Miscellaneous

Here is a collection of our blogs on a range of different subjects including influencing senior management and skills development.

Engaging senior teams

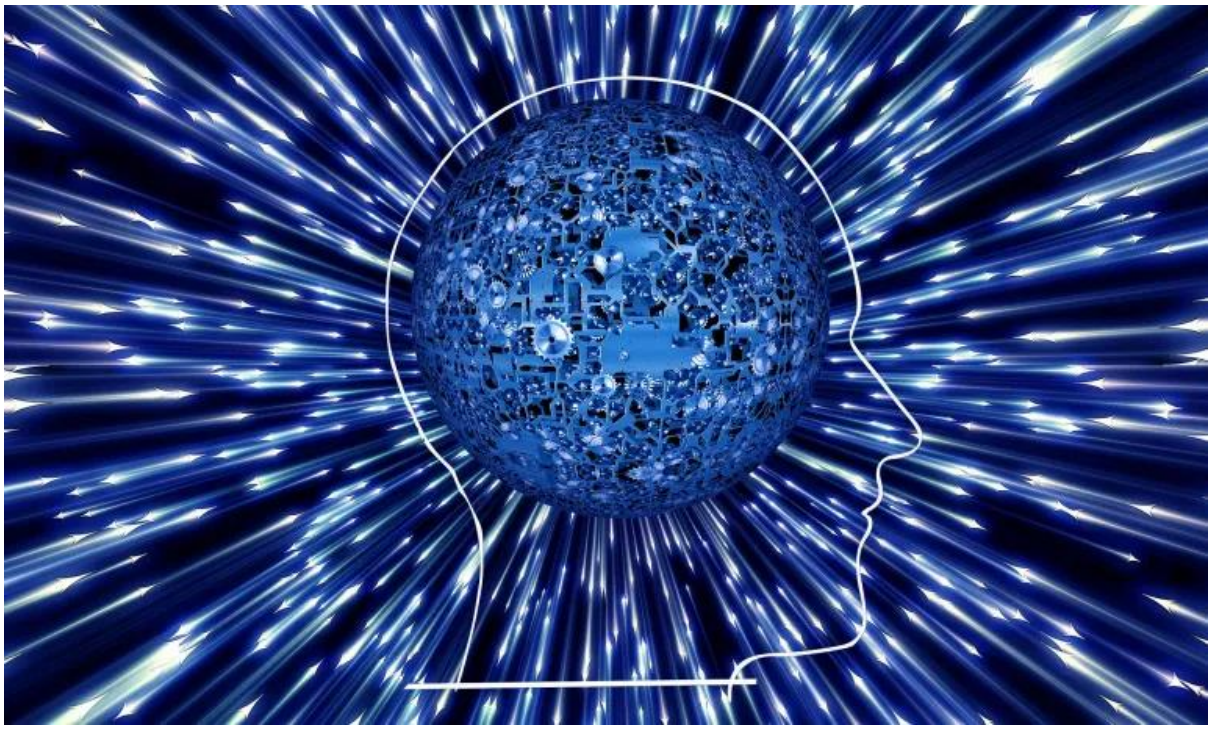


Image by Gerd Altmann from Pixabay

At SAMI, we work with colleagues in the foresight community through training (whether in our courses or through our advanced "Cohort" action learning team) and within our client engagements. One of the questions we hear most often is, "how do we engage, influence and encourage our senior teams to take futures work seriously?"

It is an understandable point. It often seems as if the rise of strategic foresight as a discipline, and its increasing use by organisations such as HM Government or the European Commission, is rarely matched either in industry or within governments themselves. It sometimes seems as if foresight is a box-ticking exercise – one of those classic consultant engagements where the job is completed, the report presented, and it is then carefully placed somewhere on a shelf and not referred to again.

This frustrates us as much as it frustrates our colleagues. Foresight and futures thinking, with its unique combination of horizon scanning, collaborative workshops, scenario creation and wind tunnelling, provides a structured, effective way of minimising future risk and developing future opportunities. Foresight enhances resilience and drives robust, reliable responses to problems – whether anticipated or not. Workshops provide a real way of engaging staff at all levels of an organisation with the future of that organisation, giving them an opportunity to play a part in creating that future and increasing their commitment and engagement.

We know all this. So why is it so difficult to persuade senior managers to act on the results of foresight work?

Here's a tick list of ideas we know works – and what doesn't.

What doesn't work

Assuming that the benefits of the exercise are self-evident. Even if foresight practitioners understand the value of foresight, there's no guarantee we have explained it clearly enough.

Prioritising the future problem at the expense of the current crisis. Managers have enough to deal with in the day to day. They rarely have the mental space to look ahead, and if they do, it is within a short time horizon.

Failing to understand the motivations of the client. Why are they doing this? Is it a nice-to-have? Are they ticking a box? Or are they looking for thoughtful, considered, transformational work? And if they are, what result do they want from it, and what will it contribute to?

