



acting now for a
positive 2018,
preparing for
radical change

the next decade of business and sustainability

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executive summary

In volatile times, it's hard to predict the future. One thing is clear however – the economic good times of the last decade are gone for the foreseeable future.

Forum for the Future and Capgemini have set out to explore what these turbulent times mean for business and sustainability. We have used our understanding of the last decade to create four different scenarios for the next ten years. Although the scenarios are different, in each one sustainability considerations grow increasingly important and have consequences for business, for government and for us all. Business must act now to achieve the best future, and prepare for radical change. Governments must regulate to reduce the risk of catastrophic environmental collapse, and provide the conditions in which solutions arise. Finally, we can all play our part in creating a future where climate change is contained, where we live without degrading the natural world we ultimately rely on, and where billions of people can have choice over how they live their lives.

the NICE decade has had nasty consequences

The last ten years of steady economic growth have been dubbed the NICE decade by economists (NICE stands for non-inflationary constant expansion). The lives of many people improved (though by no means all), and in some cases were transformed, in both the developing and developed worlds. However, growth built on historically cheap debt, energy, food, labour and raw materials has faltered in the face of turbulence in the financial markets and the first effects of natural resource constraints leading to increased energy and food prices.

The nasty consequences of the NICE decade extend beyond the current downturn. The natural resources and processes – such as the climate, the soil, the nitrogen cycle and the biodiversity on which our health and economies depend – have been degraded faster than they can be replenished. We face a global environmental crisis that will profoundly affect the lives of all of us.

from risk management to business opportunity

Ten years ago the sustainability debate centred on the responsibility a business had for its impact on society. Companies used corporate social responsibility (CSR) to protect their reputation, while the core business was often untouched. Now leading companies are realising the impact of sustainability considerations on their core business, including resource constraints, climate change, labour rights and poverty. They are identifying how these are affecting and motivating their customers, suppliers, and investors.

Sustainability is becoming critical to business success and so the pertinent question is no longer, 'How does business impact on society?' but rather 'How does society impact on business?' Such enlightened self-interest frames sustainability as a business opportunity, requiring very different approaches from the past.

scenarios show a 2018 world dealing with higher prices and environmental challenges

We have created four plausible scenarios showing how the world may look in ten years' time to guide companies on the best sustainability approach today. The scenarios are informed by the Forum's long experience of using futures techniques to help major companies develop and implement more sustainable strategies.

The scenarios are not predictions. The real future will incorporate different aspects of each scenario, and more besides. By highlighting how the business and sustainability agenda might become distorted, we hope to create an imaginative engagement with what is possible and to generate commitment to real actions now.

Future scenarios are an imaginative shortcut to exploring different responses to the end of cheap debt, energy, food, labour and raw materials, and the first symptoms of the degradation of the natural world we ultimately rely on. The seeds of these futures have already been sown, but as you will see, they manifest themselves in very different ways.

Scenario A global interest: Cooperation is the watchword. An effective globalised response to global challenges prompts increased resource productivity and low-carbon growth. Businesses have to play a greater role in supporting public services and infrastructure but reap the benefits. Successful companies have embedded sustainability management throughout their organisation. Separate CSR departments are a thing of the past.

Scenario B national interest: Global businesses all but disappear in a retreat to nationalism and protectionism. Nations hoard their own resources and tighten their borders. Corporate and government agendas are closely aligned and sustainability for business means supporting the national interest.

Scenario C patched-up globalisation: Emerging markets rise as China stalls. Low-carbon technologies, particularly biofuels, thrive. Successful companies are multi-nationals with a local feel, helping to deliver local development needs.

Scenario D me and mine, online: A highly networked world undermines individual countries and companies. Products and services are delivered in a way we would barely recognise. Successful companies are now more like branded hubs, coordinating often temporary and short-lived supplier relationships to deliver customised products. Trust and transparency are key, and trends come and go swiftly – anyone with a motive and the ability to mobilise a groundswell of opinion can exert a powerful influence.

what it means for business

The business approach to sustainability is different in each scenario because the practical manifestation of sustainability is different. However, in every scenario, sustainability considerations intensify over the next ten years.

One common theme is the effects on the supply chain. Businesses will need to find ways of meeting customers' needs and regulators' expectations with a supply chain which is affected by resource constraints and changing patterns of globalisation, for example having to source within a region. This is a more important factor than consumer demand for sustainable products. Interestingly the supply chain pressures remain as we move into a recession, even if consumer demand for sustainable products declines.

The variety of possible futures means that whatever the scenario, businesses must act now to achieve the best future and prepare for radical change.

act now to achieve the best future

In an interconnected world, it is sometimes hard to see who should act first. The scenarios show it is in business's own interest to take the first step. Waiting for governments to regulate for all risks will be too late and too costly.

The exciting possibility of a future scenario like that described in the **global interest** is that companies could generate significant returns from being sustainability leaders. Business benefits from a world that remains broadly free, stable and prosperous. The alternative could be like the **national interest** scenario, a future of big dominating government and protectionism.

Next steps

Look for opportunities that both generate immediate returns and are the first steps to creating a positive future. As we head into recession, the most obvious actions are improving energy and resource efficiency within your company, in your supply chains and with customers. Longer-term there will be opportunities in maximising the economic value from a unit of material or energy ('resource productivity'). The best approach may be to engage with entrepreneurs who have a technology or business model that can profit from creating radical change.

Create alliances – with investors, customers, suppliers, staff, competitors, and regulators – to identify where the existing system is preventing a sustainable outcome, and then find ways of creating change. In 2009 this will include lobbying for a global agreement on climate change to replace the Kyoto Protocol.

prepare for radical change

No company in the world is fully prepared for the changes ahead. Forum for the Future's experience working with some of the world's most forward-thinking businesses on sustainability is that while many can be proud of their achievements to date, even they are not ready for the future change required.

Next steps

Gain competitive advantage by embedding sustainability into decision-making and operational delivery in the important business

functions e.g. marketing, product innovation, procurement and finance. Sustainability is too important to be left to CSR departments.

Be creative in exploring and rehearsing different future scenarios. Assess where your current business is vulnerable.

Take a broad definition of the challenges and avoid reducing sustainability simply to climate change. Without a holistic view, decisions may lead to unexpectedly nasty consequences further down the road (as illustrated by the controversy over biofuels and food shortages).

what it means for governments and regulators

The scenarios tell us that governments and regulators have a crucial role in shaping the future. Working effectively, they can reduce the risk of catastrophic environmental collapse and create the conditions for a truly sustainable economy.

reduce the risk of catastrophic collapse

One of the key factors driving the positive outcomes of the **global interest** scenario is that governments reduce the risk of the catastrophic collapse of the systems we rely on. Commentators, including Lord Stern, have applied the lessons of the credit crunch to issues like climate change, concluding that if we do nothing today, we expose everyone in the future to the risk of catastrophic collapse.

Next steps

Regulate the financial system to ensure that it enables wealth creation across the real economy.

Make sure economic activity does not endanger the natural systems on which we all rely.

create the conditions in which solutions can arise

The variety of the scenarios shows that governments will need to take the initiative if global society is going to achieve the best future and progress to the better outcomes. It is the responsibility of government to create the conditions in which sustainable solutions can arise.

Next steps

Reward businesses for their leadership by better understanding the business context, constraints and opportunities. Regulators must walk a sensitive line between what is politically feasible and scientifically necessary. They must then allow businesses to meet the targets in their own ways.

Act on the modern regulation agenda, by focusing on environmental outcomes and placing greater responsibility on industry to deliver, using legal sanctions only as a last resort.

Use all government procurement decisions to support these objectives.

what it means for all of us

The future is still there for us to shape. Business and government do not act in a vacuum. Every one of us is important: as consumers using our purchasing power; as citizens using our vote; as employees using our time in organisations; and as investors using our money and pension funds.

We will all need to play our part in creating a future where climate change is contained, where we live within environmental limits and where billions of people remain in control of how they live their lives.

1998 - 2008 the NICE decade

the NICE decade

The last ten years have been a period of fast-paced market-based change. Global society has enjoyed a decade of globalised Non-Inflationary Constant Expansion, termed by Bank of England Governor, Mervyn King, the NICE decade.

