HSE futures scenario building

The future of health and safety in 2017

Prepared by **Infinite Futures**
for the Health and Safety Executive 2007

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This report describes the processes, output, and participant evaluations of a scenario-building project completed for the Horizon Scanning function of the Health and Safety Executive. The scenario process incorporated critical issues of change derived from 28 interviews of HSE policy-makers and outside experts. Participants in a two-day scenario-building workshop chose drivers of change from among these issues, and created a framework defining four different possible futures for health and safety in the UK in 2017. The scenario process also incorporated the emerging changes identified by horizon scanning as 'hot topics' for health and safety. Results from the workshop were written up in two formats:

■   'research scenarios' that include supporting evidence such as reference to other government agency foresight research and scenarios; and

■   'workshop scenarios' that present the key ideas in a vivid but compressed format to generate group dialogue.

As a test of their efficacy in generating policy discussion and ideas, the scenarios were deployed twice:

■   at the HSE Horizon Scanning Conference in November 2006 to spark wide-ranging discussion of possible challenges facing the HSE; and

■   in a subsequent wind-tunnelling workshop to demonstrate how scenarios can be used to consider specific policies in the face of potential change.

HSE Books

ACKNOWLEDGEMENTS

CONTENTS

EXECUTIVE SUMMARY

Horizon scanning uncovers emerging issues of change. Change renders some habits and hardware obsolete while creating opportunities for new patterns of life and innovations. This dynamic can be productive, but it also destabilises and magnifies uncertainty. Horizon scanning offers a useful radar for identifying areas of approaching uncertainty, but making sense of change requires a different tool. For strategic thinking, that tool is scenario building. This report presents the results of the Health and Safety Executive's (HSE) pilot project in assessing horizon scanning data via a participative scenario process.

The HSE wished to create plausible scenarios that depicted a range of possibilities for workplace health and safety in Great Britain in 2017 – a ten-year time horizon. These scenarios are not predictions, or even forecasts; they are stories and descriptions that explore possible future outcomes and thus inform strategic conversations. Two primary sources of data fed into the scenario building process: the 'hot topics' gathered by the HSE's Horizon Scanning team, and critical issues of change identified in a series of twenty-eight interviews. The project team also cited evidence drawn from related scanning work by the Office of Science and Innovation's Horizon Scanning Centre (now in the Department for Innovation, Universities and Skills), and issues identified within relevant scenarios from other government agencies and related organisations.

The issue interviews were conducted with HSE staff, other relevant UK government agencies, and outside experts from academia and related private and non-profit organisations. During the interviews, the respondents were asked to think broadly about critical issues of emerging change. Interview questions asked people to consider not only optimistic and pessimistic outcomes for health and safety in the workplace over the next ten years, but also what needed to change to create positive outcomes, and what critical information and critical activities would be required. The in-depth responses resulted in an issues 'workbook' containing hundreds of issues.

From among the interview results the HSE project team chose twenty-six critical issues of change to inform the scenario building in this pilot project. The issues chosen fell into seven broad categories: 1) *culture and society*, e.g. dependency, social exclusion, the changing nature of the family, the blurring of home and work; 2) *demographics*, e.g. ageing, diversity, increases in the partially able workforce; 3) *technology/science*, e.g. the change in disruptive technologies – as illustrated by many of the horizon scanning team's 'hot topics'; 4) *environment*, especially climate-change- related shifts in legislation, regulation, and energy provision; 5) *economics*, e.g. the 'hour-glass' economy, changing work structures, decentralisation, and outsourcing; 6) *politics*, e.g. joined-up government, attitudes to risk and blame, and the changing nature of democracy; and 7) *globalisation*, e.g. offshoring, capital and competition, migration, and conflict.

These twenty-six issues provided the starting point for building the scenarios. After review and discussion, the twenty-six were prioritised by importance and uncertainty. Several issues were clustered, and two critical uncertainties emerged as primary drivers describing possible futures for health and safety: 1) are public attitudes towards risk those of personal responsibility, or of the 'blame culture'? and 2) will the UK increase its competitiveness in the global economy?

These two uncertainties were used to construct a scenario cross, around which four scenarios were built.

The scenarios were presented at HSE's first Horizon Scanning conference in London in November 2006, where they were used in a scenario incasting exercise.

In December 2006 the scenarios were used in an internal HSE workshop in a wind-tunnelling exercise, the aim of which was to demonstrate potential uses of scenarios.

3. SCENARIO BUILDING

3.1 PROCESS

3.1.1 Workshop Activities

The HSE Futures scenario-building workshop was held in Bootle on 21-22 July 2006. Twenty-five participants attended, of whom 22 were HSE staff and three people were from another agency, business, or academia. The workshop had three goals:
1. Acquaint people with the HSE Horizon Scan and the emerging changes it identifies;
2. Review and discuss critical issues facing health and safety in the workplace;
3. Build scenarios to help HSE and stakeholders think through possible outcomes generated by the convergence of critical issues and emerging changes.

The workshop activities included presentations on the critical issues and the 'hot topics' of emerging change, plenary discussions, and small group work. The scenario building itself focussed on ten-year futures for health and safety in UK workplaces generally, rather than on futures for the HSE itself. Specific process steps are described below.