Speaking to the client in your language, not theirs. Foresight has jargon, as do clients. Mapping their language to our terminology is key in getting them to understand what impact our work could have on them. This can be especially difficult in organisations with a highly developed, inward-looking workplace culture, where the language they use between themselves can have concrete meanings.

What works

Understand that the company and the people within it have motivations. Find out what they are. Hersh Shefrin's work on behavioural economics is valuable here. It was Schefrin who boiled the motivation of investors down to two factors: greed and fear. While this is too blunt and may appear too cynical to use directly with a client, it's a useful frame.

Schefrin's two key motivators (and it's worth saying many argue with him, for instance, here, here, and here) can be reframed as "What would the client get out of this (personally and as a company)?" and "What does the client avoid by doing this (both personally and as a company)?". Foresight can give companies a first-player advantage in innovation and avoid the pitfalls of unexpected crises. It can provide senior managers with the kudos of finding something new and remove the fear of being caught by unforeseen events.

What needs are met by futures work? Maslow's "A Theory of Human Motivation" is still discussed seventy-nine years after publication because it works. Indeed, we could argue that Schefrin's "fear" maps to Maslow's second tier, "safety needs", and his "greed" maps to Tier 4, "esteem".

The trick with Maslow is to understand that people's (and organisations') needs are frequently those things they try hardest to hide. Managers fear they will appear weak by expressing those needs – so it is up to us, in finding ways to reach them, to attempt to understand those needs from the outside. It's not always easy, and assuming someone wants one need when they want another can lead to real crossed wires.

Foresight works. René Rohrbeck is Professor of Strategy and director of the chair on "Foresight, Innovation and Transformation" at the EDHEC Business School, France. His work on the effectiveness of foresight provides the hard financial underpinning to the effectiveness of futures thinking. Future preparedness leads to 200% higher growth, 33% higher profit, and makes a company 44% more likely to be an outperformer. His benchmarking report, published out of the School of Business and Social Sciences at Aarhus University, shows that futures thinking is "a factor strongly influencing mid-term future firm performance".

In summary

Seek to understand the client and their motivations. Importantly, seek to understand both the client organisation and the key individuals within it. Meet those needs in language the client understands. And make the business benefits explicit.

This is the sort of subject we discuss at our Cohort. If you'd like to be part of it, let us know. And if we've identified hurdles here that resonate with you, and your organisation, let us know as well – we'd love to work with you, in ways you understand and that meet your needs.

Written by Jonathan Blanchard Smith, SAMI Fellow and Director, published 6 May 2022

Future of skills

Image by Gerd Altmann from Pixabay

What skills will the country need as we move into the 2030s? What are the key challenges affecting our education and training sector? What policies should we enact and how? How might these need to change in the light of different scenarios of the future?

SAMI has conducted several projects on the future of work and skills needs, so in this blogpost we have pulled together some of they key themes. Most studies of future skills needs are by ***advocates*** of some particular approach: apprenticeships, short-course degrees, advanced technologies. For example NESTA have a *manifesto* for skills development. At SAMI we prefer to explore the challenges that sometimes difficult circumstances might present, and the opportunities in others.

However, there are some fairly clear trends and drivers of change which are likely to develop in most scenarios.

- Digitalisation in every field. The pandemic accelerated trends in this area, but also highlighted some of the limitations and concerns. Working from home, online shopping, home schooling ("blended learning") and remote medical consultations led to a rapid increase in digital skills across the country. We can expect many of these behaviours to continue.

- Climate policy. A general global acceptance of the need to act on the climate crisis is emerging, with recent "net zero" targets. The "green economy" brings new skills requirements in everything from heat pump installation and home insulation to nuclear power plant development and offshore wind turbine construction. However, here on this spectrum the UK skills base ends up remains at the mercy of Government policy.
- Health: The population is growing in size (at least for the time being) and ageing. People are suffering from more long-term and complex conditions. While smoking and alcohol consumption may be decreasing, diabetes, obesity, dementia and mental health issues are on the rise. The need for skills in health and social care will continue, with an increased emphasis on preventative care.

Less clear are some wider generic issues. These include

- Economic growth, post-Covid recovery, economic policy
- Geo-political disruption: Ukraine, China, Brexit
- "Levelling up", UK devolution, Scottish/NI independence
- Impact of automation and AI – creating more jobs than they destroy?
- Speed of the biotechnology revolution
- Degree of social cohesion and social innovation

In one recent project we explored these uncertainties in a scenario cross based around the axes of:

- ***"Economic approach"***, an axis encompassing austerity and centralised decision-making at one end to investment-led, localised decision-making at the other.
- ***"People-centric approach"*** with end-points ranging from "flexible and innovative" to "rigid and traditional".