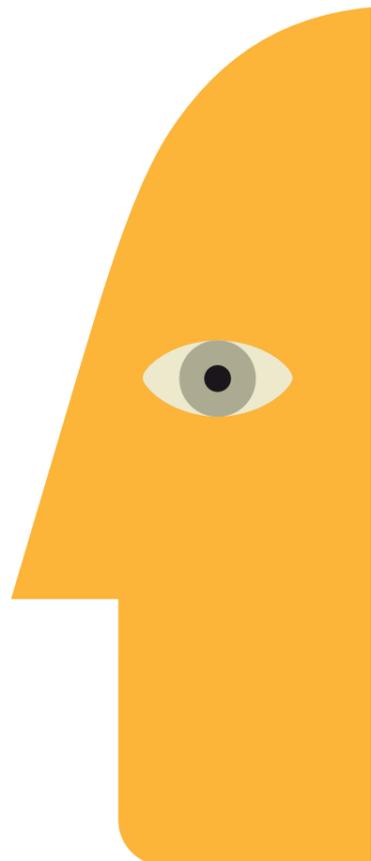
The chart summarises the highly connected group of factors responsible for helping millions in the developing world rise above the poverty line and millions in the developed world get significantly richer.

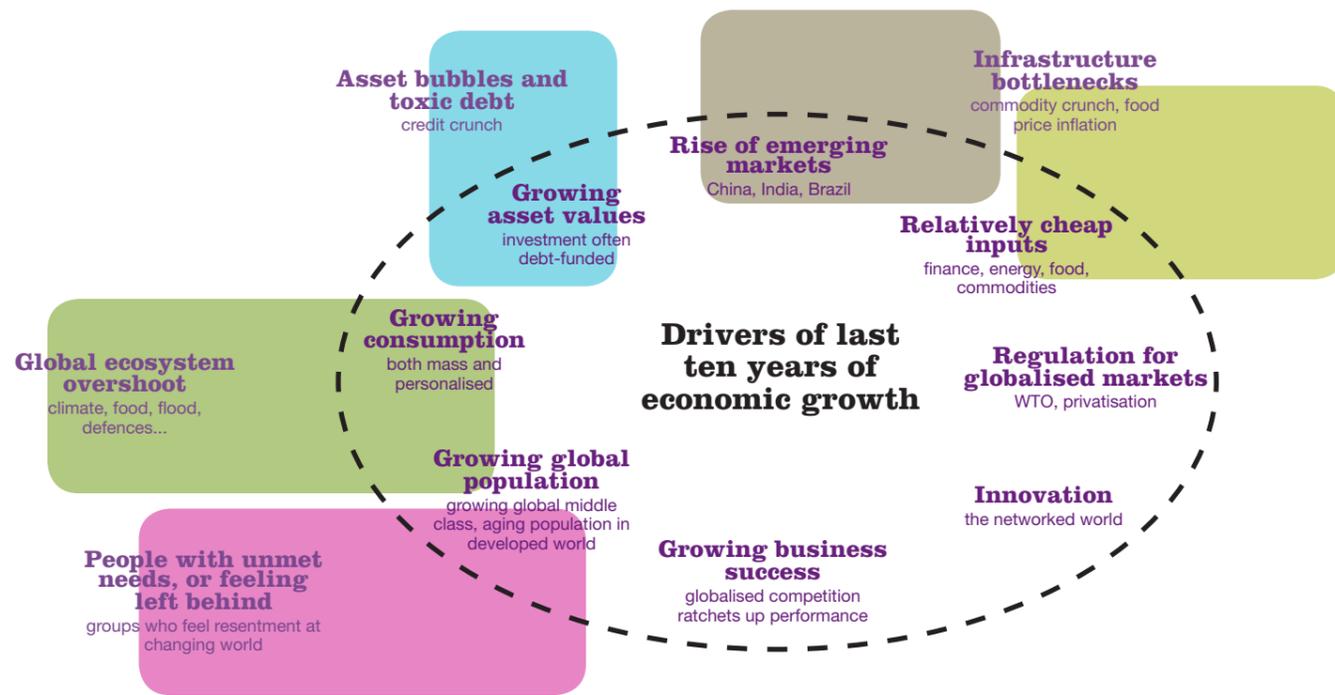


the nasty consequences

But there is a nasty side to the NICE decade (see chart next page). Even before the current recession, economic success was unevenly distributed. Those who started the decade as investors – in stocks or property – have done very well, even considering the recent falls. This is also true for those able to migrate to the new sites of economic success. However, there are still over a billion people, mainly in Africa, rural China and India, living on less than a dollar a day. It's not clear that global economic growth has had any impact on pulling them out of extreme poverty.

There are many people in the developed world who also feel left behind by globalisation. As The Economist reports, a group of American economists now conclude that rather than improving living standards, increased globalisation has had a negative impact on the American middle class, through wage stagnation, widening inequality and greater insecurity. When fast-paced change is combined with the feeling of being left behind, it can create a fertile recruiting ground for far-right politics or terrorism.





Now the world is facing a new challenge. The belief in indefinite growth has created asset bubbles funded by debt, which still remains when asset values decline. No-one fully understands who holds the overvalued assets and toxic debt in the complex global financial system. Thus the markets have frozen, finance has become expensive, banks are unable to borrow and even go bust. The global credit crunch is on. Consumers spend less, so companies have less to invest in their growth. In short, a global downturn becomes inevitable.

The end of cheap energy and food

But what caused the bubble to burst in the first place? The decade of cheap inputs was clearly coming to an end. The sheer scale of our NICE success created extra demand for energy, food and commodities, especially in China. These inputs had to come from somewhere. As China's demand exceeded existing global refining capacity, oil prices rose. Exacerbated by the threat of terrorism, the price of a barrel of oil leapt from \$12 in 1998 to a spike of \$150 in 2008. Fears of recession and reduced demand have since lowered the price to 'only' \$60 at the time of writing but with OPEC threatening to reduce supply it's unclear where oil prices will go next. The price volatility itself is a sign of uncertainty. It's not that we're running out of oil (yet). It's that we can't refine enough of it to keep pace with growing demand.

As for food, new weather patterns caused by climate change have damaged production. By encouraging farmers to grow biofuels instead of food, food inflation has spiked. This is just the first nasty consequence of ecosystem overshoot, as natural resources are used up faster than they can be replenished. Climate change will bite harder. We will all feel the effects of soil erosion, a changing nitrogen cycle, and an ailing biodiversity network no longer able to protect us from disease. When we do, the global belief in indefinite growth will be seriously questioned. The reversal of globalised markets will affect us all.

business and sustainability to 2008

The purpose of business was business-as-usual

Whilst the going was NICE, there seemed little point in questioning the purpose of business. Some companies tried to create profit with a social or environmental agenda, however the purpose of business has been to maximise shareholder value, with the public benefiting from the goods and services sold, the economic growth created and the returns on investment.

Formal regulation made piecemeal interventions on labour rights, health and safety, and producer responsibility (e.g. WEEE, Vehicle end of life, REACH), with some more coherent efforts on climate change and water management. Voluntary regulation has seen companies form alliances with other companies and, increasingly, with NGOs to create specific responses to business-critical problems (e.g. The Forest Stewardship Council (FSC)).

From responsibility and reputation to opportunity and sustainability

For much of the last decade, the business and sustainability debate has been framed by responsibility and reputation, a proxy for questioning whether the purpose of business really is maximising shareholder value. Many big businesses have a head office department for Corporate Social Responsibility (CSR), Corporate Responsibility (CR) or Sustainability, depending on when it was established. However, despite the good intentions of CSR departments, the function of CSR has been to improve the impacts of business on society. There has been progress but limited effect on core business activities. The recent banking crisis – the result of irresponsible lending that responsibility departments could not stop – is a case in point.

Now the nasty consequences are starting to take effect, the leading edge of the debate is shifting to opportunity and sustainability. The focus has moved to the impact of society on business and leading companies are addressing issues that are material to their success in the name of enlightened self-interest, rather than reputation defence.

