

Looking back at looking forwards

Next steps for Horizon Scanning and Futures

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After five years of building possible futures and testing their implications, Defra's Horizon Scanning and Futures (HSF) programme decided that it was time to look backwards for a while.

The programme entered a year-long period of review and consolidation and commissioned Sparknow, a pioneer in the use of narrative techniques to capture knowledge, to help it review the work thus far and draw out the lessons to be learned.

Through a series of events, interviews, discussions and exercises we've gathered countless experiences and insights that tell us how the programme has been run in the past and how our 'critical friends' think it should be run in the future.

The lessons we've found are presented in a big folder, of which this is the electronic version. Each page is a frank and readable summary of our findings on a core 'sticky' question identified by our stakeholders. They range from specific governance issues like steering group composition to broad cultural challenges like the effective communication of difficult findings.

Wrapped around them, the folder itself also functions as a wallchart, overview and planning tool. It lays out the project lifecycle and places on it the collected advice and hard-won experience of the people who carried out Defra's early futures projects.

Having reviewed and understood our history, it is now time for the HSF programme

to look forwards again. We have worked hard to learn from these lessons and build a strategy for the future programme that will engage and support the Defra community, build on previous successes, learn from previous mistakes and incorporate the views of our stakeholders at every step on the way.

Our aim is to clear the murk that surrounds the subject of futures work. We want to strip away the myth, mystery and bunkum around the subject, create an effective dialogue and provide Defra with a clear and easily understood set of processes and methodologies. Futures research is a powerful tool that needs to be understood.

From now on we are going to work in three ways: continuous horizon scanning, occasional large-scale futures investigations and systematic capacity-building within the department.

Horizon scanning is a 'knowledge radar' that scans for clues and suggestions at the outer periphery of what is known and understood and gives advance warning of the opportunities and threats that lie just out of sight. We are setting up a continuous scanning function to spot emerging issues and bring them to Defra's attention.

The scan will look at technology and science in its broadest sense, including the social sciences, economics, political science and the natural sciences.

Senior scientists will use the scan to locate emerging issues of particular importance to our overall strategy, and these will become the focus of cross-cutting futures projects designed to provide detailed evidence and guidance for Defra's policy makers.

The unit will continue to be a very small one, but we will also help policy teams to undertake their own futures work. We will help people to find the right expert knowledge and skills, provide training, promote technical understanding of the various futures methodologies through our website, publish models of good practice and establish governance guidelines.

We will provide the analytical capability to translate emerging issues into useful forms. We will also offer a number of communication services including seminars on futures projects, expert workshops and horizon scanning newsletters highlighting science and technology issues.

By combining incisive cross-departmental futures projects with a broad increase in futures capacity among policy teams, we aim to help Defra to be anticipatory, to manage risk and exploit opportunity and to be an efficient, proactive organisation able to build robust and resilient policy.

Horizon Scanning and Futures Team,
Science Economics and Statistics DG,
Defra





This is only the beginning

The distinctive qualities of futures work

People have a lot of funny ideas about futures work and horizon scanning. They imagine crazy-haired futurists doodling jet packs or hand-waving pontificators randomly mashing dull old words together to make exciting new ones.

They also imagine that futures work makes predictions, produces models and tells you what's going to happen. It doesn't. In reality, futures work is just another strategic tool. It won't tell you what's going to happen in twenty years time, or even five, but it will show you a picture of a world that plausibly could happen, and challenge you to think about what that would mean, whether it should be welcomed, how it might be avoided. Sometimes the picture is a broad and hazy one, sometimes narrow and precisely drawn. It all depends on the questions you choose and the techniques you use to address them.

Futures research is a fairly new school, and still considered radical by many. It's as rigorous as more familiar kinds of scientific research, but its methods and goals are very different. It doesn't aim to converge on a single authoritative view of one reality, but to spread out and examine the range of possible futures. It doesn't always build a tower of fact upon respectable, published fact, but often sifts through turbulent subjects gathering traces and whispers, noting and combin-

ing the faint signals that might mark the start of something important, or the point at which action is decisive.