The team we were working with felt that currently we were in the Orange scenario. Effective skills policies in that case were felt to be:

- ***Build an evidence base:*** to access centrally allocated funds, there is the need to clearly articulate regional skills priorities and input into national strategies. There has to be a good understanding of the labour market and the skills required, with a focus on young people.
- ***Harness volunteers:*** the health and social care sector in particular could cover shortfalls in funding by involving the voluntary sector and family support in more flexible collaborative working. Peer networks more generally (eg for careers leaders and community-based training) should be encouraged. The "University of the Third Age" could be called upon to retrain the ageing population especially in digital skills.
- ***Support entrepreneurship and SME growth*** – in this scenario there is a pool of under-employed people prepared to experiment with innovative ideas – these should be encouraged.
- ***Build agility to respond*** – being flexible to pivot into new sectors; encourage the skills system (HE and FE) to become able to quickly respond to changes in the labour market; support apprenticeships and traineeships across all levels.

In the most optimistic scenario – Grey – there is an opportunity to reinforce the drive for high-value jobs***,*** focussing on R&D and innovation and co-ordinating partners; and to improve access training, and address digital poverty and exclusion.

Conversely in the Blue scenario we would be appealing to employers to recognise it's in their self-interest to invest in skills and for people later in life funding their own training as increasing retirement age means there is a greater need for retraining and upskilling.

We firmly believe that this approach of matching your policies to the environment you find yourself in is more effective than simply aiming for an ideal solution.

Written by Huw Williams, SAMI Principal, 11 May 2022

Crosses, spaces and morphology: some ways of thinking about the future

Image by Manfred Steger from Pixabay

No simple view of the future is perfect. This is what guides our use of scenarios. The simplest solution – a forecast – simply projects forwards from assumptions to a single point position of the future. They are almost always inaccurate. Scenarios provide us with a nuanced view of the future – one where, depending on the variables, a number of futures are possible. Whilst none of them may come true in total, taking an abstract of the commonalities between those futures provides a consensus view of what may happen. Each scenario is a view of what, under the chosen variables, may happen. Preparing for the commonalities, and being aware of the range of potential futures, allows governments, companies and organisations to avoid preparing for a single point forecast and instead, have a robust, resilient view of what the future may bring in a range of possible futures.

We tend to represent this range of futures in a scenario cross. Two variables, usually chosen in a workshop by a varied group of participants after a rigorous process of horizon scanning and interviews, form the axes of the cross.

Here's an example – from a recent SAMI project for the European Commission.

It's important to note that the variables which form the axes come from different classes. That is to say, were one thinking of the usual PESTLE/STEEP categories, the axes should come from different key indicators; political should not map against political, nor social against social and so on. The reason is simple – one wants to establish two ranges where the categories do not match each other. Were they to come from the same category, the danger is that they would match – in which case one develops a scenario set of minimal difference.

By selecting opposing categories, we establish a tension between the axes, and that tension is what allows us to form discrete, different futures in each scenario.

(One of the ways we ensure this happens is by ensuring that the choice before the workshop is clearly split into different categories, so that the workshop considers and chooses from different categories rather than similar ones. Voting, such as is available in Miro, permits us to do this easily).

At the conclusion of this process, we generate four distinct scenarios, as quadrants within the scenario set. \We populate these futures, with implications drawn from the positions on the axes of each quadrant, and then derive from those potential futures the implications for the organisation.

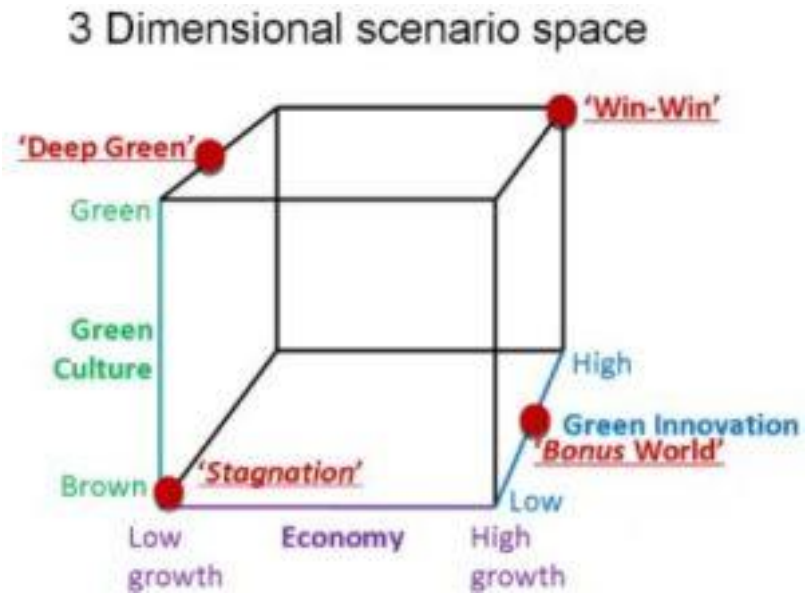
But what happens if there are three variables? Three factors that are equally important to the client, and which weigh equally importantly in the future of their organisation?

