



Gill Ringland, CEO

SAMI Consulting and Oxford Analytica are to undertake a major project to:

- Develop alternative scenarios concerning the potential long-term future development of India and China over the period to 2015
- Assess the possible impacts, both positive and negative, of such patterns of development upon the City of London financial services sector;
- Consider what further analysis may be necessary and what actions might be taken to maximise any potential opportunities and minimise any threats.

The resulting project report will aim to stimulate wider debate and

appropriate action among City financial institutions, government and other interested parties.

The Corporation of London has formally agreed to be the principal sponsor/funder of the proposed project and associated project, involving scenario development, industry-focused workshops and a report. The report will be widely disseminated by the Corporation free of charge among City institutions, businesses, government and other interested bodies as one of the Corporation's series of major research reports. The normal print-run for Corporation research reports ranges up to around 4,000 copies.

Having secured the Corporation's backing, SAMI Consulting and Oxford Analytica are now seeking co-sponsors to contribute towards the cost of the project, for instance by sponsoring workshops for a specific sector of financial services, during autumn 2005. Please contact me for more details. gill.ringland@samiconsulting.co.uk

From the CEO

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independent media, voluntary best-practice codes, and close links between investors and civil society encourage cross-border integration and virtual value chains. Networking skills and superior reputation management are essential.

Flags

The third, called *Flags*, is a dogmatic world where security and community values are emphasised at the expense of efficiency. Zero-sum games, dogmatic approaches, regulatory fragmentation and national preferences, and conflicts over values and religion give insiders an advantage and put a brake on globalisation. Gated communities, patronage and national standards exacerbate fragmentation, and call for careful country-risk management.

Major forces

All three futures are of course set in the context of the major forces shaping our world. Some of these are the dominating roles of the US

and China, the transformation of the role of the nation state as citizens become more mobile and more informed, continued globalisation, the rise in regulatory compliance requirements, demographic change and migration, and the pressures on the oil industry over climate change and depletion of reserves.



Dr Albert Bressand

These forces will play out differently in each of the scenarios. The net effect on global growth is marked – by 2025 the level of global economic prosperity is 40% higher in *Open Doors* than in *Flags*. In terms of climate change drivers, *Open Doors* sees CO₂ emissions rise most rapidly as a result of this growth. *Low Cost Globalisation* could see faster progress towards carbon efficiency as a result of a different set of policies aimed at energy efficiency, conservation and development of renewables, notably wind. *Flags* would see a patchwork of national approaches, including searches for energy self-reliance which would have positive implications for energy efficiency.

The power of shared insights

Within Shell, the imperative is to use the scenarios as a tool to gain deeper insights into our global business environment and to achieve the cultural change that is at the heart of our Group strategy. We face real challenges in the future, we will all need to be able to respond to changing circumstances and make informed and rigorous judgements about our decisions. These scenarios and methodology will help us to do that better.

Within the global community, I also hope that they will have a wider resonance. Shell *Global Scenarios* broaden one's mind-set and stimulate discussions, both with colleagues and with the global community. I am looking forward to sharing new insights with partners, shareholders, the local communities in which we operate and our many other stakeholders.

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The new *Global Scenarios to 2025* were launched in June 2005 at Chatham House, London. The Executive Summary from which this is extracted can be found on www.shell.com/scenarios.

The Shell Global Scenarios to 2025

Dr Albert Bressand, Vice President for Global Business Environment, Shell

Energy companies, more than most businesses, need to take a long-term view. That is why Shell has been producing *Global Scenarios* for more than 30 years.

These scenarios are different from forecasts in that they provide a tool that helps us to explore the many complex business environments in which we work and the factors that drive changes and developments in those environments. This information plays a vital part in the judgments and decisions Shell makes about its business and its future, decisions which typically are about complex projects developed and operated over several decades.

In the 1990s, the Shell *Global Scenarios* explored a world of globalisation, new technology and market liberalisation, and an alternative model where emphasis was placed on social and community aspirations. In this spirit, the 2001 *Global Scenarios* set out two different worlds, *Business Class* driven by efficiency, economic integration and declining power of nation states, and *Prism* that highlighted the power of cultural values and cohesion.