Futures work resists blinkers and roams freely across disciplines and departments. It moves from respectable scientific journals to the fringes of the internet, and from detailed quantitative analysis to pure blue-sky invention. It thrives on disagreement and discussion, and above all is creative and imaginative in finding ways to break out of habitual thinking and see what lies outside our assumptions.

Those new to futures work will often need some time to orient themselves and adjust their expectations. Empirical scientists often find it wordy, cloudy and inclined to build too much finding on too little fact. To economists it can seem uncertain and oddly unpredictable. The policy maker looking for concrete answers or dealing with a crisis may well ask, "so what?"

The key to understanding horizon scanning and futures is to realise that they fit in at the start of the research process, not at the end. They have scientific value, but their measure is plausibility not proof and their aim is to stimulate and support discussion, not to conclude it.

Defra's Horizon Scanning and Futures unit was set up not long after Defra itself. Its first projects were commissioned through an open call for ideas in 2002.

There were 13 altogether, and while they were useful in themselves they were also tests to see whether and how futures thinking might play a part in Government.

The result was a mixed bag of broad and detailed studies, some very successful and some less so. Most had begun without the drive and focus of policy makers' questions, which left their findings slightly removed from the mainstream of planning and briefing within Defra. Their answers were interesting and often compelling, but they weren't usually answers to the pressing questions of the day. With nobody waiting for them, and without roots in the work of policy makers, they bore less fruit than they could have.

The early projects did succeed in making clear what was already suspected: futures research can mesh very neatly with the other processes of Government thinking. It sits before and around other kinds of research, pushing the margins of current thinking, subverting assumptions and prompting inspiration, but it also provides early warning, solid strategic guidance and a structured basis for long-term planning.

Properly understood, integrated into our strategic overview and put in front of the right people, it will help to shape the Defra agenda and support the creation of better informed, more resilient policy.

"And so what we do first is remind people that scientific paradigms change... and that what happens is that scientists naturally go through a period of dialogue and controversy and collecting data.

"If they're looking at something new, and they're beginning to do research on it they see perhaps a mass of conflicting observations, and they sort through those, and they continue to gather more data until they start to converge on a model of what's really happening.

"If you actually want to notice change early enough that you have enough time to create policies to respond to it, you have to catch it at that early stage where people are still arguing about it."

Futurist and contractor to Defra



A process of continuous discovery

Growing a suitable methodology

The futures projects initiated by Defra in the last five years were all trial runs of one kind or another, and one of the main lessons to emerge is that it's very easy for the selection or specification of futures methods to happen prematurely.

Futurists often grumble about their clients dictating methodology in the brief. People will ask for scenario development, unaware that it's only one of many futures techniques including several that would be more useful to them. The futurist is reluctant to come back with a proposal that contradicts the brief, and so the project is boxed from the start and unable to achieve what it should.

Horizon Scanning and Futures are still emerging disciplines. At the fringe they can be wildly experimental, but the core toolkit now includes dozens of standardised and widely accepted techniques, each suitable for a well-defined category of problem. A good futurist will be able to respond to a question or issue with a range of possible approaches and explain the merits of each.

Defra is a science-led organisation, and an orthodox scientific environment is not always conducive to fruitful futures work. The habit of empiricism and a reliance on the observable tend to lead to safe, pedestrian futures projects. One contractor called this the 'tyranny of rigour', and many complained that creativity was

stifled by the thirst for models, graphs and figures.

The peer reviews of some - not all - of the early Defra futures projects have been damning on the subjects of poor method choice and unused findings, and interesting qualitative work has sometimes been watered down or bent out of shape by the pressure to be quantitative and predictive.

Everything depends on the correct positioning of futures work. Horizon scanning works best as an early warning system for the strategist. It's a laborious, expert job of sifting, understanding and inference that can offer policy makers a vital head start. Scanning should be a continuous process, and while it's exactly the sort of bulky, laborious work that should be delegated to an external specialist, it is important to have in-house synthesists to sift through the results for relevance and translate them into local languages and useful formats.