Basic Process

The workshop began with an introduction to the project by Geoff Brown, and an introduction to the workshop process and agenda by Gill Ringland of SAMI Consulting. Peter Ellwood of the HSE Horizon Scanning Team then introduced the twenty-six critical issues identified in the issue interviews. The remainder of day one was devoted to four analytic tasks applied to the twenty-six critical issues:
1. Working in syndicates to identify any critical omissions from the list, and then refining it to a maximum of fifteen high priority issues;
2. Meeting in plenary to synthesise output from the syndicates into a master list of fifteen high priority issues for the future of health and safety;
3. Working in syndicates to sort the master list of fifteen issues onto a matrix of importance and uncertainty (see Figure 2); and

Figure 2 Scenario issues matrix

growing up.[iv] The public demands transparency of information, but rejects alarmism.

As a result, open debate and engagement about new technologies and emerging health and safety issues characterise policy formulation. The corollary in the private sphere is a heightened acknowledgement of personal and organisational responsibility and accountability. An explicitly stated moral response to decision-taking and impact assessment is now highly valued in brand strategy. Fair trade, sustainability, and corporate social responsibility are essential elements of success in business. Both the public and private sectors see working in partnership as key to achieving transparent accountability. This increased public and private sector transparency has widened the pool of early adopters. People are now more likely to embrace innovations perceived as beneficial, such as expert-system-based and robotic healthcare, gene therapy, and even health and safety products arising from nanotechnology.

The global scientific and policy consensus that climate change is upon us demonstrates international confidence in climate models. More generally, it demonstrates how deeply rooted the systems perspective has become in science, policy, and business. More and more insights and innovations emerge from concepts based on chaotic system behaviour or intelligent agents and self-organising complex adaptive systems.

2017: The UK's global strength in nanotechnology research and design bears fruit as Nanomed Plc's research division announces still more breakthroughs in cancer detection and prevention.

In the past decade, personal augmentation and human performance enhancement have given an entirely new twist to 'marginalisation' and 'differently-abled'. The 31 October 2017 "100% organic human bean" demonstration in Hyde Park was organised by a backlash movement celebrating the joys of simplicity (remaining augmentation-free), and has created a public debate on the responsible design of future humans.

In-Depth Exploration

Define: *what concepts, ideas, paradigms, and values define this world?*

Pundits have suggested that experts finally exhausted the public's ability to absorb the 'warning of the week': "Butter's bad for you - use margarine!" "The trans-fats in margarine are bad for you – use olive oil!" Out of the absurdities has emerged the age of the considered rational response: "Cleanliness may be next to godliness, but we survived childhood without all those antibacterial cleansers; all things in moderation". Kids are allowed to fall out of trees; the occasional scuff or bruise is part of

Scenario Cross

Personal responsibility, pro-active adoption of technology, management of risk, ability to absorb impacts of conflict/war and resilience in the face of economic/social/other shocks

Increased UK competitiveness, harmonisation of regulations; differently abled in employment; incorporation of migrants; enterprise culture, expectation of well-being and social cohesion

Decreased UK competitiveness

Blame culture, resistance to new technology, rejection of risk, shattered by impacts of conflict/war and fragility in the face of economic/social/other shocks

Increased UK competitiveness, harmonisation of regulations; differently abled in employment; incorporation of migrants; enterprise culture, expectation of well-being and social cohesion

Blame culture, resistance to new technology, rejection of risk, shattered by impacts of conflict/war and fragility in the face of economic/social/other shocks

Boom and Blame

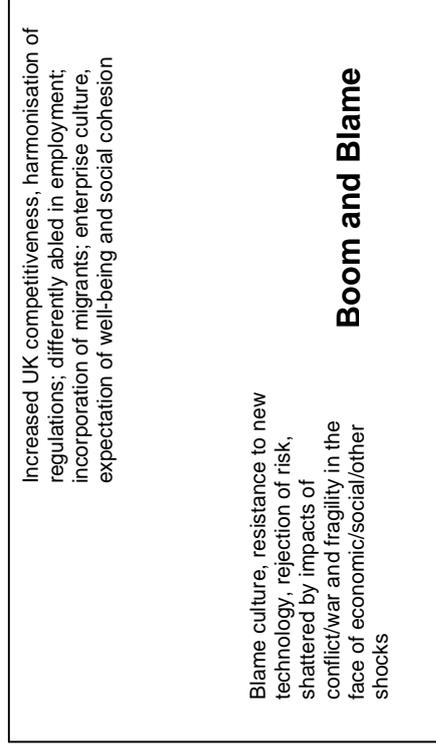# HSE Scenario Project: Boom and Blame

Introduction:

This scenario is one of a set of four comprising HSE's Scenarios for the Future of Health and Safety in 2017. The scenarios resulted from discussions and group work during a scenario-building workshop (20-21 July 2006) hosted by HSE's Horizon Scanning team as part of a wider scenario-planning project. Participants prioritised change issues and created the 'scenario cross' to the right that provided the logical framework for four scenarios. The time horizon targeted was 2017. This scenario, 'Boom and Blame', is driven by decreased personal responsibility – a 'blame culture' – and decreased risk tolerance combined with increased UK competitiveness in the global political economy.