Climate change is the material issue businesses and governments both agree on, but it is not the only challenge. Factors such as reducing operating costs, increasing revenue from customers' greener needs, and managing supply risks are driving leading companies to make a compelling business case, tailored to the corporate specifics of sector, capabilities and location. Mainstream investors are beginning to recognise environmental, social or governance (ESG) issues as critical differentiators between otherwise similar companies.

Sustainability and business – a growing field

This changing business context has prompted a growth phase for business and sustainability, with definitions, basic principles and practical approaches still contested.

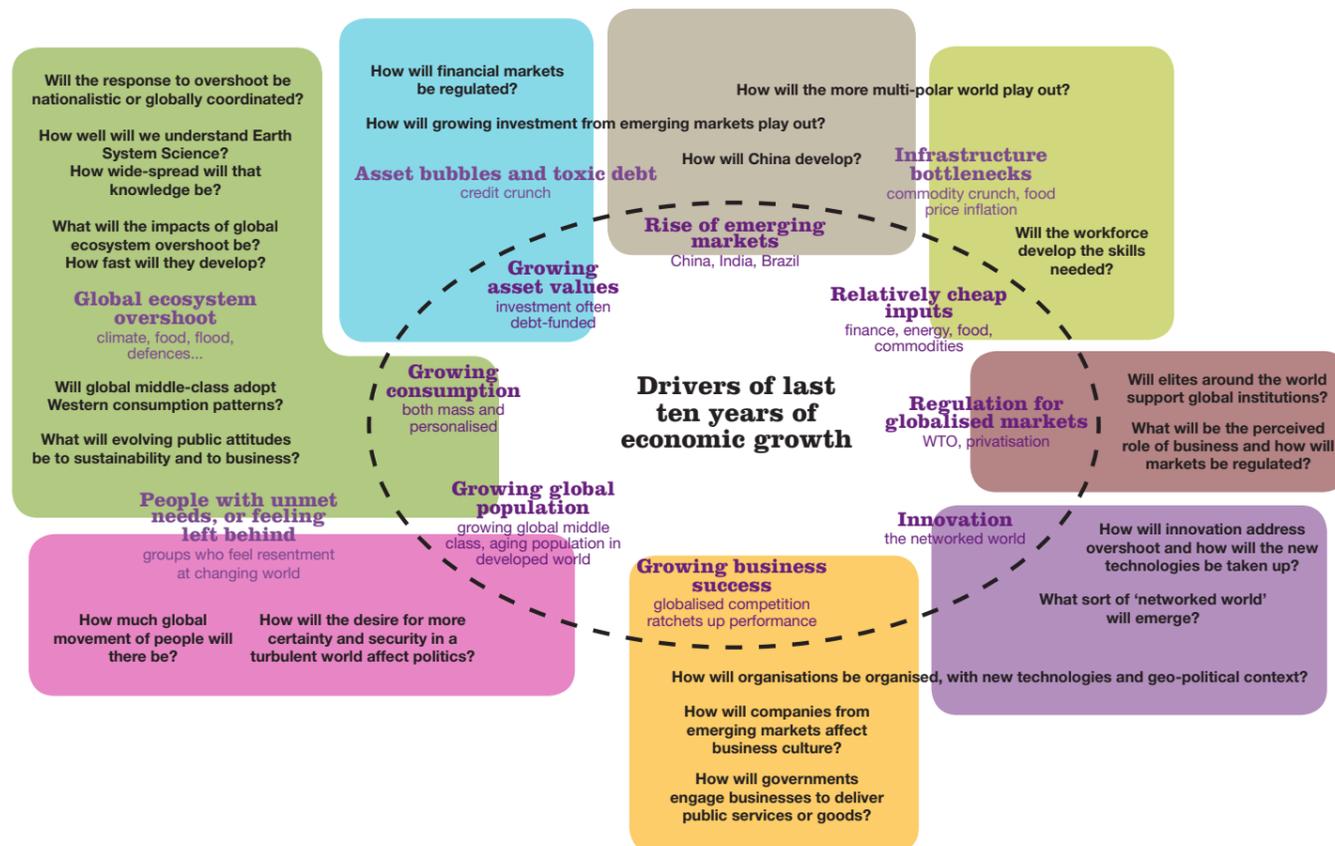
Companies are wrestling with questions like: How do you make decisions involving trade-offs? How can you find a business case for sustainability? Where is the sweet spot of profit and sustainability? What structures are needed to deliver sustainability? Some companies are just beginners, others are long-term pioneers. There is a growing market for giving advice and new qualifications that signal industry professionalisation.

the next ten years

the uncertainties

Contemplating a range of possible futures is an important part of all strategic thinking and in periods of volatility, organisations need to be prepared for dramatic upheaval. Now may not feel like the time for looking into the future so scenarios are a great way of creating minds prepared for uncertainty.

Scenarios outline plausible, internally consistent, possible futures and provide multiple perspectives that highlight a range of uncertainties. They are useful 'thinking tools' to encourage long-term decision making; to communicate aspirations or concerns; to build consensus; and ultimately to develop strategies that can be robust in any future. Using scenarios is one way of creating 'prepared minds' which have a systemic view and a ready response as circumstances change.



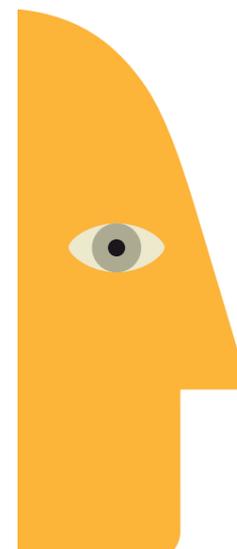
These scenarios have been created from our bank of hundreds of factors from previous 'futures' projects (and subsequent reports) such as the future of climate change (see Climate Futures), the UK retail sector (see Retail Futures), nanotechnology (see Nanologue) and ICT and sustainable development (see Digital Europe). The factors were augmented through desk research and a series of joint workshops between Capgemini and Forum for the Future.

Factors were clustered and prioritised, identifying high impact or highly uncertain factors that could push the system to different states that would help us answer the question: How will the business and sustainability agenda develop over the next ten years?

In its current form sustainability has come to be an umbrella term that covers a vast number of different issues relating to 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'. When generating these scenarios we used the Forum for the Future notion of sustainability, which enables all people to realise their potential and improve their quality of life in ways that simultaneously protect and enhance the Earth's life support systems. Hence we have retained width by including social, economic and environmental considerations.

With this in mind, we created a 'better-than-expected' scenario (Scenario A: [global interest](#)), a 'business-as-usual' scenario (Scenario B: [national interest](#)) and two scenarios very different from the *status quo* (Scenario C: [patched-up globalisation](#) and Scenario D: [me and mine,online](#)).

The scenario worlds are not predictions. The real future will incorporate different aspects of each scenario, and more besides. By highlighting how the business and sustainability agenda might become distorted, we hope to create an imaginative engagement with what is possible, and to generate commitment to real actions now.



scenario A

the global interest

Environmental overshoot

- The world remains in serious overshoot – natural resources are being used up faster than they can be replenished – but there are signs that the rate of loss may be stabilising.
- Action on climate change has slowed the rate of increase of carbon emissions to almost zero.
- High-profile collapse of Mediterranean and Pacific blue-fin tuna stocks have decimated high-earning sections of the fishing industry and shocked governments into stricter catch quotas for other stocks.

Consumers

- Global middle class per capita consumption levels are down compared to 2008.
- Aversion to debt and lower disposable incomes contributed to growth of 'smart services' reducing ownership cost (e.g. car clubs).
- 'Green' marketing messages are less effective as consumers assume regulation ensures 'sustainable enough' corporate behaviour. Businesses caught 'cheating' are punished.
- Emerging economies learn lessons from relative decline of the US, with local values and 'smart' consumption trumping individualism and conspicuous consumption.

Meeting world population needs

- Low cost holistic farming techniques increase food yields in Africa and stabilise top-soil loss.
- Millennium Development Goals costed at less than the consequences of inaction and so well-supported.
- Knock-on positive effects starting to emerge: decreasing inequality, 'leap-frogging' in sub-Saharan Africa and South Asia and falling population growth.