Futures research, on the other hand, is the targeted examination of selected possible developments by means of detailed and rigorous methods that tend to yield weighted answers and require specific questions. It can chart the route to a desired future, map out threats and opportunities around a particular policy issue or examine the wider consequences of a local decision. It usually takes the form of an evolving investigation, and it is common for these techniques to be daisy-chained.

For example:

- The scanners spot an increased reliance on fuel crops in the next ten years and the in-house team recognise the policy importance of this development.
- The policy team commission a decision tree to map out the factors that will shape this development: will the oil companies redeploy their infrastructure, or the US soya industry get there first?
- Scenario building is then useful in picturing the broad consequences of those big decisions: will unsightly fields affect tourism, and will the transportation of bulky crops change patterns of road use?
- Once these investigations have helped the policy team to select and characterise their desired outcome, a backcasting project might help to plan a route that leads from here to there.

With the correct distribution of responsibility – policy teams set questions that matter and futurists choose the approaches that will answer them – futures work like this has a great deal to offer. But remember: none of these techniques will tell you what's going to happen, or give you a model with strings to pull and consequences to observe. They will produce useful pictures of a world that might well happen, and the better the choice of method, the sharper the picture.

"It seemed to be a clash of cultures. One was a fairly bureaucratic, tick-box culture that had been set up by project management. We had a steering group meeting and we had to come back and explain what we had done and where we wanted to go.

"The other culture was our own professional approach to trying to do things in the best possible way. We had realised that we could create scenarios using a quite innovative quali-quant method, combining the best of statistical rigour with some creative visualisation techniques. It was like hitting a brick wall.

"We felt that they would not believe our professional credibility and values. They just couldn't accept that the reason we were coming back with a changed plan was because we thought it was the best thing for the project and the best thing that we could do."

Futurist and Defra Contractor



Keeping people interested

Involving and empowering critics

Stakeholder engagement doesn't have to be a messy, tedious, risky waste of time. New techniques like online games and citizens' juries are bold experiments that offer a genuine meeting of communities.

Online games can invite participants into a parallel environment where they can directly experience the consequences of imaginary actions, sometimes with discomfort and embarrassment which gives them useful pause for thought.

A citizen's jury on GM crops offers stakeholders the metaphor of legal process, allowing them a role where they can listen to unpalatable views with respect and challenge them in a reasoned way.

These and other successful stakeholder consultations work because they permit boldness and honesty while safely containing rawer emotion and conflict. They can penetrate well rehearsed positions and tease out the gaps between espoused and practised behaviour in a way that no questionnaire will manage.

Well chosen techniques, often made possible by technology, can draw in a mix of stakeholders and keep their attention. They invite stakeholders to be heard and to listen with empathy, however reluctant, and to contribute with energy and consideration even where tricky compromises must be drawn. They can cut through power structures and politicking and

interrupt the dominant voice of the knowledge classes. They also make good sense in the climate of a broader thrust towards participative government.

None of this is easy to achieve. It is at odds with the policy cycle. It takes time and sustained effort and facilitative flair. It is easy to pay lip service, or to be backed into a show consultation where the really impassioned campaigners either refuse to show up or drown out every other voice. Sometimes stakeholders have to swallow hard medicine, or the press spin a question into a conflict. In other words, the kind of subjects which futures work is likely to dig into are also those which most likely to touch a raw nerve.

Stakeholder consultation can't be bolted on in the last couple of weeks. It takes time and commitment to understand people's fears and hopes, but the effort is worthwhile: futures research offers an excellent chance to get under the skin of things, to develop and to demonstrate a real understanding of stakeholders' concerns.

Peer review may seem easier to manage, but that too works best when it's woven into the fabric of the project. The Farming Futures project was commissioned as a precise piece of research to look at all the non-regulatory pressures affecting the future of farming. It allowed the policy makers to put themselves directly into the shoes of the farmers and see the regulatory demands in this context. The contractor

produced a draft in good time and decided to take it to academics for peer review before final delivery.