Scenarios are not predictions of the future - they are vivid stories about possible futures. They help us explore the boundaries of uncertainty defined by specified drivers of change. Scenarios written for interactive exercises are typically brief, depicted in personal rather than institutional anecdotes, and salted with humour (laughter aids impact and memory). But these are best based on research scenarios: longer narratives, depicted in broader terms. The research scenario for 'Boom and Blame' begins with a brief overview of conditions in 2017 and the historical changes which created them. It then explores how life is different in this future in greater detail:[i]

- What concepts, ideas and paradigms **define** the world around us?
- How do we **relate** to each other – what are the social structures and relationships that link people and organisations?
- How do we **connect** with each other -- what technologies connect people, places and things?
- What are the processes and technologies through which we **create** goods and services?
- How do we **consume** goods and services – how do we acquire and use them?

The scenario finishes by focusing on the changing workplace, and changed health and safety issues.

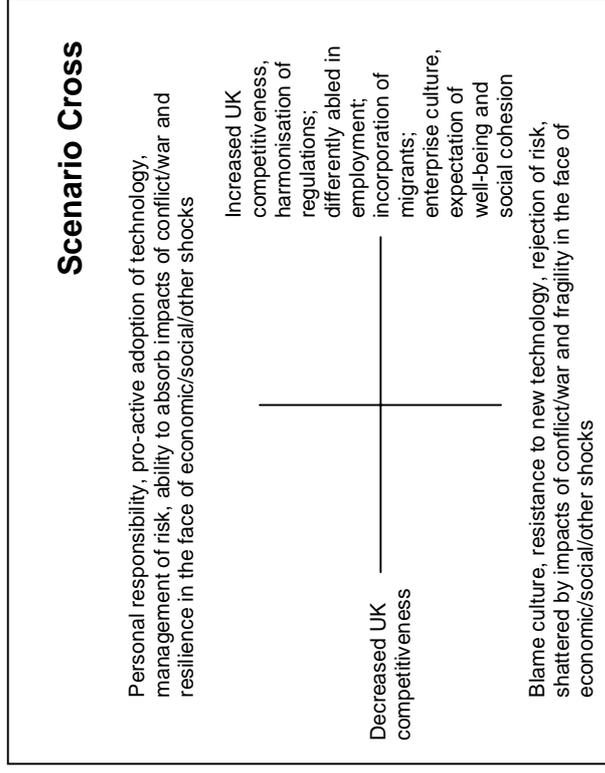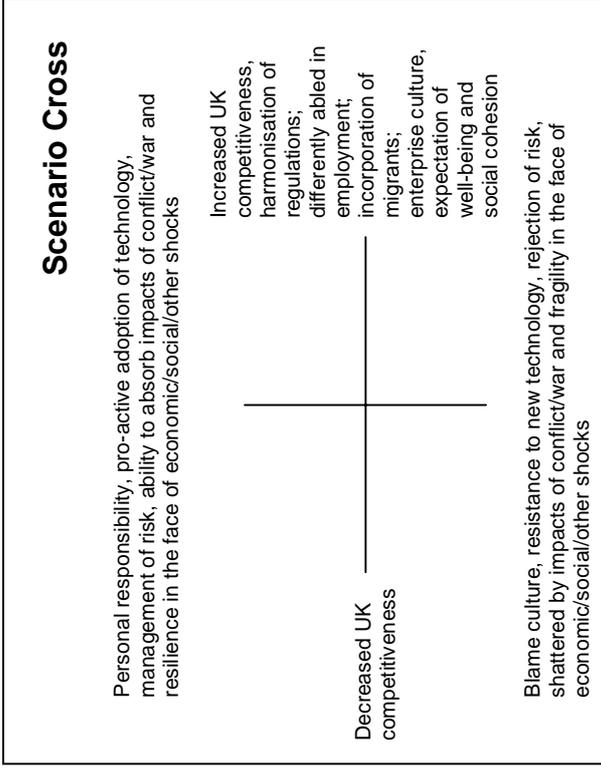# HSE Scenario Project: Tough Choices

Introduction:

This scenario is one of a set of four comprising HSE's Scenarios for the Future of Health and Safety in 2017. The scenarios resulted from discussions and group work during a scenario building workshop (20-21 July 2006) hosted by the HSE's Horizon Scanning team as part of a wider scenario planning project. Participants prioritised change issues and created the 'scenario cross' to the right that provided the logical framework for four scenarios. The time horizon targeted was 2017. This scenario, 'Tough Choices', is driven by decreased personal responsibility – a 'blame culture' – and decreased risk tolerance combined with decreased UK competitiveness in the global political economy.

Scenarios are not predictions of the future – they are vivid stories about possible futures. They help us explore the boundaries of uncertainty defined by specified drivers of change. Scenarios written for interactive exercises are typically brief, depicted in personal rather than institutional anecdotes, and salted with humour (laughter aids impact and memory). But these are best based on research scenarios: longer narratives, depicted in broader terms. The research scenario for 'Tough Choices' begins with a brief overview of conditions in 2017 and the historical changes that created them. It then explores how life is different in this future in greater detail.[i]

- What concepts, ideas and paradigms **define** the world around us?
- How do we **relate** to each other – what are the social structures and relationships that link people and organisations?
- How do we **connect** with each other -- what technologies connect people, places and things?
- What are the processes and technologies through which we **create** goods and services?
- How do we **consume** goods and services – how do we acquire and use them?