All futures structures such as scenarios are only essentially a slice through the future. They are our best estimate, given the chosen variables, of what – in the case of a scenario cross, four – potential futures may look like. What though if we want a

slice which must include a particular variable, or where the client requires three PESTLE components to work together?

In this case, we use a scenario space. Rather than opposing two variables against each other on a flat plane, to produce a cross and four scenarios, each of the three variables forms an axis of a three-dimensional square. We move from four quadrants in a scenario cross to, essentially, an infinite number of points within a three-dimensional space.

The space below has three dimensions such as *green culture, green innovation* and *the economy*, as shown below, which were derived for the European Agency for Safety and Health at Work, when looking at scenarios for new and emerging risks for health and safety in green jobs.



This has one major advantage – it enables us to introduce a third variable and map our two selected variables against it. And it has one major disadvantage – an infinite number of points in a three-dimensional space is no way to construct clearly understandable, and explicable scenarios.

So we do what we do with a two-dimensional scenario set: we divide it into manageable parts. Dividing each side equally will give us 8 scenario spaces, each of which will be range bound, and can now be described as one would within an ordinary two-dimensional scenario set – except that these individual scenarios will take account of the three variables which form their axes. However, as my colleague Gill Ringland has pointed out, “Generally, it is highly unlikely that developing eight scenarios, one at each corner, would be practical or useful, and in this case four scenarios were developed at selected points on the axes to provide plausible and differentiated scenarios.”

If we have more than three variables, it becomes incredibly complex to map visually – mostly because trying to represent four dimensional spaces do not naturally map either to our usual ways of representing them on a screen or paper, and because it is quite difficult to comprehend without a grip on mathematics (there is a useful image of a tesseract, a simple four dimensional space, here).

Accordingly, we use morphological analysis, which tabulates the variables against each other. This gives useful results, but ones which can be difficult to manipulate or explain. An excellent example can be found in the journal Technical Forecasting and Social Change 126:116-125, illustrating an case developed for Norwegian defence planning. The author, Iver Johansen, says “Each parameter is defined in terms of an exhaustive set of possible states or values,” in a paper which gives a “method for characterizing the entire solution space of future outcomes in a given subject field, and suggests a process for classification of an all-encompassing and mutually exclusive set of scenario classes.”

At SAMI, we work with all three models – scenario crosses, scenario spaces, and morphological analysis. We prefer scenario crosses – they are easier for clients unfamiliar with scenario thinking to use, and – in most cases – four scenarios are more than adequate to gain a rounded, useful view of the possible future. They enable us, and our clients, to develop a robust approach to future opportunities and risks. But they are one tool of many – and for truly complex problems, it is useful to have equally complex tools.

Written by Jonathan Blanchard Smith, SAMI Fellow and Director, 20 May 2022

Ensuring the food security of the UK

Image by Wilfried Pohnke *from* Pixabay

In June, our Director and Fellow Jonathan Blanchard Smith gave evidence to the UK Parliament's All-Party Parliamentary Group on Business in a Pandemic (Covid) World. The hearing focussed on food security and the integrity of supply chains. An edited – and slightly telegraphic – version of his comments follows, which also covers some questions attendees raised.

Futurists go through a deep and rigorous process to determine a range of possible futures. We conduct horizon scanning to research topic areas (and I thank my colleague and SAMI Fellow David Lye for his horizon scan for this meeting) and analyse trends. There are many trends, which we merge into groups called megatrends.

We can take a risk-based approach – though it's worth noting that currently, the UK does not include food security as a national risk. (On the 9th of June, it was announced that food security would be included on the national risk register).

Jonathan reviewed some of the trends we have seen come through during the pre-work for the meeting.

It is thought that the world's population will fall towards the end of the century. Countries like Italy and Thailand are forecast to shrink by 50% absent migration.

We are in a polynodal world where the West is no longer dominant. The UK has both trade friction and a reduction in employment. We have seen a decline in both imported and home-grown food. The CAP finishes in 2023, and we do not know what will replace it but can imagine it will be less well funded.

Hopefully, the European conflict caused by Russia's invasion of Ukraine will be a blip. It should lead to a resolution. Conflicts from issues like climate change are less resolvable. Also, a weak signal – a term we use for an emerging trend – is the use of food as a weapon of war (this may become a strong signal, as Russia's invasion has shown). This has a global impact: for example, 80% of Egypt's grain supply comes from Russia and Ukraine. We have seen that food supply issues quickly lead to civil disorder.

Additionally, there is tension between free trade and protectionism.

The climate crisis should be evident: heat rises, floods, and the like, change the capacity of the land to produce food. In the short term for the UK the climate will get hotter. In the long term it will affect our food sources. We need to prepare for tipping points which cause a cascade of reactions.