Rather nervously, he also decided to take it to the National Farmers Union, knowing that they had specialists in all the relevant sectors and weren't inclined to pull their punches. He wanted to make sure that something he was putting his name to was good, and relevant enough, to pass a test that it was bound to face at some point. Putting a draft out for scrutiny took guts, both for the contractor and for Defra, and it worked. The NFU were frank and constructive, even where they didn't like the implications of what they heard, and helped to shape the final report.

Getting the right people involved and keeping them over an extended period means extending your reach across networks, finding opinion leaders and being open to dissent. It also means looking beyond those who are fluent in saying what you want to hear and engaging with people who are hesitant to contribute, who don't see the point or who are hostile to the whole enterprise.

Stakeholder consultation is essential and demanding, but it would be a great mistake to think of it as just a box that needs ticking: it's also a golden opportunity to gather insights that can't be manufactured and secure goodwill that can't be bought.

"I always get put off by the expression because stakeholders comprise so many different categories of people and it is important to think about who you classify as stakeholders. Whenever I see stakeholder consultation, I always put a question mark and say, 'Who?' Particularly within Defra, different policy areas refer to stakeholders in different ways. Even within industry stakeholders, you have farmers as deliverers on the ground, but they actually take products from other industries so they could be two industry stakeholder groups. It is all about being clear about your labelling.

"And futures work is often different. It's not at the top of people's piles because they are dealing with today's stuff, not 10 years' time stuff or whatever. Therefore, you need to convince people that it really is at the top of the pile, that they need to be involved now if they are going to make a change. Because it is all about the trajectory you are following. If you don't take action now, you might not be able to address that issue until too far down the line."

Defra Scientist



Stay on track

Good governance and the role of the steering group

Some futures projects can succeed without their own steering group. Small projects on tight timescales don't need the extra administrative burden, and some projects clearly fit into a wider portfolio of research that already has a steering group. Others - chiefly horizon scanning - work best as a continuous sweep watched by dedicated policy analysts.

For every other kind of futures work, energetic governance is vital. Steering groups are there to make sure that the unfolding activities of the project remain true to the original brief, to guide contractors with the right mix of flexibility and firmness and to make sure the work connects to the rest of the organisation and reaches the places that should take notice.

Projects need a mixture of challenge and reassurance, strong feedback and critique, and a steering group in the traditional civil service mould doesn't always provide that. The steering group typically sits 'up there somewhere' and the project reports upwards. It is chaired by a senior person for whom this is a relatively minor concern, creating a hierarchical distance made more acute when members then take their cues from the presiding chair by colluding, corroborating, raising side-ways issues or not saying very much at all. This can lead to an awkward mix of heavy handedness and 'management-lite', further interrupted

by a constituency that depends on who can, or will, turn up.

It takes concerted effort in the early stages of a project to make time for the steering group to gel and to grasp all the uses to which the work will later be put. Squashed between the institutional timetable and the competing commitments of steering group members yet to be fully enthused, this vital initial meeting of minds shrinks to a dot in the margin, damaging the long-term effectiveness of the investment and severely limiting the usefulness of the steering group.

While Defra has a responsibility to ensure public money is properly spent and delivered on, the Herculean task of keeping up with the administrative and reporting burden can get in the way of the actual work. One contractor called it a complete nightmare, complaining that "we had to put in a huge amount of extra work; they asked for reports at every stage and we were really conscientious. I added it up and we wrote somewhere in the region of about 80,000 words – practically a novel – of different reports. If we had been working with someone who was a bit more on our side, we would probably have agreed to do PowerPoint summaries rather than reports. We were finding our feet with this frightening steering group and their tick box mentality."

The contractors' fear of the steering group meant they also found it necessary to bring in a professor or two to "make sure we had that sort of ammunition." While this paints an extreme picture, interviewees from past futures projects frequently recalled loggerhead moments. In some cases the project reacted to this tough stance by ramping up the energy and becoming extremely diligent but in others the conflict created a loss of will on both sides, and the research suffered.