The scenario finishes by focusing on the changing workplace, and changed health and safety issues.

Scenario Cross

Personal responsibility, pro-active adoption of technology, management of risk, ability to absorb impacts of conflict/war and resilience in the face of economic/social/other shocks

Increased UK competitiveness, harmonisation of regulations; differently abled in employment; incorporation of migrants; enterprise culture, expectation of well-being and social cohesion

Decreased UK competitiveness

Blame culture, resistance to new technology, rejection of risk, shattered by impacts of conflict/war and fragility in the face of economic/social/other shocks

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Tough Choices

These Scenarios were produced by Infinite Futures working with SAMI Consulting and the Health and Safety Laboratory. They are intended to stimulate thought and are in no way predictions of the future. They do not represent HSE views on how the future may develop.

2008: Record levels of immigration into the UK from eastern Europe continued.[iii] Increasing public unease with the situation may have contributed to the growth of the right-wing in government; candidates were proposing to consider immigration controls in addition to simplifying the regulatory environment for business.

2009: As the first decade of the 21st century came to an end, the powerhouse economies in Middle East, South Asia, and East Asia came into their own. EU competitiveness and growth sagged in comparison. Thus began the UK 'youth drain'. More and more highly qualified graduates began to look abroad for interesting careers.

Domestically, the numbers and varieties of youth gangs in UK communities increased. Analysts suggested a connection with the economic slowdown and rising unemployment. Rising levels of conflict, on the other hand, were attributed to cultural clashes among long-time locals and various new immigrant groups.

2010: By 2010 the European economic hiccough was revealing itself as a major stumble. The UK was not immune, and business' ability to adapt and innovate was hampered by an increasing talent drought in the sciences, mathematics, and engineering. The influx of immigrants and migrant workers continued, along with an increased incidence of illegal work gangs. New ghetto areas emerged in UK cities, and the grey and black economies blossomed.

2011: An already pressured NHS found itself unable to cope with the additional burden of immigrant and migrant worker health problems. Epidemiologists tracked a jump in TB and contagious diseases centred in depressed urban neighbourhoods. Communities were polarised by fear, primarily across cultural lines, when long-time residents blamed immigrants for bringing the infections with them. The public blamed the government as well for failing to control the tide of immigration. This particular crisis was simply a symptom of the polarisation of society as a whole due to a deepening economic divide.

2012: The TB crisis of 2012 finally put the NHS into full-blown arrest: it simply lacked the resources to treat everyone infected, or even to identify who all the infected were.

On the economic front, innovation continued to slow, and employment fell overall. The resulting drop in government revenue coupled with continued stresses on government services forced cutbacks. Health benefits were curtailed; unemployment and incapacity benefits programmes were reduced; and old-age pensions suffered their first cut.

2014: More and more small businesses were driven to dubious hiring practices in an effort to stay competitive. This in turn encouraged gangmasters to procure ever cheaper labour pools and the November accident in Liverpool was commonly referred to as an 'industrial Morecambe Bay'. Autopsies unveiled the appalling detail that the gangmasters in question had injected the workers with subcutaneous RFID 'inventory tags'.

Breakout Groups

The Digital Rose Garden
health and safety in the changing workplace

Leading article – **Global Financial Tribune:**

WiMax immersive edition – 1 December 2017

It's official. Yesterday's report from Work, Life and World tells us so. The roaring 1920s are back. And where do we go to taste the energy and innovation of those boom years of old? Well, believe it or not, to work.

The world of work is very different now from even five years ago. Technologies have advanced more in the last ten years than in the previous one hundred. Pervasive computing, immersive communications, biotechnologies, nanotechnologies, and new materials are transforming production, offices, homes, our relationships, even ourselves. We are all explorers now: and we'll take a little risk along the way. As for work-life balance, what about it? To quote last year's Productivity Consortium's ad campaign 'Work? Life? It's all living!'

We work 'glocally' – in small, high tech outfits doing global business – so where we work barely matters at all. Why should it when immersive communications – witness last week's videophone sunglasses launch – can take you anywhere in the world in an instant? So we work at home or rent a desk at the neighbourhood office down the road. 'Factories' are cleaner, greener, self-monitoring, self-repairing.

Yes, it's great to be at work as we near the roaring 2020s. Or it is if you're one of the 50% working in the brave, new, risk-embracing world of biotechnology and innovation. For the rest of us, it's not all good news.

We worry about keeping pace with developments and about what happens when systems collapse; we can build virtual friendships on-line but nothing really compensates for a chat at the coffee machine; and increasingly, we wonder if human performance enhancement technologies, both bionic and personality improving, are turning us into something else, something almost trans-human.