Scenarios for 2025

While these themes are still very relevant, the events of September 11, 2001 and the crisis of trust in the market arising from corporate scandals have brought profound changes in our business environment, which the *Global Scenarios to 2025* explore. In particular, the feelings of insecurity and mistrust that have arisen in the light of these events have led to

new barriers to free movement of people, goods and capital, as well as a stronger role for the state both in protecting national security and in restoring trust in the market.

are needed to reconcile them, setting out what is called a *Trilemma Triangle*.

This has led to the breaking of a time-honoured tradition in *Shell Global Scenarios* – that the analysis should lead to two alternatives. The new analytical framework has shown that three *Global Scenarios* offer the best way to capture the interactions between the three sets of forces and the subsequent trade-offs and choices that shape the business environment over the long term.

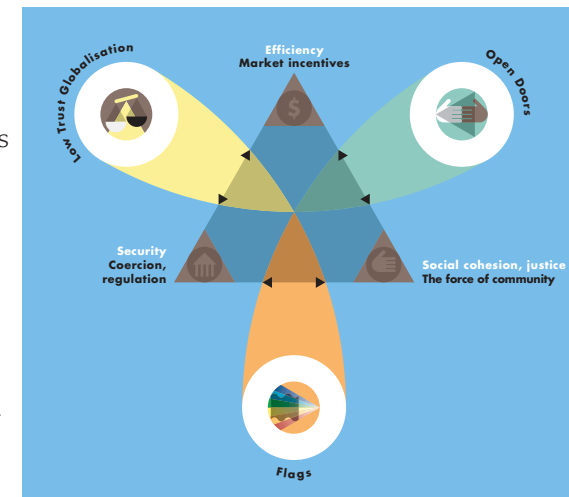
Low trust globalisation

The first of these 'possible futures' is called *Low Trust Globalisation*. This is a legalistic world where the emphasis is

on security and efficiency, even if at the expense of social cohesion. The absence of market solutions to the crisis of security and trust, rapid regulatory change, overlapping jurisdictions and conflicting laws lead to intrusive checks and controls. These encourage short-term portfolio optimisation and vertical integration. Institutional discontinuities limit cross-border economic integration. Complying with fast-evolving rules and managing complex crises are key challenges.

Open doors

The second, *Open Doors*, is a pragmatic world that emphasises social cohesion and efficiency, with the market providing 'built-in' solutions to the crises of security and trust. Built-in security and compliance certification, regulatory harmonisation, mutual recognition,





Climate change: the time to plan for the consequences is *now*

Tony Jefferson and Natalie Kirschberg-Back of The Futures Forum

Climate change is always with us. There are natural cycles to it. The underlying issue today is the impact mankind is having on the natural cycle of climate change, and the magnitude and speed of that impact.

The current consensus could be characterised as:

'We believe mankind is definitely having an impact on the climate; our models demonstrate this conclusively. The hard, observable evidence is just beginning to arrive and is not yet overwhelmingly conclusive. We are unsure of the scale of the impact mankind is having but we continually revise our estimate of the impact upwards.'

There is an increasingly widespread view that climate change is one of the most serious crises the world faces.

The scientific consensus that is emerging would seem to indicate, strongly, that:

- The risks to the environment and the impact on human activity increase sharply if global temperatures increase by more than 2°C
- An increase in carbon dioxide (CO₂) concentration in the atmosphere of more than 450 parts per million (ppm) represents a very significant level of risk
- The current level of CO₂ concentration is about 370 ppm and is increasing at over 2 ppm per year – and accelerating
- Therefore emissions of greenhouse gases need to be curbed, both significantly and rapidly.
- Going much above a 2°C increase raises the risk of a 'domino' impact that would see accelerating and possibly unstoppable climate

change on a scale that would have a very serious impact on humanity.

The impacts of climate change are estimated to be considerable and span:

- Temperature increases
- Sea level increases
- Rainfall pattern changes
- Much more extreme and damaging weather events.

To give some indication of the potential magnitude of these changes, the climate change scenarios produced for the UK in 2002 indicated that for the South East, under the 'High' scenario, the following impact was likely by around 2080:

- Summer temperature increases of 4.5°C to 5.0°C
- Rainfall increases in winter of 25% to 30% and decreases in summer of 50% to 55%
- Sea level increases of 86 cm.

