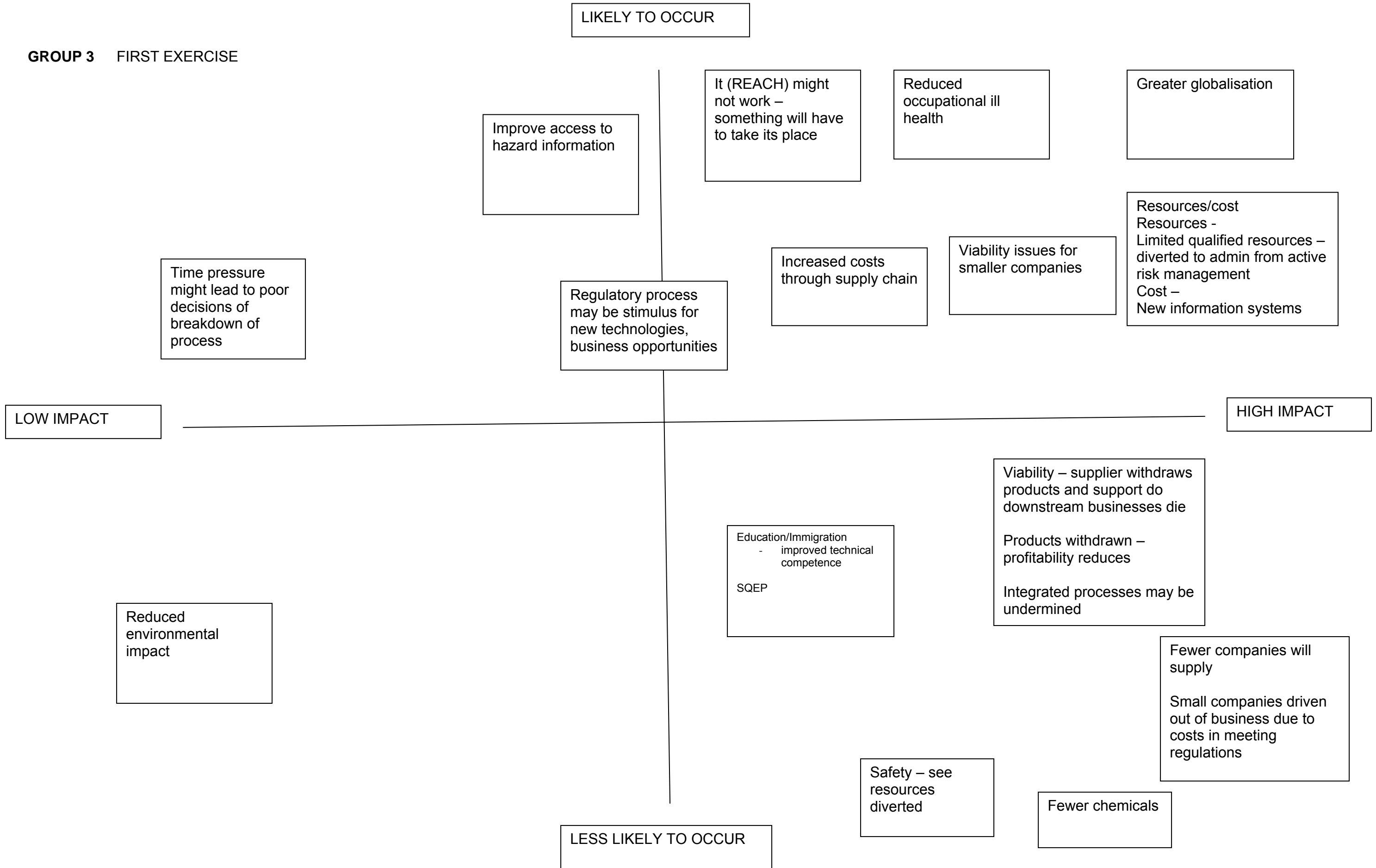
GROUP 2 SECOND EXERCISE - HIGH IMPACT/CERTAIN