Biotechnology can help us support food production. Countries hostile to immigration like Australia and China have automated their harvesting process. Robots can compensate for the lack of workers.

Can we have vat-grown meat and genetically modified plants? Our life sciences industry is world-leading so we need to use it. Biotechnology could be a great benefit for the UK. The development of vat or cell-grown meat gives the opportunity to stop putting so much grain into meat production and reduce methane emissions from livestock. We will also have to make good inroads into controlling food waste.

Social attitudes are less relevant in this area except for the change in attitude as the generation pass. Young people are not older people; they have different perspectives and will take their ideas forward. They are more obese, but they smoke and drink less. They are more multinational in outlook but more despairing.

Polarisation is a real potential issue. During the Ukrainian crisis, we saw that some countries stopped exporting food. The UK food industry relies on imports, so if our suppliers stop exporting, we are in trouble.

No look at the future is sound unless it includes wild cards – the so-called “Black Swans”. A few of these, some more likely than others, in this area include ecological collapse, covid for crops, or a catastrophic methane release that speeds up climate change.

Existing pressures (Brexit, Ukraine, Covid) mean UK farmers cannot get people to plant and harvest crops. If this cannot be resolved, it will create serious food security issues within the next few years. Why, after all, would farmers plant crops if they could not harvest them?

In the future, we need to consider and prepare for a situation where there may not be enough food or where it is so expensive it becomes difficult to afford? Crop failure and import price hikes could cause hunger in the UK. If we get the biotechnology industry right, that could both benefit the UK and give us an export product.

Questions afterwards covered supply, biotechnology, and resilience issues.

Food is an example of a supply chain. If there is hunger in the UK, it follows that there will have been famine elsewhere. The direct impact on the UK would be increased migration. People do not hang around to fight wars: they leave and go somewhere safe. If there is famine in Africa and severe impacts from climate change, people will move North. The question for the UK and EU is how to manage the migration pressures into Europe?

There are issues with biotechnology. In the short term (like the next couple of years), it’s essential to set the regulatory environment so that the industry is ready to start large-scale production when needed. There needs to be a debate on issues like gene editing and vat-grown meat, then set the regulatory space and let the industry get on with it. The response to the pandemic showed a helpful approach: government needs to find 50 projects in a good state of readiness, invest in them, and see which ones come good.

There is also a need to ensure security of supply. If the government is comfortable with potential interruption to supply, then offshoring is a route forward. The risk is that foreign governments will re-route food to feed their own people first.

The single most helpful thing that the UK government could do at this stage would be to view food security and supply chains as a resilience issue and give them the same amount of care and attention it provides to other matters of national resilience. A whole-system approach, based on the understanding that food security and supply chains are critical to the nation, would ensure attention, funding and foresight – all of which are sorely needed.

Written by Jonathan Blanchard Smith, SAMI Fellow and Director, 8 July 2022

Nature Conservation - some foresight considerations

Image by Ryan McGuire *from* Pixabay

The natural world is afflicted by a wide range of pressures, mostly man-made, from climate change to poaching. Encroachment on wild spaces by human developments has many impacts and finding a balance between local communities and wildlife is becoming increasingly difficult.

Biodiversity

The accelerating loss of species around the globe is now referred to as the sixth mass extinction. It is driven by an unprecedented loss of vital ecosystems such as forests and wetlands, the result of social and economic systems that are focused on constant growth. The latest UN Biodiversity Conference, COP15, the second session of which is due to take place in October 2022, aims to implement ambitious measures for stemming biodiversity loss.

Anthropogenic extinctions have been occurring for millennia but recently it is the industrialised societies' focus on economic growth and resulting need for "natural resources" that creates challenges. A key element in solving threats is a transformation in the way society values nature.

Threatened species across the UK Overseas Territories (UKOTs) are set to benefit from £6.4 million government funding announced in May. A total of 20 environmental recovery projects will be supported with a share of the Darwin Plus initiative to deliver marine conservation, research into threatened species, and improve resilience to climate change.

Pollution

Pollution is responsible for 9 million premature deaths per year worldwide , the majority of which are caused by air pollution. Nearly all pollution-related deaths occur in low-income and middle-income countries
Plastic particles smaller than 5mm (microplastics) have frequently been reported in ocean and freshwater habitats: microplastics have been found in rivers of the Himalayas, deep in the Pacific Ocean and snow close to the peak of Mount Everest was found to contain on average 30 microplastic particles per litre. Microplastics can change the acidity, water holding capacity and porosity of soil. This affects plant growth and performanceby altering the way roots bury into the soil and take up nutrients.

Poaching

Wild animals are being poached on a massive scale, with millions of individual animals including elephants, rhinos, lizards and monkeys killed or captured from their native habitats. Wildlife trading is a major black market that has increased with rising wealth in Asia and more use of e-commerce and social media websites.