These represent massive changes. Although 2080 sounds a long way off the trend is clear and extreme events between now and 2080 are likely to have a big impact. The risks can be categorised as

- Flood plains are more likely to flood, floods will become more frequent and will become progressively more extensive
- Coastal flooding will follow a similar pattern
- Summer droughts will become more likely and more significant.

There are some clear implications of these for where one may choose to locate either homes or workplaces:

- Flood and coastal protection schemes will become more extensive and expensive.
- Not everywhere can be and will be protected.
- Insurance will become more – and potentially much more – expensive, especially for those businesses and homes in high-risk locations.
- Disruption due to flooding in winter will get more frequent and more extensive and may be of longer duration.
- Water may become scarce in summer and/or more expensive.
- Hotter and drier parts of the UK may experience bush fires.

Another significant impact – on a global scale – concerns food, which may become more expensive and suffer periodic disruptions in supply.

Given the magnitude of these potential impacts, governments are formulating policy responses, such as the UK's long-term ambition to cut emissions of greenhouse gases by 60% by around 2050 compared to the 1990 levels. Currently the UK is on track to reduce its emissions by 20% by 2010, which exceeds the Kyoto target. Unfortunately what has been achieved to date has been largely as a result of a reduction in manufacturing industry and a shift from burning coal to burning gas to generate electricity. The remaining 40% will be much harder to achieve, especially as the population will have increased by about 10% by 2050.

There is one feature of these targets that is significant. Air transport and sea transport are not included. Air travel in particular is now recognised as having

a disproportionate impact on greenhouse gas and the emerging consensus is that air travel will need to be curbed to hit any realistic emissions targets.

It will be impossible to achieve reductions of 40% to 50% magnitude without massive changes in lifestyle. Clearly there will need to be significant reductions in the use of greenhouse gas emissions for:

- Energy use in the home, which in 2002 accounted for over 27% of end-user greenhouse gas emissions.
- Road transport, which accounted for 25%
- Business, which accounts for 32%
- International air transport, which will certainly become a key area for reduction.

From an organisational viewpoint much of this may seem far into the future. Five years is a long-term horizon, let alone 2080. However, as was stated earlier, within five years there could be clarity on the scale of impact and the danger thresholds. Once this occurs then the pressure for action on emissions will intensify. There will probably be a step-change in the policies designed to reduce emissions. The trends are clear.

Whilst the trends indicate a steady but cumulative impact and implications, what could really transform attitudes would be some significant climate or weather events. For example, in the UK a repeat of the 1952 East Coast floods; in the USA the equivalent of two Hurricane Andrews in the same year (in 1992 Hurricane Andrew did \$26.5 billion worth of damage), the flooding

of New Orleans or a prolonged West Coast drought. Events like these could transform public attitudes and lead to rapid action.

There is a huge range of potentially dramatic implications that businesses need to take into account in longer-term planning:

- The need to reduce their own greenhouse gas emissions – power for factories and installations, methods of distribution
- New distribution and retail networks – as a direct result of energy-efficiencies, as well as geographical shifts of population
- The relocation of factories, offices, etc – including offshore
- The need to introduce new, more efficient processes that consume fewer resources
- Higher corporate taxation – to pay for flood defences, etc; also excess greenhouse gas emission penalties
- Higher risk of business disruption with consequent impact on profits; some of these may be insurable
- Higher insurance costs
- Potentially higher costs overall
- Reduced scope for corporate air travel
- New opportunities in shipping
- New product/service opportunities (for consumers as well as corporate customers), and not just in energy generation/consumption.

A prudent approach for most organisations would be to undertake a risk assessment of the impact of climate change and emissions policies on their activities. For those organisations where there is a probability of significant impact then the publication of the next set of scenarios for the UK in 2007 would provide the ideal opportunity for a more in-depth look at the implications.

One thing is absolutely certain; the climate is changing. The evidence is piling up that greenhouse gas emissions are intensifying the impact and therefore either action is taken to reduce them or the impacts get progressively greater and more damaging. These actions or impacts are no longer decades away.

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