Others see a divide between those who work within the innovation dynamo and those who do not. Manufacturing jobs, contrary to predictions, are still very much around, albeit transformed by intelligent infrastructure. Building continues apace, particularly as the 2018 World Cup approaches and as docks are expanded to meet our ever-increasing import needs. These jobs can't be done at home. And neither can some of the new jobs – sorting rubbish by hand for recycling may not be the most glamorous of occupations but over 150,000 of us now do it. In social occupations, we still need policemen to patrol our high streets – vastly changed as chain stores move online – and we still need carers for the elderly: with life expectancy now at 93 years and rising, we'll need many more in the future.

The changing workplace has transformed the lives of millions for the better; for others, not at all; and some, for the worse. We're heading for the roaring 2020s – but it's not yet all coming up roses.

Economic vitality over time.
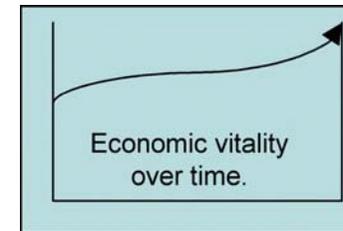
KEY FEATURES OF THIS WORLD

STRONG, INCREASING UK COMPETITIVENESS

ECONOMIC BOOMTIME

CULTURE OF PARTNERED RESPONSIBILTY

INTER-CONNECTED SOCIETY

SUSTAINABILITY: EFFICIENT, ELEGANT DESIGN

LOW-FOOTPRINT CONSUMPTION

IMMERSIVE COMPUTING & MEDIA

WORKPLACE IS EVERYWHERE

The Digital Rose Garden
health and safety in the changing workplace

VALUES

- First loyalties to digital social network and communities of interest;
- Value exploration and creativity;
- Focus on transcending the life / work conflict.

HEADLINES

"Work? Life? It's all living!'

The roaring 1920s are back.

Virtuality Dependence tops sick note list.

Brain-Enhancing Drugs Boost Productivity

UK Brain Gain Boosts Innovation

Family sue over care home bionic suit accident

1 GB-wide broadband in 50% of UK homes

UK Net Hub down 2 hours after net attack; hackers get 10-year jail term

Tonight I'm gonna party 'cos I'm 99!

QUOTES AND METAPHORS

"Green de luxe": eco-design is elegant and parsimonious.

Not 'shop 'til you drop' but 'mod your bod';

The changing workplace has changed the lives of millions for the better

Worker SUE (Ex Air Host): "I'm gutted I lost my job to a robot, but now I work as a virtual holiday rep in Third Life/Westworld."

Business Owner NEILL (of high tech company Limb Assistive Devices, LADs): "Demand for our bionic limbs remains high and is rising now we've introduced a new leasing system for seniors."

Employee representative TED: "I'm working closely with various Government agencies looking at the many ethical issues associated with the use of Human Performance Enhancement technologies in the workplace."

Local authority employee RAHEEMA: "I just don't know who is working and who is not."

Health and safety representative STEVE: "WiFi remote safety inspections are a breeze, but we're dealing with ever increasing incidences of VRA (Virtual Reality Addiction)."

ADMIRED PEOPLE

Ray Kurzweil

Philip Rosedale

A THRIVING COMPANY

An SME with a small staff mixing locals and 'knowledge nomads', producing biomimetic clothing designs using genetically tailored bioluminescent textiles for the global market.

* These scenarios are intended to stimulate thought. They are in no way predictions of the future and do not represent HSE views on how the future may develop.

Breakout Groups

The Digital Rose Garden
health and safety in the changing workplace

Partnered Responsibility

- Pro-active adoption of technology, management of risk a partnership among individuals, business, and government;
- Ability to absorb impacts of conflict/war, resilience in face of economic/social/ other shocks.

Inter-Connected Society

- People are more politically engaged and unified – act in partnership with government;
- Generations are more closely knit, and families are more inter-knit with interest groups: the cyber-extended family;
- An enhanced sense of connection to, and responsibility for, the national landscape and global environment.

Immersive Computing

- Seamless, immersive digital data/media environment (telecoms and computing networks; Wifi / RFID);
- Overlays the real world and everyone accesses it constantly.

Economic Boomtime

Increased UK competitiveness

- Harmonisation of regulations; differently abled in employment; incorporation of migrants; enterprise culture, expectation of well-being, and social cohesion.

A New Global Balance

- Globalised capital and BRIC economic strength;
- Partnerships as emerging economies strengthen and move to centre stage;
- UK Economy booming, generating innovative goods and services;
- Labour force growing – 'Knowledge nomads' in-migrating: UK is the place to be;
- Offsets ageing of UK society;
- Business initiatives succeed;
- Innovations based on biosciences, materials sciences, design expertise – linked to CSR; small, nimble, global enterprises.

Low-Footprint Consumption

- Avid consumers of experience, not consumer goods – but buy high quality when they buy;
- Designer food – but eco-friendly;
- Value parsimonious design resulting in resource conservation;
- Low footprint holidays: Devon Riviera;
- Beyond health to HPE (Human Performance Enhancement) and augmentation;
- But still widespread obesity.

Sustainability Works

- Sustainability for design elegance and parsimony of system solutions;
- Embrace technology innovation, but take responsibility for impacts.