Chimpanzees are hunted for meat which is the biggest threat to their survival. This and other threats such as habitat loss has pushed chimpanzees onto the IUCN red list of endangered species. In parts of Africa, chimpanzee populations have declined by 80% since 1990.

The illegal sale of donkey skins is thriving in online marketplaces, with traders openly flouting local laws, and social media multinationals such as Facebook doing little to prevent the illegal trade. About 4.8 million animals are killed each year in a trade largely driven by Chinese demand for traditional medicine.

Peru is among the world's top ten most biodiverse countries. It ranks in the top five globally for amphibians, mammals and plants. This has made the nation a hotbed for wildlife trafficking. Some of this wildlife is poached for the pet trade. It is also hunted for bush meat, or sacrificial items for traditional remedies and religious rituals.

Species migration

Marine life in marine protected areas will not be able to tolerate warming ocean temperatures caused by greenhouse gas emissions. The marine protected areas at the greatest risk include those in the Arctic and Antarctic, in the northwest Atlantic, and the newly designated no-take reserves off the northern Galápagos islands Darwin and Wolf.

Recent heavy storms flooded puffin burrows on the Farne islands and washed away soil, and wider climate change could have affected sand eels, which are their primary source of food, leading to fears about their overall numbers.

For seabirds in the Australian region, climatic and oceanographic variation and change has been associated with changes in distribution, success and timing of breeding, chick growth and survival of adults and immature birds, across many foraging guilds and regions.

Growing plant trade may spread invasive species but help ecosystems adapt to climate change. As commerce and tourism have become globe-spanning enterprises, humans are purposely or unintentionally moving many plants or their seeds and cuttings. This process can help species adjust the range in which they live to fit their climate requirements. Many of their former habitats are becoming too hot or dry, so moving can ensure plants persist in changing landscapes. However dispersal by humans can accelerate the spread of potentially invasive species that alter ecosystems and crowd native species out.

In Jamaica, native trees are being driven further up mountains towards extinction. Climate change is slowly shifting the range of plant and animal species into previously colder zones, towards the north and south poles and up the slopes of mountains. New research shows species migration was accelerated by Hurricane Gilbert in 1988.

Human behaviour is driving evolution.

The peppered moth changed colour in response to air pollution, poaching has driven some elephants to lose their tusks and fish have evolved resistance to toxic chemicals. Human impacts are leading to exceedingly rapid alteration of our world and habitat loss. These accelerated rates of adaptive evolution can affect population dynamics and hence natural selection has the potential to partly mitigate effects of current environmental change.

Attitudes

Anthropocentrism results in the treatment of other species and nature as objects and resources for human ends. This assumption still underlies the way many people approach conservation. In environmental science and resource management, the concepts of "natural resources" and "ecosystem services" reflect the prevailing anthropocentric approach for assessing natural value, especially through cost-benefit economic analyses.

Technology

Researchers are using autonomous underwater robots to sample environmental DNA and monitor the biodiversity of marine systems. The DNA offers insights into biodiversity changes in sensitive areas, the presence of rare or endangered species and the spread of invasive species. The autonomous robots are able to study previously unsurveyed regions of the ocean, and this new data could help strengthen global ocean health.

Whale images aid crucial research – British Antarctic Survey (bas.ac.uk) A new dataset featuring hundreds of satellite images of whales has been published to support the development of artificial intelligence systems which will aid crucial conservation work.

Scientists at NERC's British Antarctic Survey (BAS) developed algorithms to automatically identify wildlife in remote and inaccessible areas from high resolution satellite imagery. The techniques have been used for a range of animals including whales, penguins, seals and albatrosses, and have delivered far more accurate data than previous survey methods at much lower cost and with minimal disturbance to the animal

AI could help spot viruses like monkeypox before they cross over and help conserve nature. There is a need to be better prepared for spillover of viruses from animals, focus on the connections between human, environmental and animal health. This is known as the One Health approach, endorsed by the World Health Organization. Artificial intelligence can help understand this web of connection and show how to keep life in balance.

The new European Space Agency satellite, BIOMASS, will map how much carbon is held in forests, providing data vital for monitoring how deforestation and reforestation are affecting the global climate. BIOMASS will create 3D maps of the world's forests, measuring the weight of the wood held within them and the height of the trees, providing information on deforestation and its reduction. The satellite will offer unprecedented insight into the changing state of the world's forests.

Written by Huw Williams, SAMI Principal, published 13 Jul 2022

Forecasts and their failings

Image by Gerd Altmann from Pixabay

Imagine you are driving a car. I tell you that if you continue driving the car in the same direction for a long time, at some stage you will drive over a cliff. You, if you are kind, will first thank me, then point out that you are not going to drive in a straight line. You are going to change direction regularly and, well before the cliff comes, you will do something to make sure you do not go over it.