Finance

- Finance regarded as a utility that is essential for business and infrastructure investment and the creation of value.
- Banking separated from speculation in most countries, with new and exotic financial instruments confined to the new financial hub of Dubai.
- The 'universal investor' is on the rise, who takes a systems view of their portfolio. Externalities from investments are scrutinised for their effect on other businesses.
- Return to safe-but-dull lending practices with less easy credit and emphasis on saving.
- Innovation explosion in peer-to-peer lending brokered by online enterprises, with booming microfinance.

Overview

This is a networked world with many powerful countries and a strong international ethic founded on global agreements. Collaboration is the general response to uncertainty, although resource depletion creates friction at the international level and nations are acutely aware of their dependence on each other. Physical distance matters more than in 2008 and freight miles have decreased. However, sophisticated networks enable communication and coordination, and levels of global trading remain high, particularly in non-physical 'products' such as design and research skills.

From 2008 to 2018

The interconnectedness of the world was made shockingly clear by the financial crisis of 2008, when only coordinated global action averted complete meltdown. Parallels were drawn with the even greater systemic risks posed by looming ecosystem collapse, climate change and resource crunches. Sustained pressure from business and civil society led to strong international frameworks to tackle global problems, such as the Green New Deal proposed by UNEP. The recession accelerated a switch from products to lower-cost services in rich nations and there was support for government spending on low-carbon infrastructure. China began promoting 'high-efficiency intelligent growth' and positioned itself as the world's biggest exporter of renewable technology.

Manufacturing

- Limited resources and closed-loop production systems necessitate product development with end-of-life and next life in mind.
- Producers have responsibility for disassembly and recycling, components are designed for two or three use cycles before final 'downcycle'.
- Basic primary manufacture still mostly based in China and South Asia, with regional finishing, disassembly, reassembly and reuse.

International relations

- Binding post-Kyoto agreement amongst all major powers.
- China is strong. The US and EU are in relative decline, but still wield economic power.
- South Asian, African and South American nations benefit from global climate change agreement and experiment with 'leap-frog' low-carbon models of development.
- Attempts to tackle serious ecosystem issues at regional level held up by nationalistic protection of key resources such as water and oil.



Response to the end of cheap inputs

- Rising prices and regulation encourages resource productivity, with cradle-to-cradle and closed-loop production systems mainstream – products are designed with their end-of-life and reuse in mind.
- Increasing nationalistic protection of key resources, as energy is expensive and efficiency is highly prized.

Construction & infrastructure development

- Strong demand for new infrastructure in emerging economies – roads, rail, water and energy distribution networks.
- Some countries 'leap-frog' over energy-intensive traditional infrastructures with distributed systems for energy generation and water collection and supply.
- Most industrialised nations increase efficiency through retro-fitting existing buildings.
- Building regulations help deliver post-Kyoto energy and materials targets.

Transport

- Shipping and rail are mainstays of global trade. In mature economies, road freight is restricted to 'the last mile' and electric vehicles are competitive.
- Just-in-time business models have had to adapt to slower, more regionalised systems.
- Aviation is expensive and less popular for freight and individuals.
- Public transport and shared-ownership systems such as car clubs increasing steadily.

Regulation & the role of government

- Greater acceptance of governments shaping market to avoid catastrophic collapse and provide the conditions for the strengths of business increasingly harnessed to deliver public goods and services.
- Regional trading blocs such as the EU, ASEAN and NAFTA create dominant market frameworks with regulation to incentivise 'enlightened self-interest' and conserve resources for each region.
- Regulators enforce post-Kyoto global agreement locally in a *de facto* globalisation of environmental regulation.
- Regulators are outcome-orientated and incentivise businesses to develop appropriate new products and technologies (e.g. tighter producer responsibility drives closed-loop production methods).
- Public sector procurement budgets in mature economies sometimes used to pump-prime new markets.

ICT

- ICT binds global business communities and facilitates efficient use of resources.
- Smart services rely on ultra-convenient, accessible booking systems, and manufacturers use electronic trading exchanges to match their waste streams to other companies' resource needs.
- 'Smart' grids start to allow a push-and-pull energy network.
- All businesses depend on their ability to manipulate, exchange and process vast quantities of information.
- Cloud computing (where people use services out there on the internet, rather than software in their device) has gone mainstream, from Accra to Auckland. High-tech upgrades reserved for server farms and individuals access the web via simple handheld, hard-wearing devices.

scenario A

the global interest

businesses are either global, niche or social enterprises

Globalised competition has favoured global businesses with economies of scale or small niche companies with economies of scope. Regional players have been squeezed out.

Large businesses are 'globally integrated enterprises' with a sense of global citizenship, but limited ties to any particular place. They try to maximise shareholder value over years rather than quarters.

Niche companies succeed through fast innovation cycles and relationships with large players, who take their innovations global. These entrepreneurs have many different ownership models: family, private equity, within a loose conglomerate and cooperatives. While they are profit-driven, the successful ones motivate their staff through a shared sense of purpose – being the most creative or revolutionising a particular market-place – embedded in their ethos.

There is a growing cohort of global social enterprises, whose business models generate positive social or environmental outcomes and cover their costs. Governments and global agencies like the UN use them to deliver public services such as disaster relief or helping long-term unemployed people into work. Some global social enterprises are effectively an alliance of global businesses, governments and NGOs addressing 'collective-action' problems like water quality and availability in a cross-border river basin.

'sustainability' for business means cooperating to create a global system of prosperity

Acknowledging their need for a thriving global society of customers, suppliers and staff, companies now take active responsibility for shaping a global system that delivers long-term certainty and prosperity for all.

They cooperate to provide political cover for government and civil society action on 'systemic risk' issues, principally climate change, and to share the costs of a shared infrastructure.

There is opportunity – and dynamic competition – around products and services that meet people's or organisations' needs, especially maximising value through material or energy efficiency. These products and services have reduced environmental impacts but are sold on the basis of value and quality.

As action on climate change becomes mainstream, companies compete for the brand benefits of leading on 'undiscovered' social problems, such as poverty or human rights.

'sustainability' breaks out of the CSR department and becomes embedded in the business

Few large companies have a CSR department or a 'sustainability strategy' any more. Business strategies address the key sustainability issues driving the external context, and cascade into function or business-unit strategies. Sustainability specifics are embedded in the particular parts of a business that drive its success e.g. marketing, innovation or supply chain.

Material sustainability issues are embedded into strategy planning, risk management, and reporting at head office level. Business-critical issues such as climate change adaptation or security of supply are handled across functions, and even across companies, particularly along supply chains. The benefits of securing success and survival are shared. Within a sector the cooperation is tempered by competitive demands.

business case highlights dependence of business on thriving society

"Action on climate change and other issues materially affecting our business is a no-brainer. Playing our part in a global system with a future means generating returns for our investors over the long-term and opportunities for competitive advantage now."

investors take long-term view and favour resource productivity

Investors avoid investing in assets that heighten the risk of systemic collapse. There is more conscious effort to match the long-term liabilities of pension funds with long-term investment approaches. Mainstream investors consider how the externalities from one asset might reduce the performance of another. Money flows into companies with technologies or business models that drive resource productivity.

civil society and stakeholders offer external insights and delivery potential

Companies engage with stakeholders to learn about their external operating context, and so set an appropriate business strategy. Civil society works with business to create solutions, sometimes in the form of social enterprises.

implication for today's business: the global interest scenario may seem restrictive but it's the best on offer and should be acted on now

1. Large companies should start shaping global society towards this scenario.

By making business actively responsible for tackling systemic challenges, the **global interest** scenario restricts business action compared to today. However, tomorrow will not be like today, and this scenario offers the best outcomes for

today's large companies, who are rewarded for addressing material sustainability issues. There is still a role for large organisations with global reach, and the wider context provides certainty to invest for returns.

2. Normalise sustainability to gain competitive advantage.

Just like the quality movement, which started life in a single manufacturing department and is now everyone's responsibility, the **global interest** scenario sees the business-critical parts of sustainability embedded into the fabric of the company. Successful companies equip their people to make judgements on what sustainability really means for the business, and then create the management approach to deliver.