Workplace is Everywhere

- Transformative high tech;
- "Glocal": small enterprises do business globally;
- Workplace has exploded and been absorbed: it's everywhere;
- Biosciences, new materials;
- Ever more rapid technological advances as pace of change outstrips development of social values, e.g., ethics.

Health and Safety Implicit

- Workplace stressors/risks: stress from over-immersion;
- Home stressors/risks: over-augmentation; over-reliance on cyber social networks;
- Leisure stressors/risks: adrenalin overload;
- Attitude to H&S: a matter of exceeding congenital potential;
- H&S infrastructure: in partnership with peers and government; H&S built in at design phase, more automated H&S monitoring and control;
- Extent of regulatory structure: HIGH

Breakout Groups

Boom and Blame
health and safety in the changing workplace

Leading article – **The Competitive Intelligencer:**

from our database to your mobile PDA –
1 December 2017

Welcome, businesses of the world! A LSE economic survey has confirmed the UK as the world's most supportive business environment. Low taxes and a minimal regulatory environment entice the world's businesses to the UK free market. And in our 24/7/365 world, Britain needs to remain strongly competitive – the current economic woes of those nations that failed to keep pace with change are a daily reminder to us to do so. The world's climate may be getting warmer, but the world's markets are incandescent.

We've worked hard to become early adopters and rapid adapters. We made the most of our strengths, and business is booming in finances, business services, competitive intelligence, technical expertise, and a smaller but more competitive tourist industry. Enterprises are larger: our successful small companies have grown; less competitive companies are absorbed by larger firms. Large chunks of manufacturing have been outsourced, offshored or automated.

The job for life has gone and with it, many of the old bonds of employer loyalty. Average tenure in post has slipped to 4 years. Most workers, across all sectors, are on short, fixed-term contracts. Being dismissed is nothing unusual. It's just something that happens.

Biosciences have transformed teamwork and HR – companies can now evaluate candidates' fit to corporate culture in terms of metabolism, personality, and vulnerability to workplace environments and stress. Health regimes can be tailored to our individual genetic profile, and supported by a wide array of sanctioned performance enhancement medicines. The latest new-hire perk, the HealthNano implantable health sensor, helps employees monitor their own health stats as well as productivity. For the individual, it's preventative health care – for the company, it's additional competitive edge. And it helps keep our 1 million workers aged over 65 healthy and at work. We can't afford to lose them from the labour market – nor their skills.

Of course, more competition among companies means more competition within companies. We know life is losing to work under these conditions – while we can work anywhere, corporate security and privacy concerns keep most of us at the office, and at the office late: evening rush hour now falls between 8 and 10 pm. Yes, we're still competitive, but how long can Britain's workforce keep up this white-hot pace before blowing a collective gasket?

Economic vitality over time.

KEY FEATURES OF THIS WORLD

STRONG UK COMPETITIVENESS

ECONOMIC SUCCESS - CAN IT CONTINUE?

BLAME CULTURE

COMPETITIVE SOCIETY

STRONG CONSUMPTION

SUSTAINABILITY DELAYED

HIGH-TECH WORKPLACE | GENETIC IDs

INVASIVE COMPUTING

Boom and Blame
health and safety in the changing workplace

VALUES

- First loyalties to current company or organisation;
- Value competition and winning;
- Focus on work.

HEADLINES

- They're Watching While You Work….
- Nuclear Power 1: Renewables 0
- Deregulate To Accumulate
- Newsagents' collective sue over paper cuts
- ASBOs Reach Record High
- 'Phish and Chips': RFID scam; consumers hit
- Workplace pressures linked to alcohol abuse" says health advisor
- Obesity: Britain tops EU league

QUOTES AND METAPHORS

- "There is no society, there are only individuals."
- "Success first, sustainability later."
- "Maintaining productivity is a 24/7/365 endeavour!"

PEOPLE

Worker SUE (MultiSource Energy): "I work all the hours God sends and more, but it's not so bad because we've got pills to help us along."

Lawyer NEILL: "Genetic profiling saves my new materials clients a packet."

Employee representative TED: "Health and Safety takes up way more time than pay issues."

Local authority employee RAHEEMA: "Health and Safety? Least of my problems."

Ex health and safety representative now working for Health and Safety Insurance (HSI) STEVE: "The new Health and Safety accreditation scheme is a winner."

ADMIRED PEOPLE

Gordon Gekko

J R Ewing

A THRIVING COMPANY

A large corporation offering global investment and trading services, including competitive intelligence.
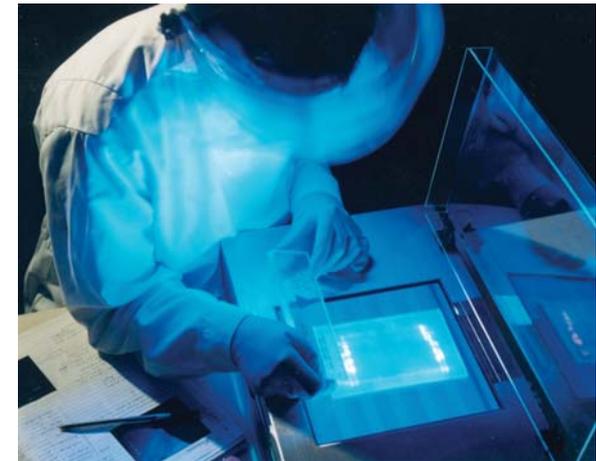
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Boom and Blame
health and safety in the changing workplace

Blame Culture

• Resistance to new technology,

• Rejection of risk,

• Shattered by impacts of conflict/war;

• Fragility in face of economic/social/other shocks.