The most effective steering groups comprise high calibre individuals playing quite specific roles all of which must be represented, though not necessarily in different people:

- **A policy or strategy lead** to anchor the research in a clear need and be active owners of the project;
- **People to help translate research results** into language useful to policy makers;
- **Scientists with a knowledge of the research area** to provide intellectual and factual challenge at regular intervals;
- **A futurist to advise** on the selection and implementation of suitable methodologies;
- **A chairperson**, who may be a very good scientist, or a very good futures person, but should most of all be a very good chair.

"We talked about the broad mandate in the very first steering group meeting. I remember they said, 'Really, we can't expect you to do all this', but every time we came up with something, it was like, 'Oh, we would like you to do that, and we would like you to do that too.' Whereas on the surface it was recognised that the objectives were too broad whenever it came to narrowing them, there was hesitancy, a lack of willingness to make it manageable.

"We laid it out fairly strongly in our discussions, saying 'Right, you can either get something broad, or you can get something narrower and deeper.' The sticking point came when the steering group just said, 'Well, that's up to you to tell us which is better.' We asked for guidance very explicitly. Not getting a clear answer meant we had to make a decision on our own and then live with the repercussions."

Contractor project manager



A happy combination?

Power and potential in multidisciplinary

Futures work is inherently multi-disciplinary. There is a meeting of disciplines and interests at every level: in the steering group, the project team, the stakeholders and in the variety of practitioners carrying out the research.

The pivotal relationship in a Defra futures project is a simple triangle, between the policy customer, a generalist project manager and a specialist contractor. The workspace of the project is within that triangle, and it is only in that contained space, actively and robustly managed, that the other kinds of multi-disciplinarity can thrive.

Futures work naturally calls for broad representation and competing voices. It might bring together biologists and economists or farmers and pharmacists, and it will definitely require a combination of academic rigour and unfettered imagination. This heterogeneity will always generate a certain amount of discord and misunderstanding.

Multidisciplinary teams often feel chaotic, riddled with covert - or overt - power plays, insecurities, evasion and obstinacy. Members will have different skills and mental categories, will apply different filters to the information they receive, will have different ways of seeing and expressing what they see, and will make different, and - crucially - often conflict-

ing claims to truth. One interviewee spoke about the “subtle issues of diffidence and confidence” in working with academics on a steering group, with non-academics feeling: ‘I don’t want it to seem that I don’t know about anything’ and academics feeling: ‘I’d better not say too much because I don’t know whether this is their take.’ Unchecked, these differences will deepen into repeating patterns of incomprehension, frustration, disaffection, footstamping and finally entrenchment.

This decay is made more likely in Defra by cultural and functional constraints that squeeze projects into too little time and space. Time spent becoming comfortable with the rest of the team seems like a luxury, and the foundations of empathy, mutual understanding and trust are not built deep enough to survive the disagreements that will inevitably follow.

People will disagree: first over definitions and terminology, then over the research approach, then over the significance of its findings. The best Futures projects draw strength from this conflict and actively encourage robust, friendly argument. They grow through productive challenges to the assumptions and models of each participant, and from the collective story making that carries the group from disagreement through tentative redefinition to a new and powerful agreement on meaning and use.

This means that futures work needs people willing to step beyond the safety of their own languages and assumptions and enter the liminal zones where disciplines overlap. Futures thrives on edges: sites of contested meaning, where new understanding can emerge, and these spaces must be left open for long enough to allow even the most timid to bring their point of view and describe their experience.

This takes a leader – or a group – willing to work hard, remain vigilant and build a genuine consensus; someone who can hold open the search for a shared language while allowing individual insights to be heard. Dominant voices must not be allowed to drown out disagreement, and quiet voices must not be allowed to hide.

A futures project without the ability to transgress disciplinary boundaries and discover new spaces – perhaps it has a rich list of PhDs in its appendix but only two people actually doing the work – might still achieve something, but it will never burn as brightly, or achieve the intense satisfaction possible when people from different disciplines combine their strengths, put aside their differences and work together on the fertile new ground that lies between their usual furrows.