On 7 July, the Office for Budget Responsibility warned that "if economic shocks continue to hit the public finances, debt is on course to reach almost 320% of annual national income (GDP) in 50 years' time – up from 96% now". You can already see where I am going with this, I suspect.

Of course, the OBR is not stupid. The Fiscal Risks and Sustainability Report is far more detailed and far more thoughtful than the headlines. It focuses on three "potential pressures on the public finances": the economic and fiscal implications of heightened geopolitical tensions; "fiscal risks from higher medium-term fossil fuel prices and potential fiscal implications of long-term changes in energy supply and demand, taking account of the UK's decarbonisation objectives"; and demographic change. It warns that successive governments must raise revenues to offset rising costs.

In other words, the car will only drive over the cliff if we do nothing about it.

This certainly puts the highly questionable tax-cutting plans of many of the candidates in the current Conservative leadership debate into perspective. “Tax cuts don’t pay for themselves and would not improve the long-term financial position,” said the OBR’s chief of staff, Andy King. The report also highlights some of the strange mismatches resulting from the way the economy is currently structured: fuel duty is a significant revenue source, which will diminish to near zero if the government’s plans to see an all-electric car fleet introduced by 2035 come to pass; whilst domestic electricity use is relatively lightly taxed.

The projections the OBR makes are subject to a range of influences over the period of the projection. Some of these influences are explained in exhaustive detail in the report.

Some, it has to be said, are not. Most especially, the policy responses available to the government are identified in one paragraph (in the Executive Summary – there is more detail later on) as:

“Bringing debt back to 75 per cent of GDP – the level at which it stabilised in the Government’s pre-pandemic March 2020 Budget – would need taxes to rise, spending to fall, or a combination of both, amounting to a 1.5 per cent of GDP additional tightening (£37 billion a year in today’s terms) at the beginning of each decade over the next 50 years”

This is where scenarios – a scenario set which can bring in all of the elements the OBR studies and more – would be useful. They would be able to incorporate more factors, including more policy responses. Something such as the SAMI Journey Game would allow an understanding of the transition through time within those scenarios and the response to systemic shocks.

Those scenarios could be supplemented by tools like the “cone of plausibility”, which we have written about before – most recently here. The cone is a tool which states, essentially, that the further away from the origin point one goes, the more possibilities are enshrined in the future. Whilst the most likely future travels through the middle of the cone, as it expands away from the origin the cone widens, as the range of possible futures expands.

It is an inherent property of forecasts that they appear – because they can be plotted on a graph or encapsulated in one of the many diagrams the OBR report includes – credible. They are a blending of factors into a nice line – one which, in the OBR’s case, goes alarmingly up over the course of the next fifty years.

But the future is not like that. It is not a straight line, but a combination of factors which interplay unpredictably, and whose messiness and complexity do not lend themselves to the nice straight line.

So we have two comments.

The first is that the future is not as simple as it looks on a graph, and the possibilities open to changing that future are near endless. The value of the OBR's report is that its straight lines show where we do not want to be. To find out where we want to be, and how we get there, we should be thinking very much more widely.

The second reflects on a comment by Richard Hughes, the OBR chair. He said, "All these risks need to be understood and mitigated if we are to safeguard fiscal sustainability in what appears to be an increasingly risky world." One of those risks is that the public understanding of risk, and the reporting of it, is weak. It needs to be significantly improved.

Written by Jonathan Blanchard Smith, SAMI Fellow and Director, 20 July 2022

Opportunities and risks for 2023

Image by Markéta (Machová) Klimešová from Pixabay

Last December we reported on our thoughts about the coming year. As we review those, and think forward another twelve months, we note that futures thinking is not forecasting. Generally we look beyond the immediate news cycle by reflecting on major underlying trends and other "weak signals". We don't judge our effectiveness on whether a specific prediction was correct or not. Instead, the goal is to capture the range of possible futures in key areas, and so help people plan for less likely events and avoid surprises.

On the radar

Major events that we successfully covered in our analysis of potential futures included the seismic Russian invasion of Ukraine. The impacts on gas supplies and prices, the solid support of NATO and increased defence spending (but refusal to engage in combat), an increased push for renewables, and the impact on growth were among the consequences we identified. We didn't do a full Futures Wheel analysis that would have also brought out the impact on grain supplies and famine risks in Africa, the drawing into NATO of Sweden and Finland, and effects on Greenhouse Gas commitments.

We also flagged up the other major global geo-political concern of China's ambitions in Taiwan. The issue simmered all year long, but fortunately did not escalate into a full-blown assault.

A similarly sized elephant, hard to overlook, was the climate crisis. Here we were particularly concerned with irreversible "tipping points". This remains a concern of many scientists: one study in September identified nine different tipping points. In 2022, the lack of progress on further emissions cuts at COP27 had brought forward these concerns.