Competitive Society

• Ageing UK/European demographic;

• Widespread obesity;

• New focus on extended biological family as genetic health mapping gains importance.

Invasive Computing

• Pervasive computing (seamless, immersive telecoms and computing networks; Wifi/RFID) monitors productivity;

• Total lifestyle, environment, and performance monitoring by companies via implants tracking working wellness and productivity.

Economic Success

Increased UK competitiveness

• Harmonisation of regulations; differently-abled in employment; incorporation of migrants; enterprise culture, expectation of well-being, and social cohesion;

A world of globalised capital

• BRIC economic strength;

• Global free market amplifies economic divide: UK economy holding steady,

• Large enterprises;

• Focused on finances, business services, expertise, and tourism;

• Government intrudes much less – regulatory structures are reduced and the market is free;

• Knowledge workers staying home; skilled blue collar out-migrating;

Business Adapt

• Initiatives known for rapid adoption and adaptation more than innovation;

• UK label on services and ephemera.

Growing Consumption

• Who has time to shop? 'fastgoods';

• Conspicuous consumption still fashionable;

• Foods healthier – must enhance productivity;

• Nuclear power; fuel subsidies, no support for environmental initiatives;

• What leisure?

Sustainability Delayed

• Only stable, surplus generating economy can afford sustainability;

• Less consideration for the environment, leading to worsening conditions;

• Technology: adopt and adapt – let someone else pay for R&D, and externalise the impacts where possible.

High-Tech Workplace

• High tech for productivity;

• Big enterprises working globally;

• Workplace standardisation and limited company-sponsored augmentation for competitive advantage;

• Financial sectors, technical services, expertise, and tourism

• Deregulating to generate wealth to fix environment;

   BUT

• Deregulation adds to environmental damage.

Health and Safety only for Productivity

• Workplace stressors/risks: high pressure to compete successfully;

• Home stressors/risks: lack of home/down time;

• Leisure stressors/risks: insufficient leisure;

• Attitude to H&S: necessary to maintain productivity;

• H&S infrastructure: based within company; government involvement minimal – increased role for insurance companies;

• Extent of regulatory structure: MINIMAL

Breakout Groups

Tough Choices
health and safety in the changing workplace

Leading article – **The Economiser** – 1 December 2017

We're calling it: the recession is now a slump. Asset price deflation has spilled over into a general deflation, which low interest rates cannot correct. Chunks of our cities decay as organisations outsource and migrate. We've watched public agencies, NGOs, and big business cut costs and re-trench. The health infrastructure is creaking, pensioners are job-hunting with the vigour of school leavers and in some cities, gangs clash over turf. Climate change has lost out to battling international organised crime as the new global challenge.

The world of work has changed. Competition for the best jobs is hot, and disappointed candidates with great CVs are looking elsewhere in the world. Elsewhere, people are elbowing each other aside for jobs with long-term health and pension benefits. Yet even with high unemployment, some seasonal and labour intensive jobs go begging.

In the workplace itself, the picture has changed. With shrinking revenues, 'shabbily genteel' now describes too many British workplaces. Reports show that old machinery, worn flooring, improvised wiring and over-taxed ventilation and exhaust systems are common. Advanced automation and intelligent systems installed just five years ago aren't getting the updates they need.

It's no surprise that accident rates are up – as are insurance claims.

Yet in many ways, Britain's employers and workers have proved remarkably adaptable. Short term contracts, part time working and creative shift patterns have kept many a business afloat; and the older worker – who may have skills, both technical and inter-personal, that many employers now consider lost – is valued more highly than ever before. Over 1 million workers are aged 65 or over. The challenge is to enable them to continue to keep working.

Britain is not a country in collapse. Flexible employers, adaptable employees and continued business endeavours, even in these troubled times, provide hope. But we face at present a landscape littered with tough choices and a future of tougher challenges. It's time for action.

Economic vitality over time.
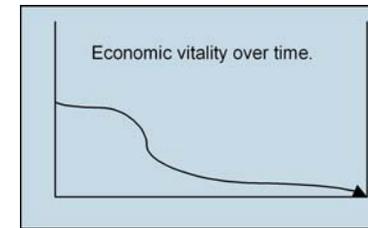
KEY FEATURES OF THIS WORLD

DECREASED EU COMPETITIVENESS

ECONOMIC STAGNATION

BLAME CULTURE

FRAGMENTING SOCIETY

REDUCED CONSUMPTION

SUSTAINABILITY BY COPING

PERVASIVE COMPUTING A LUXURY

WORKPLACES CHEAP AND SHABBY

Tough Choices
health and safety in the changing workplace

VALUES

• First loyalties to self;

• Value security;

• Wish for the luxury of choice regarding work/life balance;

HEADLINES

Monetary Policy Committee stands firm – lower interest rates must wait.