“It was triangular. We were all involved; we all saw the drafts. We had weekly or fortnightly meetings together to chew over what we had, go through the drafts and look at the bigger picture. We all brought our own experience, whether from the policy side, or the Horizon Scanning team with their knowledge or the consultancy firm who had good in-depth knowledge about agriculture. It was about keeping that dialogue open...”

“The consultants were very driven and made sure they had a clear understanding of what we wanted. They weren’t afraid to ask questions or to challenge what we were asking them to do to make sure we’d actually got it right – for our benefit. We were very much the same. We were challenging them in an open, friendly, helpful way, saying ‘You’ve put this as an assumption, but judging from the data you’ve got, the data and the projections, is that really what we think will happen?’”

Defra Policy Lead



Found in translation

Language, misunderstanding and discovery

Futures research crosses the borders between social groups, subjects and cultures. It will often bring together people who don't speak the same language, or who don't speak it in the same way, or who have very different ideas about what it is proper to say. One of the central challenges for a futures team is to give people enough time and space to understand one another.

Each project brings together a new set of disciplines and individuals and each group has to assemble its own particular vocabulary of new words, old words, borrowed words and no doubt sometimes blue ones.

Futures work also has its own sometimes exotic terminology. It is standardised and powerfully descriptive, but some of it, on first acquaintance, can seem a bit silly. People will have to keep an open mind and learn their way around, however eminent they are in other fields, and futurists will have to help them appreciate the strength of this new vocabulary.

Given time and sufficient friendship, a new shared language will form. Sometimes this just happens: useful terminology oozes out of discussion under pressure, and people who are used to reaching across disciplines help everyone to put it together.

Sometimes it's not easy at all. People made defensive will wave their hands, cover their tracks and hide in jargon. They will talk too much, or too little, refuse to explain or refuse to understand.

This awkwardness needn't be a bad thing. Handled correctly, it becomes productive. Like the grain of sand in the oyster it is a useful irritant, and it will make people work towards understanding.

The shared language of the project can only emerge from the combined languages of its participants, and only by a gradual process of misunderstanding, challenge and explanation. The rough working definitions that begin the process may seem clumsy or overwrought, but usage will gradually shape them into an efficient and precise project vocabulary.

Mutual understanding takes time, explanation and repetition, and this means extra work for busy people. Worse, it is the kind of work that makes people more vulnerable, not less. Experts are comfortable and skilful in their native languages, but futures work takes them out of their group and into new territory.

Futures work in a scientific context is particularly at risk of misunderstanding, not just because of differences of language but because of differences of culture. It often relies on tapestries of speculation that empirical scientists will distrust so instinctively that they can't find the words to express their opposition.

The only way to overcome these barriers is to make a commitment to shared understanding and tolerant explanation. It's a commitment that needs to be expressed out loud and then actively policed. Often

the best way to do that is by appointing an arbitrator with the power to interrupt, so that there's at least one person who can request translation without offending.

A project in which people are able to talk freely and spark ideas in one another is most of the way to success, so long as it doesn't forget to make its inner language accessible again to the outside world when the time comes to report back.

As well as the usual translation questions - will stakeholders read this chart in the same way as project members do? - the members of a successful futures project also have to ask themselves whether their own colleagues will understand the message they return with and whether they will manage to take it seriously.

The final translation of the project into report, executive summary or ministerial advice is always going to take time and work, but a project team with efficient, fluent internal communications will find it much easier to arrive at conclusions, express them concisely and translate them back into terms that others will understand and remember.

Linguistic issues are very easy to overlook. We all appear to speak the same language and to use words in the same way, but we don't, and it's the subtle differences that will trip a project up. Budget some time for understanding to grow, and after that every conversation and every report will be easier, quicker and more effective.

"It pays to have a few days of everybody sitting around and making their perspectives on the issues clear. You have to work in your silo to a certain extent, but you're aware of how other people are viewing what you're doing. If you're a biologist working on invasive species spread, the social scientists are going to be saying "So what, who cares? Is that a bad thing? Why do you think so? Do you think there might be people who think it's a good thing?" It's very empowering, as a natural scientist, to have those questions in your head. Similarly, as a social scientist it's good to know that while this looks like a narrow issue affecting Clapham it could affect all of London in three months because that's the way diseases spread.