The US mid-term elections were a "known unknown" in 2022. We flagged that the typical swing against the incumbent might not happen – and that largely proved to be the case. We also noted the pressure on Roe v Wade, which was duly overturned, even though a majority of the US population was in favour of keeping it.

What surprised us in 2022

Perhaps the most remarkable and unexpected event in 2022 – at least here in the UK – was the chaos in the Conservative party. Pressure had been mounting on Boris Johnson over "partygate", but he mostly seemed to have weathered it. Even when he was fined and an investigation opened into whether he had misled Parliament, it seemed that the affair would just rumble on at a low-level. But suddenly discontent among Tory MPs reached a level where resignations from cabinet forced him out of office. To have forecast what would happen next, with Liz Truss becoming PM and throwing everything up in the air would have been beyond Nostradamus himself. Although we are now in a period of relative stability, the implications will ripple on throughout 2023.

The scale and duration of popular public protests In both China and Iran were also surprising. The fact that in both cases they forced the regime into backing down a little was even more so. Whether these foreshadow more radical change is more debateable as both regimes have a strong sense of self-preservation.

Looking forward – ongoing trends and embedded issues

We maintain a regular watch on megatrends or drivers of change. An updated presentation is now available and a new Working Paper will be published shortly.

2023 is widely forecast as a year of recession. The current wave of strikes is set to continue even if inflation does begin to fall back from its peaks. By the end of 2023, the Government's reaction to the economic situation will have set the terms for the upcoming General Election.

An ageing population will continue adding to the challenges of the NHS and care systems whilst undermining the tax and pension balance.

Globally, economic pressures, ongoing geo-political uncertainty and increasing demands for self-sufficiency will lead to major re-engineering of the supply chain. On the positive side, technological advances will continue to multiply. AI in particular looks set to become mainstream. The recent launch of ChatGPT from OpenAI caused a stir, despite some concerns about its limitations. The breakthrough in fusion technology promises real change, when energy is so key to the health of nations and the world. Last year we flagged biotechnology as the coming disruptor, with concerns about nefarious uses. That remains on our radar.

We also worried about cyberattacks; despite the Ukraine war these have not multiplied substantially, but the threat remains.

Known unknowns for 2023

Implications of geo-political uncertainty:

- Even if the outright hostilities in Ukraine come to an end in 2023, which is by no means certain, the ramifications will continue to echo, with effects on the global economy yet to be fully worked through. Recent attacks within Russia itself could herald an escalation that leads to even more extreme and dangerous outcomes.
- China's future seems less clear than ever. Increasing internal pressure on President Xi – that has already led to him changing course on Covid policy – could lead to him feeling the need to create a distraction and bring forward threats to Taiwan.
- There will be elections in Turkey. How disruptive to the stability of the region will these be?
- Lula da Silva takes over the reins from Bolsonaro in Brazil. How radical will he actually prove to be in office?

We can be fairly sure that 2023 will see more extreme weather events, floods, fire and droughts. What we don't know is where and how severe these will be. Will there be loss of life on the scale of the Pakistani floods? Perhaps a major incident in a Western city – Sydney burnt to the ground, New York flooded New Orleans style – will radically change the agenda.

Migration is not going to stop – the unknown is just how much, when and where. If anything, war and climate change will increase the numbers seeking sanctuary. How will Western nations react? Repressive attempts become increasingly difficult to sustain, and the economic benefits of more youthful, enterprising people may yet

bring a change of mood. Public attitudes to immigration may be softening, but this is not being reflected politically as yet.

What do we "know" that may not be true?

Japan *is stable.* But as the remarkable coup plot in Germany showed, nowhere is immune from sudden shocks. What would happen if extremists (left or right) stormed to power in Tokyo?

We're over the pandemic. For now, maybe, but various threats have not gone away and the range remains unknowable. One of current concerns is a "Covid for crops" – massive disruption of food supplies caused by new plant pandemics.

Islamic terrorism has gone away. While many argue that the growth of right-wing terrorism is of more concern, in 2018/19 (the last year for which data is available) 60% of terrorist-related arrests were classed as "international".

Hype

Technological advances are amazing, but often take longer to become realised than expected, if at all. From Amazon drones to flying taxis (a SAMI favourite bugbear), some scepticism is often justified. We'll look into this more next month.

Our work over the last couple of years on modelling a Horizon Zero into the standard "Three Horizons" model has shown us how key an understanding of yesterday and today can be. Futures thinking is in many ways about "the seeds of the future in the present" so we will keep our eyes on that present as the year progresses.

We will be back in January to help you understand both the short- and long-term future, in its risks and opportunities. After a remarkably intense year, not least in the UK and Europe, we hope that your short-term includes a joyful holiday season, and a successful, peaceful and prosperous New Year.

Image by Markéta (Machová) Klimešová from Pixabay

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