Fourth anniversary of the great crash. When will the bear market end?

Prices fell another 3% last year

"Where's the aid we were promised?" say bankers.

Infections in warehouse linked to tag-chip implants

Crime levels reach 10-year high

QUOTES AND METAPHORS

"Tough choices require tough resolve."

Factory Worker SUE: "I've just started my third job this year, I don't know how long it will last. The pay's not great, but I'll get a pound extra an hour if I agree to wear a productivity tag."

Business Owner NEILL: "Health and what? It's a luxury I can't afford!"

Employee representative TED: "I'm flat out. And companies switch management so often it's hard to keep track of who you're dealing with..."

Local authority representative RAHEEMA: "I sometimes feel like I'm fighting a losing battle. People don't seem to listen the way they used to…"

Health and safety representative STEVE: "I'm banging my head against a brick wall. How can I improve health and safety when I barely know what people are doing or where they work?"

ADMIRED PEOPLE

Arthur Daley

Private Walker

EXAMPLE COMPANY

A medium-sized corporation working within the UK and EU, producing small electrical appliances and struggling to remain competitive.

* These scenarios are intended to stimulate thought. They are in no way predictions of the future and do not represent HSE views on how the future may develop.

Breakout Groups

A Virtue of Necessity
health and safety in the changing workplace

Leading article – **Sustainability Times:**

Local edition – 1 December 2017

WiMax immersive edition – 1 December 2017

The latest figures are in: going green and staying local have fertilised a dormant economy. Britain is becoming a beacon for high tech sustainability in our technically astonishing world. But it is also a nation with huge demands on its public services, particularly health provision and elderly care. The have/have not gap has widened. Yet the march of change continues.

Take the world of work. In some ways, it's similar to that of ten years ago. Manufacturing still exists. There are still large corporations – mostly with overseas owners and notwithstanding those that relocated overseas, taking many skilled workers with them. And the health and care sector remains by far the largest employer. Yet in other ways the world of work is very different.

Society has re-trenched. More people have shifted from consumerism to self-sufficiency – it is a warmer world, after all. It's been a gain for sustainability – and, it seems, for revived competitiveness, as people re-create businesses from a unique local and green perspective.

More and more of us work for small companies – in a workplace as likely to be a 'flat pack' office in your boss's back garden as it is an office block. More and more small businesses are sharing office space, production machinery and support staff – using software to allocate resources dynamically among several businesses, lowering costs and reducing waste. Given our concerns about climate change, this office 'co-op' may well be just a cycle ride away. And new industries are emerging that recycle, repair and 'make do'. The 'We Can Fix It' franchise is flourishing.

Of course, declining birth rates and a slowdown in immigration mean it's more important than ever to keep workers safe and healthy – particularly those 1 million workers aged over 65. This is achievable - technological progress has been blamed for increasingly complex health and safety issues but at least we have the ability to track workers' health and stress indicators throughout the day. Or at least we do if your employer can afford the RFID monitor tag systems. It's often those workers who need them most that can't have them – those in care professions, for example, or people working shifts and juggling child (and parent) care responsibilities.

So how do we keep our workers safe and well as the world of work changes? No one pretends it's easy. But it's essential. Our economy – and the future care needs of all of us – may depend on it…

Economic vitality over time.
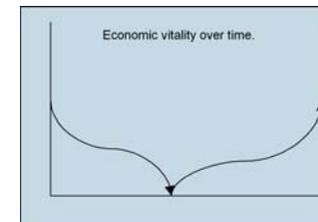
KEY FEATURES OF THIS WORLD

REVIVING UK COMPETITIVENESS

THE ECONOMICS OF RECOVERY

CULTURE OF PERSONAL RESPONSIBILTY

CLOSE-KNIT SOCIETY

SUSTAINABLE CONSUMPTION

"SHABBY GREEN" SUSTAINABILITY

PERVASIVE COMPUTING

GREENING OF WORKPLACES

HSE futures scenario building
The future of health and safety in 2017

This report describes the processes, output, and participant evaluations of a scenario-building project completed for the Horizon Scanning function of the Health and Safety Executive. The scenario process incorporated critical issues of change derived from 28 interviews of HSE policy-makers and outside experts. Participants in a two-day scenario-building workshop chose drivers of change from among these issues, and created a framework defining four different possible futures for health and safety in the UK in 2017. The scenario process also incorporated the emerging changes identified by horizon scanning as 'hot topics' for health and safety. Results from the workshop were written up in two formats:

- 'research scenarios' that include supporting evidence such as reference to other government agency foresight research and scenarios; and

- 'workshop scenarios' that present the key ideas in a vivid but compressed format to generate group dialogue.

As a test of their efficacy in generating policy discussion and ideas, the scenarios were deployed twice:

- at the HSE Horizon Scanning Conference in November 2006 to spark wide-ranging discussion of possible challenges facing the HSE; and

- in a subsequent wind-tunnelling workshop to demonstrate how scenarios can be used to consider specific policies in the face of potential change.

This report and the work it describes were funded by the Health and Safety Executive (HSE). Its contents, including any opinions and/or conclusions expressed, are those of the author alone and do not necessarily reflect HSE policy.

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