"So get everybody together to build an understanding of how they each approach the subject and to build respect through and then let people work in their particular disciplines and bring them back together a lot. We didn't think at the outset that this was a very social issue. We thought it was just a very technical, scientific issue. We had to learn."

Futurist and Defra Contractor



The policy making merry-go-round

The search for ownership and relevance

Policy makers work in the future, setting the parameters of the society we will become. Of course they need to look ahead.

They need to step out of their immediate working environment, leaving behind its habits and assumptions, and 'play seriously' in an imagined but realistic future world, testing and revising decisions based on what they find there. To do that properly, they need the imagination and rigour that expert futurists can provide.

What they don't need is to have futures work thrown at them 'just because it's interesting', as one exasperated policy maker put it. As Defra's history shows, a futures project that doesn't come from a policy need and head towards a policy solution has limited value. However bracing and pertinent its findings, they're not going to have any effect unless policy people are waiting for them.

The futurist knows this, and it can cause a lot of frustration. The whirling merry-go-round of policy people, politics and priorities can make an initially vital and relevant project end up feeling like a child waving to get attention, cut off from Defra's larger requirements, deprived of influence and delivering results into a void where the policy process used to be.

It is obvious to everyone involved that there should be a firm and continuing

handshake between policy enquiry and futures investigation. Why doesn't it happen?

The main problem is that policy makers are up to their eyes and over in mundane, daily work. They live under immense pressure, tangled up in onerous procedures and daily deadlines, and a full-blown futures project looks like an impossible luxury. It might offer an exhilarating process, new conversations and ground-shifting insights, but it might also fall short of actual practical models which move policy making forward, and policy makers are understandably reluctant to commit time to so risky a venture.

Personal risks bubble under the surface too. It's asking a lot of people to bet their professional standing on a novel investigation that might fail, or to have the nerve to back work that won't play well with angry fishermen, or which infuriates the Minister by not providing a useful answer to a Parliamentary Question, or which might get picked up by the papers and leave MPs at the mercy of hot-tempered constituents.

It is when firm backing is most needed that it can be hardest to give. Who, while sleeplessly redrafting a White Paper that is already rocking the boat, would willingly stick their neck out and back a grim 30 year scenario for the countryside so that detailed backcasting can be done?

The futurist is left struggling for relevance while the overburdened policy team hunts for evidence on which to base urgent decisions. Each of them is able to ignore the other unless they take the initiative, and the pressing need for their cooperation falls through the gap.

A bridge needs to be built, and it will have to be started at both ends. Practical ways should be found to commit policy time to futures work and keep it relevant. Policy people need to be active on steering and commissioning groups in a way that maximises both clout and attendance and doesn't make people feel like they're betting their career. The futurists also need to find ways to feed unprompted insights into the policy agenda and start to build an appetite for more detailed work.

Horizon scanning can offer policy people the advance warning they desperately need, and futures research offers a priceless chance to trace the delicate interactions of policies and trends and follow the ripples that decisions send out into the future world. Policy people will need to be helped to grasp the importance and scale of the opportunity this offers them.

Horizon scanners and futurists should be doing everything in their power to strip away the mystique and make plain the opportunity they offer, so that bold and novel futures work can be driven by clear strategic and policymaking need.

"And so what we do first is remind people that scientific paradigms change... and that what happens is that scientists naturally go through a period of dialogue and controversy and collecting data.

"If they're looking at something new, and they're beginning to do research on it they see perhaps a mass of conflicting observations, and they sort through those, and they continue to gather more data until they start to converge on a model of what's really happening.

"If you actually want to notice change early enough that you have enough time to create policies to respond to it, you have to catch it at that early stage where people are still arguing about it."

Futurist and contractor to Defra



Will it fly?

Making a long term difference

In the end of every futures project is its beginning, and most are compromised by compression at the reporting stage. Tidying unpredictable findings into a format chosen months before can box research in, leading to charges of shallowness, particularly given the common scepticism about futures work.