DESCRIPTION	IMPACT	What are the indicators that this is happening?	What does it mean for WATCH?	How can WATCH/Anyone respond?
Costs and time involved Practicality	REACH won't happen on time (registration). Who does assessment?	Database crash Extensions Production goes to China	Technical opinions asked for	Offer technical expertise
Will improve exposure information Lack of expertise in people to do measurements	(High) delay in document production	Industry approach	Look at generic Streamline control	Agree but change
Should lead to best practice for poorer performing companies Horizontal and vertical integration	Reduced exposure in poor performing companies (most at risk)	Reduction in ill health	Produce evaluation audit (how do)	Develop/propose indicators —
Improve public image of industry Benefits?	More graduates in chemistry Chemists feel good about themselves	More 'A' level studies More controls Less compensation	Streamline process Audit Troubleshooting	Offer encouragement and advice for a fee
Removal of use of chemicals for economic reasons May drop marginal/novel//innovation if costly	Loss of useful chemicals on commercial basis (nasty ones)	Small companies disappear, drop marginal products	Offer advice, but probably not reach WATCH	HSE offer advice for smaller companies. Competent authority WATCH advocate

GROUP 2 SCENARIO - DIGITAL ROSE GARDEN THIRD EXERCISE - WHAT WILL BE THE IMPACT OF REACH IN THIS SCENARIO?

Insufficient time

GROUP 3 FIRST EXERCISE



GROUP 3 SECOND EXERCISE - HIGH IMPACT/CERTAIN

DESCRIPTION	IMPACT	What are the indicators that this is happening?	What does it mean for WATCH?	How can WATCH/Anyone respond?
It (REACH) might not work – something will have to take its place	Costs↑ Loss of faith in system Blame on whose reputation	Unofficial schemes Overburdened regulators/stakeholders	Science becomes less relevant /contribution	WATCH opportunities to be involved in REACH alternative and Gov and stakeholder coalition
Greater globalisation	Loss of industry	Factories closing, job losses	Less influence, fewer members	Gov/industry influence EU Competitiveness Council

GROUP 3 SCENARIO - BOOM AND BLAME THIRD EXERCISE - WHAT WILL BE THE IMPACT OF REACH IN THIS SCENARIO?

REACH too costly, too much paperwork, too slow

Self-regulation by industry

Encourage new molecule development, innovation↑, more scientific issues to consider

Inadequate risk assessment, short-termism

Inability to track workplace ill-health (4 year job max)

Move away from risk aversion, risk-taking?

Legal framework?

Easier to escape justice, ethics?

Patentability of molecules

WATCH Workshop Evaluation

Respondents 11/17

Please tick the box that best describes your employer

Academia 2 Voluntary 1 Industry 3 Government 2 Other 2 Not Stated 1

GENERAL COMMENTS**Please rate the following** – E – Excellent, G- Good, F- Fair, P- Poor

	E	G	F	P
Venue	3	4	2	
Food	1	6	2	
Organisation	2	5	2	
Format	1	5	3	
Overall	1	5	4	

Please briefly describe what you most valued about the event.

Interesting thought provocation
 Probably lateness in the day didn't help with the discussion
 Working together/Good to consider the issue in a different way
 Too rushed – otherwise very useful
 Good scenarios allowing new thinking
 Insights into HSE/HSL perspective on future trends
 Open discussion of key issues
 Facilitator helped lateral and future projections – real scenarios helped the formation of ideas

HORIZON SCANNING**Had you undertaken any horizon scanning prior to this event?**

Yes	No
5	5

If yes, briefly describe the nature of these activities

At WATCH – considering issues for regulation
 For WATCH
 Core element of my role for last six years
 Thinking about new areas of activity that may cause health and safety problems

Do you plan to engage in any horizon scanning related activities in the future?

Yes	No	N/A
6	4	1

If so, what type of action?

Provide feedback to colleagues on this event 1
 Initiate horizon scanning within my own team 1
 Use the HSE scenarios to stimulate discussion in my team/organisation 3
 Develop our own scenarios 2

Other 1

Did you learn anything new about horizon scanning as an activity?

Yes	No
1	1

SCENARIOS

Please rate the extent to which you think the scenarios presented in the workshop might be useful to your organisation.

E	G	F	P
	3	6	

Please rate the extent to which you found the scenarios thought provoking.

E	G	F	P
3	3		

Do you have any specific comments regarding the scenarios?

Scary!
Enjoyed it

Are there any emerging issues that you feel the HSE Horizon Scanning Team should investigate? If so, please describe:

EU application of precautionary principle
Repercussions of financial crisis (e.g. on 'Better' Regulation)
Web 2.0 Technology – uses in H&S