3. Prioritise innovation for resource productivity and services.

In this scenario, many businesses have successfully decoupled resource consumption from growth - by creating closed-loop production processes or by shifting to innovative service models. This cushions business and society from volatile prices and creates a more resilient global economy. Today's global companies need to start working out how to do this now, before resource pressures bite too deeply. Don't wait for legislation is the message – the benefits of acting early are strong; lessen your risks of being exposed to resource availability fluctuations, particularly in water, fuel and key minerals.

4. Create the alliances to shape conditions for your success.

Building the trust that makes cooperation successful takes time, particularly when working with new partners who may also be competitors. Start now to form networks with other businesses and civil society groups who share an interest in the resources you use and the communities you work within.

scenario B

the national interest

Environmental overshoot

- Rate of overshoot increasing, with some fish stocks collapsed.
- Virgin resource use still cheaper and easier, as efforts to embed resource conservation in product design held up by poor, uncoordinated legislation.
- Hope for mitigating climate change rests almost entirely with emerging carbon capture and storage (CCS) technology.
- Geoengineering an increasingly serious option.

Consumers

- Rich nations' consumers fearful about direction world is heading in, and want reassurance.
- Patriotic marketing campaigns reinforce desire to buy local goods and food to support local communities and ways of life.
- Middle class consumers in emerging nations still motivated by consumerist ideal, with little patience for 'sustainability'.
- Strong desire to develop at all costs, and rich nations blamed for state of the world.

Meeting world population needs

- Inequality increasing and extreme poverty exacerbated by primary resource depletion such as severe water shortages and exhausted soil.
- Conflicts over resources increasing throughout global South, with sharp rise in refugees and economic migrants.

Finance

- Many financial sectors part-nationalised indefinitely.
- High levels of government intervention is needed to deliver political and national aims.

Overview

This is a trading world where many powerful countries compete in what they think is a zero-sum game. Hoarding resources is the common response to uncertainty, and the global elite is shutting itself off from the rest of the world. Many countries have part-nationalised key sectors such as energy, finance and shipping. Sovereign wealth funds are largely investing in their own countries, or in strategic assets for future exclusive use. The business landscape is characterised by large numbers of 'national champions' that dominate at the regional level.

From 2008 to 2018

The failure of the 2009 Copenhagen climate negotiations was a disaster, with emerging nations embracing coal after rich nations failed to agree on the terms and cost of energy technology transfer. The recession put paid to the Millennium Development Goals. Companies retreated to their national borders and capped immigration, and the EU and US adopted a protectionist stance. The oil crunch in 2013 led to further nationalisation as transport sectors reeled under high fuel prices. Ireland and Italy left the Euro as their economies fell too far out of alignment, and Spain may be next. Everyone is concerned with the direction the world is headed in.

Manufacturing

- Most manufacturers pressured into bringing operations back to home countries, with resurgence of manufacturing in mature economies.
- Access to resources is an ongoing problem, and many businesses with 'symbiotic' needs (e.g. the waste of one is an input for another) are starting to band together to form symbiotic conglomerates.
- Businesses develop ways of dealing with increasing levels of workforce racial and ethnic tensions.

International relations

- Physical distance increasing in importance, and despite sophisticated 'virtual' contacts, the 'trust gap' is widening between regions.
- No effective global framework tackling climate change or resource issues.
- Closed bilateral agreements and strategic alliances have replaced open multilateral trade agreements.
- Eurozone under pressure. Stronger countries dominate shared resources such as water, sparking resentment in arid areas such as the Middle East.
- Powerful countries such as Russia, China and Saudi Arabia buy exclusive access rights to minerals, timber and food crops.
- Weaker nations forced to go without.

Response to the end of cheap inputs

- Coal is the fuel of choice to provide vast quantities of energy for emerging economies' growth.
- Oil is expensive; the US has turned to coal-to-liquid technology and ethanol to supplement its liquid fuel reserves.
- The EU is building a new generation of fast-breeder nuclear reactors to minimise dependence on Russian gas.
- Rich nations employ cheap migrant workers in factories, restricting their rights and creating labour camps in response to local pressure.

Construction & infrastructure development

- Centralised, statist approach to most infrastructure projects.
- Coal and nuclear power plants fast-tracked to fill energy gaps and reduce dependence on other nations.
- Public funds in rich nations poured into carbon capture and storage (CCS) research to counter inaction on climate change.

Transport

- Transport sectors progressively weakened by high, volatile energy prices over a long period.
- Essential carriers subject to state intervention for survival, with shipping under government control.
- Key rail and air carriers part-nationalised.

Regulation & the role of government

- Individual nations create their own, differing market frameworks to shore up particular national sectors and gain preferential access to resources.
- Mish-mash of regulatory approaches, with environmental regulation determined at a national level.
- Most regulators control use of diminishing national resources to maximise national income, with heavy penalties for wasteful use of key resources.



ICT

- Flexibility essential for survival in world of uncertain supply chains are unreliable and constantly changing and high levels of uncoordinated regulation add extra complexity.
- Many large companies have two or three different strategies in play at once. All business is highly reliant on ICT to manage their operations and give them flexibility.
- Trust levels are low, so closed, proprietary systems are preferred – this unfortunately adds an extra barrier of non-portability across different systems and diminishes the capacity of businesses to work together.

scenario B

the national interest

businesses are regional or national, not global

Businesses are tasked with serving the national or regional interest. There are still a few global businesses, but many are broken up into regional groups along geopolitical lines. Global businesses create national divisions, or franchises, to appear as local as possible.

Individual companies become national champions in strategic sectors like defence, extraction, energy and steel. There is talk of a renewed 'military-industrial complex'. 'Progressive' companies who see business as having a wider role are rare.

'sustainability' for business means nationalism

Every business is primarily responsible to its nation or region. Shareholders come second, and adhering to codes like the UN Declaration of Human Rights comes a distant third.

Sustainability is about sustaining the success of the home region. Environmental priorities include climate change adaptation and resource productivity. High material prices and strict producer responsibility regulations mean companies are keen to get back end-of-life materials. The rise of patriotic 'localism' does have environmental benefits through, for instance, reduced transport emissions. There is a greater connection between people and their land.

Progressive companies look after their employees by building company towns, and apprentice schemes and skills development

are extended to marginalised groups such as prisoners. Companies employ local people first. Where migrant labour is reluctantly required, companies must run camps to ensure no 'leakage'.

International poverty and human rights are not on the corporate agenda. However certain companies are experiencing the real effects of environmental overshoot and can see a lot worse to come. They are questioning whether a nationalistic approach can address the scale and scope of the issues they face. These companies are joining together into global groups pushing for a global response.

'sustainability' is a communications and HR function

The external affairs function becomes critical to business success, as companies vie to shape government agendas to benefit their industry or company. Marketing plays a strong role in making sure opinion formers view the company as vital to the region.

The HR department is forced to focus on developing the skills of its staff, who are drawn from a national, rather than a global, labour pool. Innovation is focused on resource productivity, creating closed-loops for materials and climate change adaptation.

business case is the nation's case

"What's good for our region is good for our company, and vice versa. We get more value from using less because resource costs are

so high; any environmental benefits are incidental. Going the extra mile for our staff – skills development, employment rights, out-of-work amenities – creates the loyalty and motivation we need to keep going."

investors follow national government favourites

Investors have a more limited choice, as capital markets become more regional. They look for companies with close ties to government and success in winning public sector contracts.

civil society and stakeholders say local

The loudest civil society voices campaign to protect their country or region. They pressurise companies to prove they really have bought local. Secret outsourcing abroad creates a major scandal. The voices who warn about accelerating global problems – especially climate change – are seen as unpatriotic and idealistic.

implications for today's business: the national interest scenario is in no-one's interest

Businesses must act to avoid this scenario. Not only is it disastrous for poor people and the planet, it is a bad scenario for business too. Environmental overshoot ignores national boundaries, and needs global cooperation to tackle it. Ignoring the global for the local will only lead to more challenging times in the future.

scenario C

patched-up globalisation

Environmental overshoot

- Low carbon energy begins to reduce carbon emissions.
- Pressing resource and ecosystem challenges such as deforestation neglected and continue to worsen.
- Water crunch imminent, despite expansion of desalination technology.
- Fish stocks teeter on brink and wholesale collapse of ocean ecosystems expected within 20 years without strong global agreement.

Consumers

- Consumers choose low carbon energy sources on cost and convenience, not sustainability.
- Energy is expensive, so cars and household goods highly efficient.
- In rich nations, smart meters mainstream and car ownership falling in urban areas.
- Africa and South Asia 'bottom of pyramid' markets expanding rapidly.
- Consumers in emerging markets often double as entrepreneurs, hungry for goods and services such as microfinance.

Meeting world population needs

- Push for low carbon infrastructure creates millions of new jobs.
- Expansion of energy supply and communications networks across Africa and South Asia enables hundreds of millions of new entrepreneurs.
- Inequality slowly decreasing, with fewer people living in extreme poverty.
- Food security challenging and getting worse.
- Highly volatile global food prices as more arable land shifts to biofuels.
- Governments start hoarding reserves as frequent spikes in prices of staples cause unrest across the global south.

Finance

- Explosion of new systems and products meeting needs of emerging nations.
- Costs of business inexorably increasing across the world as resources tighten, and innovative financial solutions are demanded to offset them and spread risk.
- Mature carbon trading market, with carbon credits boosting economies of early low-carbon movers e.g. Sweden and Kenya.

Overview

This world operates a patched-up version of globalisation, despite increasing energy and resource pressures and a China in crisis. African and South Asian nations are the new focus of investment as China struggles to cope with tightening environmental limits, energy and resource shortages and internal political demands. A binding global agreement is tackling climate change, and most emerging nations are making use of technology transfer deals to follow alternative models of development that prioritise low carbon infrastructure. Biofuels are booming and every possible method of low carbon energy generation is being explored.

From 2008 to 2018

World recession hit Chinese exports, and China's competitive advantage was further eroded by higher wage demands, spiralling costs, collapsing ecosystem services, and the rising cost of high-carbon centralised infrastructure. China turned inward, spending its vast accumulated trade surplus on dealing with these challenges. The US seized the opportunity to invest in other countries and create alternatives to the Chinese Century. The global low carbon energy gap proved a massive investment opportunity, the way out of recession and the main obstacle to clear for development. Algal biofuels took off as an oil crunch in 2013 sent fuel prices soaring.

Manufacturing

- Most manufacturers investing in Africa and South Asia, attracted by cheap labour and proximity to key raw materials.
- They bring distributed infrastructure to set up their operations and often extend services such as power and water provision to local communities, in tacit exchange for a 'licence to operate'.
- However, businesses invested heavily in China find it difficult to leave and are forced to slim down operations and ride it out.

International relations

- International relations structured around energy and development.
- Binding post-Kyoto climate change agreement weighted heavily towards energy technology transfers.
- Energy revolution in Africa and South Asia with controversial transfers such as 'micro-nuclear' tamper-proof reactors.
- EU pursuing 'green growth' strategy partnering 'Southern Mediterranean' North Africa countries to generate electricity and desalinated water using concentrated solar power.

Response to the end of cheap inputs

- Energy dominates, with any land-rich sub-Saharan countries – such as Uganda and Tanzania – growing and exporting large amounts of biofuel crops such as jatropha.
- Energy and infrastructural bottlenecks attract significant investment.
- Quick-to-install distributed power generation such as solar power in high demand.
- Sovereign wealth funds investing in developing country infrastructure e.g. roads, ICT, electricity grids as quid pro quo for resource extraction and improved economic growth.

Construction & infrastructure development

- Low carbon focus for infrastructure development.
- US investing heavily to deal with legacy issues.
- EU nations retrofitting old building stock.
- Construction booming in Africa and South Asia, focused on small to mid-scale, less resource-intensive buildings and infrastructure.

Transport

- Patchwork, ad-hoc solutions, particularly in emerging nations striving for personal mobility by any means possible.
- Cars and taxis powered by locally grown biofuel prevalent across Africa, South Asia and South America.
- Japan transitioned to plug-in hybrid model supported by a smart grid and extremely efficient public transport.
- Most mature economies attempting to follow suit, with varying degrees of success.

Regulation & the role of government

- Strong market-led focus on energy and carbon.
- State-led solutions discredited since China failed to stay within environmental limits.
- Minimal national regulation.
- Global trade norms delivering global targets on climate change, policed internationally by reformed WTO.



scenario C

patched-up globalisation

businesses are multinational not global, and from 2008's emerging markets

There are international companies – many with their roots in 2008's emerging markets such as Brazil and India – and niche players. There are also more companies successful within a regional context, protected by their home governments and in return contributing to priorities like poverty alleviation.

The largest companies are multinationals, rather than 'globally integrated enterprises'. Maximising shareholder value, each region has its own head office to respond to different cultures around the world. Proud of their achievements, these companies still retain a sense of their home country identity.

'sustainability' means different things in different parts of the world

In today's emerging markets, it means maintaining a licence to operate by doing what's required to help the economy take off. Companies help deliver on the Millennium Development Goals and contribute directly to health and education services and local transport and communications infrastructure, in effect the local state. Companies introduce resource-efficient techniques and technologies and are expected to buy from and sell to the poorest people at what was called the 'bottom of the pyramid'.

Across the world, energy supply and climate change remain key challenges. Companies with technologies that

maximise economic value per unit of energy, or per unit of greenhouse gases emitted, prosper.

'sustainability' translates into local development activities

Large companies have a head office department that coordinates the company's development, poverty alleviation and 'bottom of the pyramid' work. Head office shares best practice and sets minimum performance levels.

However, there is a strong onus on companies to tailor their activities to the local situation to get the best returns. In practice, the regional head offices are in charge of sustainability, working closely with the core business to understand and implement contributions to the particular development goals of a country. Philanthropic donations also help keep governments and communities on-side.

business case meets needs of the poor as new customers

"Our business model is to profit by meeting the needs of the poor. All the seemingly extra stuff – HIV treatments or paying for road building – means the poor have more money to spend with us, and keeps the local government happy."

investors take a long term view of national sustainability

Investors use their long-term appraisal of the sustainability of countries to drive

corporate investment decisions. Will the countries in which companies are operating continue to grow? Or will development obstacles or environmental limits slow down the country's growth, and so hold back the company?

civil society and stakeholders provide local development insights

Companies use stakeholders to understand the development priorities in the countries they operate in.

implications for today's business: the patched-up globalisation scenario requires a foothold in many countries and in-depth local knowledge

1. Don't bet the company on one country.

In this scenario, China stalls. This may run counter to received wisdom but there are signals in 2008 that make this plausible. And if it does, companies with commitments to sell in that market or source from it will face difficulties. Do you have a reliance on China or any other country which could come unstuck?

2. Have an approach that is regionally sensitive.

Today, many companies have global supply chains, and the largest companies are becoming 'globally integrated enterprises' to reap the benefits of a globalised world. Here globalisation changes direction to have a more regional feel. Companies would need to adapt their global strategies to be regionally sensitive.

scenario D

me and mine, online

Environmental overshoot

- Global agreements appear unenforceable, with cynicism about governments' ability to create lasting change.
- But networked international coalitions of NGOs, some businesses and millions of individuals create momentum around flagship issues like climate change, deforestation and over-fishing.
- Millions of volunteer enforcers starting to create positive change.

Consumers

- Experience prioritised over ownership in rich nations.
- Satisfaction from: quickly following trends; services (rather than products); and, fractional ownership.
- Emerging nation consumers consume and produce digital and physical products produced in local low cost workshops.
- Resource pressures embed strong culture of reuse, repair and recycling of physical components to keep costs down.
- People everywhere rely on the opinions of trusted, familiar others. 'Word-of-web' expressed in ratings systems and testimonials.

Meeting world population needs

- Inequality is reducing, with increased education and business opportunity for the developing world.
- Food security and ageism still serious issues.

Finance

- Peer-to-peer lending services and microfinance have exploded across the world.
- New enterprises seize market share and existing brands re-invent themselves.

Overview

In 2018, the world is made up of numerous powerful centres, only some of whom are countries, all interacting through intense networks enabling fast-paced change. Individuals and companies depend on communication technologies to create the alliances and secure the resources they need to thrive. The distinction between 'virtual' and 'real' worlds is blurred, with people moving effortlessly between both for work, rest and play. Web-enabled global communities command more loyalty than nation states for a significant fraction of the world's population. Some countries have tried to re-assert control over people, but globally the genie is out of the bottle. New self-organising superstructures are starting to emerge, replacing the 'company' organisational form we are familiar with today, as ICT enables collaborative groups to come together temporarily to create a batch of clothing, an architectural design, a run of washing machines. These groups act more like hubs which use their brands to coordinate relationships and instil trust. Some of the relationships are long-lasting, but most interactions are temporary and short-lived.

From 2008 to 2018

The financial crisis in 2008 drained public trust in large institutions that has not been re-established. Institutions are no longer trusted to make big decisions like building nuclear power stations. Digital access is in everyone's reach, through projects like Google's satellite broadband connecting three billion people and One Laptop per Child. Most people are online and the accessible pool of talent and creativity has grown considerably. Developing countries invested heavily in high-speed internet access to connect rural communities to the global economy and reduce the impetus for emigration to already overpopulated cities.

Manufacturing

- New forms of distributed manufacturing emerging – networked groups quickly design and produce customised products by combining and modifying components from giant open source design libraries.
- Economies of scale diminished by computer numerical controlled (CNC) machining and 3D printing which produce one-offs at similar unit-cost to larger runs.
- Design and personalisation services booming with ad-hoc local CNC and 'print-shops' churning out millions of 'good enough' products across developing world.
- Recycling and scavenging teams keep costs down through components and materials re-use.
- Strong shift to services in developed world, with upsurge in customised products produced rapidly in small batches by networked teams close to the market.
- Traditional manufacturers who can't adapt lose market share.
- Intellectual property is hard to protect.
- Smart companies adapting to open business models and harnessing not fighting creative power of hackers.

International relations

- Governments finding it difficult to adjust.
- Despite intense networking and interdependence, credibility gap makes most intergovernmental cooperation seem hollow.



Response to the end of cheap inputs

- Raw materials expensive, so reused components reduce costs in new physical products.
- Repair services back in demand.
- Online services are cheap and popular to cut down on physical resource use.
- Mass production pointless since one-offs now have similar unit costs to larger runs.

Construction & infrastructure development

- Raw materials and fuel expensive, conserving and reusing building materials a financial imperative for construction companies.
- Energy efficiency needs drive strong retro-fitting industry in mature economies.
- Widespread distrust of centralised politics and traditional institutions delays many large physical infrastructure projects.
- Distributed energy systems and local solutions fill gaps in growing number of areas.

Transport

- Expensive and crowded as high fuel prices bite.
- Freight companies optimise every container-load and shave margins to stay in business.
- Governments accused of failing to plan ahead.

Regulation & the role of government

- Regulation at all levels is running to catch up with this world, as organised crime and pirates have been empowered along with everyone else.
- Networked, ad-hoc entities evade legislation and getting clear picture is hard.
- Environmental regulators now employ physical sensors which broadcast data online. Networked groups of NGOs and local citizens sift data to pinpoint and report illegal activity.
- Black market fights back by destroying or hacking sensors threatening lucrative activities eg. illegal logging and shark-finning.

ICT

- Developing world access exploded early, with rapid innovation in branded hubs for business, microfinance, long-distance education and entertainment.
- Enterprises offering free creative and participation tools thrive.
- Cloud computing lowered hardware requirements with mobile phones the default devices for web access.
- In mature economies, the 'supergrid' and emerging 'web of things' starting to offer augmented reality: real-time audio-visual interface between web and physical world.
- Virtual worlds are mainstream.
- Most emerging world citizens are under 30 and highly positive about opportunities of internet.
- But generational backlash of older populations resistant to highly networked world.

scenario D

me and mine, online

businesses are coordinating hubs or delivery partners in ultra-flexible networks, not companies as we understand them today

There is still profit-seeking activity such as trading, manufacturing and services, but the organisational forms it takes are very different to 2008. The networked world makes it easy to assemble the resources needed for a particular, often temporary, project. Large, monolithic organisations are rare, and 2008 companies built around a centralised purpose with a shared culture and history find it hard to adapt.

Hubs coordinate profit-seeking activity by outsourcing everything except the coordination of many different partners, often SMEs, who in turn may sub-contract. These profit centres rely on trust, relationships and their coordinating skills to get things done. Delivery partners perform what is effectively piece-work, and have relationships with many different hubs. Brands are very important to the hubs as the way to engage and coordinate activity across many relationships.

'sustainability' for business means protecting the trust and relationships central to success

The hubs are highly sensitive to the smallest shifts in corporate perception which could snowball and damage their reputation. They ask their partners to look out for these shifts, and reciprocate. Hubs make proactive information disclosure, both pre-empting challenging corporate questions and

manipulating the lines of questioning. On the environment-side, resource availability and climate change are important issues. On the social side, fair treatment of their partners (who might otherwise leave) and privacy are critical issues.

what is a generic approach to 'sustainability' in this scenario?

Many reputation strategies are 'open-source,' meaning anyone can see what their strategy is and copy it for themselves.

Consumers are pursuing satisfaction from non-consumption. Thus, profit centres are furiously innovating the technologies and the business models that do deliver customer satisfaction from less environmental impact.

the business case highlights interdependence and integrity

"Without our customers or production partners we are nothing. We must make sure they have no reason to question our integrity. With resource inputs so expensive, our service offerings must satisfy while using the minimum materials and energy."

how do investors engage with 'sustainability'?

The investment community is different. There are fewer large pension funds or other institutions. Instead there is a much closer link between an individual and their investments.

Investors can access a great deal of transparency on how the hubs create profit.

They use crowd-sourcing and other ways of grasping distributed knowledge to make investment decisions. There are micro stock exchanges which give many small investors the opportunity to invest small amounts in small companies.

what is the role of civil society and stakeholders?

Campaigners are powerful, if they can regularly motivate large numbers of people. They are regularly consulted by hubs who want to avoid problems in the future.

implications for business today: be prepared for the possibility of disruptive change to organisational models

This scenario may seem radical, but many seeds of this world are present today. Technology firms use social networking sites like LinkedIn to assemble project teams. A company like Nike has outsourced its manufacturing, with the corporate centre coordinating the supply chain and brand. Google is a trusted hub for finding information (its search engine) and then manipulating it (all the associated applications). Amazon has become a trusted hub for selling and purchasing physical items like books. Proctor and Gamble uses a network of outsiders for its innovation. An Italian company (Arudino) is using open-source manufacturing – giving away their designs and profiting from for high-value services.

1. Prepare for open source hardware.

Intellectual property is hard to protect in this scenario, as hardware is by definition open –

anyone can take a product apart and figure out how it works. What happened to the music industry over the last ten years could happen to you in the next ten. The smart companies in this world have adjusted to this reality and are making use of 'unofficial' improvements and modifications rather than fighting the creativity of their customers.

2. Prepare for radical transparency

There is a transparency paradox at the heart of this scenario – the mushrooming of information and the sheer pace of change makes it hard to get a clear picture of what is going on, yet most institutions are exposed to intense scrutiny and are forced to be transparent whether they want to be or not. Prepare to be much more transparent.

3. Look to the margins to find disruptive innovation

Developing countries are a massive source of innovation in this world. Yet most of today's businesses struggle to understand the needs of millions of potential customers and associates. Today's businesses need to look beyond easily identifiable 'core' stakeholders, and find ways of engaging peripheral stakeholders such as the rural poor in emerging economies. Disruptive innovation often emerges at the margins.

what to do today, for tomorrow

what it means for business

The business approach to sustainability is different in each scenario, because the practical meaning of sustainability is different. However, in every scenario, sustainability issues intensify over the next ten years.

One common aspect is how sustainability considerations intensify in the supply chain. Businesses will need to find ways of meeting customer needs and regulators' expectations with a supply chain that is feeling the effects of resource constraints and changes to globalisation. This is a more important factor than consumer demand for sustainable products. Interestingly the supply chain pressures remain as we move into a recession, even if consumer demand for sustainable products declines.

The variety of possible futures mean businesses must act now to achieve the best future and prepare for radical change.

Act now to achieve the best future

In an interconnected world, it's sometimes hard to see who should act first. The scenarios show it is in business's own interest to take the first step. Waiting for governments to regulate for all risks will be too late and too costly. Businesses have the global reach and longer-term perspective that elected governments often lack. Governments need to know that their industries' engines of economic success will support the right sort of regulation. Customers

need new ways of satisfying their needs. Businesses need a global society that is stable and prosperous and an environment that provides the materials and services to support them. This positive interdependence is best reflected in the **global interest** scenario and, to a lesser extent, the **patched-up globalisation** scenario. However, the **national interest** and **me and mine, online** scenarios are not worlds in which global companies thrive.

The exciting possibility of the **global interest** scenario is one in which companies are rewarded for being sustainability leaders. There is a larger overlap between the business case for an individual company and the societal case for sustainable development. We can construct a world where there are more win-win opportunities. Businesses who lead on sustainability gain advantage from 'no regrets' actions and at the same time create the space for others to act. Business leadership could end up protecting the liberal market system, even if it is more constrained than today. The alternative could be a scenario like the **national interest**, a future of big dominating government and protectionism.

Next steps

Look for opportunities that both generate immediate returns and are the first step to creating a positive future. As we head into recession, the most obvious actions are on improving energy and resource efficiency within your company, your supply chains and with customers. Longer-term there will be

opportunities in maximising the economic value from a unit of material or energy ('resource productivity'). The best approach may be to engage with entrepreneurs who have a technology or business model that can profit from creating radical change.

Create alliances with others – investors, customers, suppliers, staff, competitors, and regulators – to identify where the existing system is preventing a sustainable outcome, and then find ways of creating change. In 2009 this will include lobbying for a global agreement on climate change to replace the Kyoto Protocol.

Other actions should include:

Support the right kind of globalisation, where there are global institutions, open and equitable trade with cultural exchange making global solutions to global problems possible.

Engage with institutional shareholders on sustainability.

Develop creative partnerships with other companies, civil society and government to deliver on a bigger part of the puzzle than one company can do alone.

prepare for radical change

No company in the world is currently prepared for the changes ahead. The four scenarios are plausible but very different. Whatever happens next, business-as-usual is not an option, even after an economic recovery. Our scenarios show that every aspect of business will change: the demand from customers; how goods or services are produced; the supply chain; the nature of competitive advantage; the way staff live their lives; and the regulatory context for business. Forum for the Future's experience working with some of the world's most forward-thinking businesses on sustainability is that while they can be proud of their achievements to date, even they are not ready for the future change required.

Sustainability is too important to be left to a single function or department. The entire company must be oriented around the challenge, from developing the business strategy to equipping front-line staff with the understanding and skills to take action.

Next steps

Gain competitive advantage by embedding sustainability into decision-making and operational delivery in the important business functions e.g. marketing, product innovation, procurement and finance. Sustainability is too important to be left to CSR departments:

- Identify new business opportunities where core competencies can be used today. Be aware that the main drivers in the scenarios are from the inputs a company uses – its financing, energy, raw materials and so on. Consumer demand for explicitly ‘ethical’ or ‘sustainable’ products or services is less important;
- Plan to exit high carbon technologies in response to climate change;
- Explore innovation opportunities for technologies or business models that improve resource productivity, especially on greenhouse gas emissions and in the physical infrastructure of cities and transport networks.

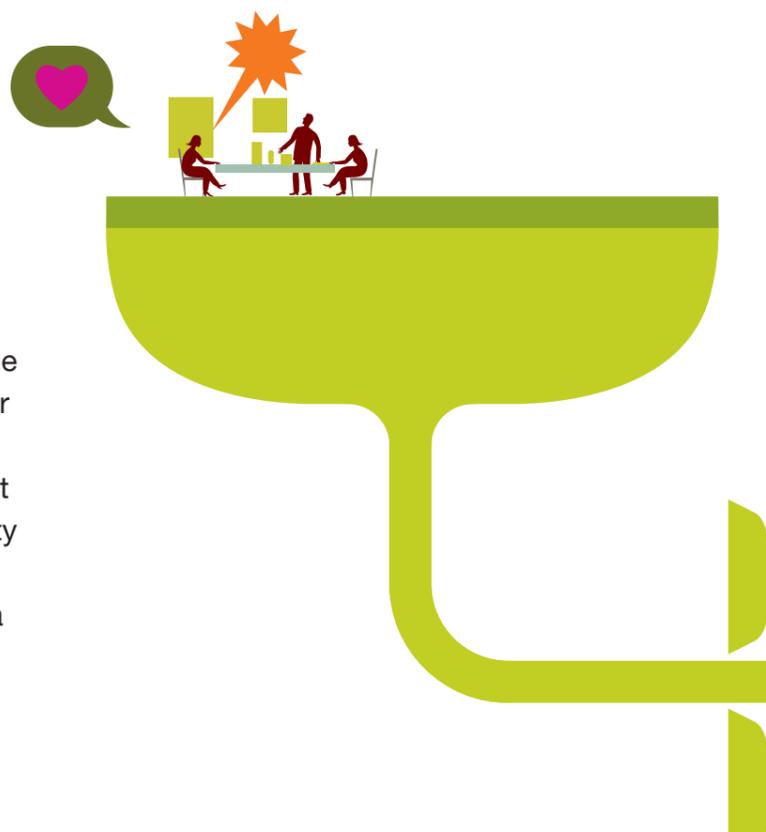
Be creative in exploring and rehearsing different future scenarios:

- Don’t bet on one version of the future. The world of 2018 will contain elements of our scenarios as well as things no-one has thought of yet. Long-term strategies must be flexible enough to deal with uncertainty and adaptable to a variety of plausible futures. Prepare for events such as China

stalling, the retreat of globalisation or open-source hardware;

- Prepare for increasing transparency, a feature in all the scenarios;
- Assess where your current business is vulnerable;
- Identify where new expertise is needed;
- Practice making decisions based on trade-offs.

Take a broad definition of the challenges and avoid reducing sustainability simply to climate change. Without a holistic view, decisions may lead to unexpectedly nasty consequences further down the road.



what it means for governments and regulators

The scenarios tell us that governments and regulators have a crucial role in shaping the future. At best, they can reduce the risk of catastrophic environmental collapse and create the conditions for a truly sustainable economy.

Reduce the risk of catastrophic collapse

One of the key factors pushing the positive outcomes of the **global interest** scenario is that governments reduce the risk of catastrophic collapse of the systems we rely on. Commentators, including Lord Nick Stern, have applied the lessons of the credit crunch to issues like climate change concluding that if we do nothing today then we expose everyone in the future to the risk of catastrophic collapse.

Next steps

Regulate the financial system to ensure that it enables wealth creation in the across the real economy.

Make sure economic activity does not endanger the natural systems on which we all rely.

Create the conditions in which solutions can arise

The variety of the scenarios shows that governments will need to take the initiative if global society is going to achieve the best future and progress to the better outcomes. If there is a special onus on business to take the first step, there is a requirement of government to create the conditions in which solutions can arise.

Next steps

Reward businesses for their leadership by better understanding the business context, constraints and opportunities. Regulators must walk a sensitive line between what is politically feasible and scientifically necessary. They must then allow businesses to meet the targets in their own ways.

Act on the modern regulation agenda, by focusing on environmental outcomes and placing greater responsibility on industry to deliver and using legal sanctions only as a last resort.

Use all government procurement decisions to support these objectives.

what it means for all of us

The future is still there for us to shape. Business and government do not act in a vacuum. Every one of us is important, as consumers using our purchasing power, as citizens using our vote, as employees using our time in organisations, and as investors using our money and pension funds.

We can all play our part in creating a future where climate change is contained, where we live without degrading the natural world we ultimately rely on, and where billions of people can have choice over how they live their lives.

Forum for the Future

Forum for the Future – the sustainable development group – works in partnership with leading organisations in business and the public sector. Our vision is of business and communities thriving in a future that is environmentally sustainable and socially just. We believe that a sustainable future can be achieved, that it is the only way business and communities will prosper, but that we need bold action now to make it happen. We play our part by inspiring and challenging organisations with positive visions of a sustainable future; finding innovative, practical ways to help realise those visions; training leaders to bring about change; and sharing success through our communications.



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