But without that initial constraint projects tend to be too eager to impress with their breadth and depth, and the result is an unwieldy bulk, densely formatted in an unnaturally small font size. Feel-the-width reporting doesn't help the reader and does little to propel the findings and their implications into a broader community where they can have some effect.

A clear brief is needed from the steering group at the outset, but it's hard to ask the 'so what?' questions when the project is still getting to the right 'what if?' question. It helps to insist on a formal reporting and communications plan during the procurement stages, so that these important topics can't slide and have to be given the necessary resources, but the best projects will always be those that take care to ensure reporting quality without closing down creative avenues.

Do policy makers want products and models, or is it sufficient that the process gave them access to the right people and fostered some really good conversations? Should the outputs meet or challenge their expectations? Is it better to have

documented the whole project, or to have changed one influential person's mind in a useful way? Should scanning and futures be a window on the world, a way of accessing expertise out there, or should it be constructing research and insights in here? Which one should we pay for?

The answer to all these questions is likely to be 'all of the above'. Futures work has a unique ability to challenge the way that people see the world, but it also has to reach them and make them ready to think again.

A project with striking results should always think about unconventional ways to bring them to wider attention, but it also has to deliver simple and useful findings to its commissioners. However intensely interesting the findings, they have to be applicable.

That may also mean being available when they're needed, despite the difficulties this can create for a long-term enquiry. "What can I say to the Minister?" one policy maker said, "Can I tell him: 'You can't say anything on Newsnight tomorrow night because we haven't done the modelling yet?' That might not get a very polite response from the Minister's office."

Even where the work has been punchy, provocative and well received, it may be making more waves in the outside world than in Defra. This lack of internal attention means that good work is easily

wasted: "It's hard to know how big a splash it's going to have. I think people will find some of the ideas interesting, but the Bill is rolling on like a steamroller, events have overtaken us and it'll probably just be picked up as an interesting little thing."

The ideal model for futures research is more radial than linear, featuring iterative loops of investigation and product development, a work in progress continually adjusted through experimentation and conversation, always useful and controversial, and always stimulating debate.

But in the end the most important contribution a futures project makes is likely to be the invisible one. Most of the marks made by the work will be hidden, impossible to trace other than anecdotally, embodied in the changed perspectives of individuals. It will turn up, almost unrecognisable, on distant shores in other work at other times. It creates an appetite for new research which builds insight in turn. It is changing the conversations of the organisation in subtle, untrackable ways.

It is hard for an organisation like Defra, budgeted, scrutinised and evaluated, to sit tight and trust that this invisible benefit is spreading within it, but it is essential. The greatest benefit of futures work may be the subtle nudges by which it jogs people out of habitual thinking and make them look at the world afresh.

"The document could be taken and made into a kit. It could have cards describing scenarios, and a PowerPoint presentation on each scenario. And a canned workshopping process - you spin people around the scenarios, let them react, then develop scenarios further for their own application. There is a whole bunch of ways you could use it.

"It could be used to build partnerships with organisations like English Nature and the Environment Agency. As they put the Marine Bill in place they are going to have to set up a new marine agency - a group that's been brought together. They will need team building. You could use these scenarios as a vehicle for that.

"You know, it would just take a bit of energy to get that picked up and conceptualised and the kit packaged and then you could almost take it on the road."

Defra Project Manager



“What about a horizon scanning advisory group, what should that be doing? I think that should be a very uncomfortable group for the people who are members of it and the people for whom it talks, because it should always be sceptical. It should always be asking, ‘Well, does that fit together? Is that sort of story that is coherent, or is it a story made up of a particular set of prejudices?’ which we have a lot of.

“In this territory as I assume in lots of others, people come along with pre-made visions and they are not really prepared to see anything other than their own vision, and one of the jobs of a horizon scanning advisory group would be that you would get this sort of stuff presented to you and they would be there asking hard questions about it and making people really justify what they are saying.”

Scientist and SAC member

The uses of discomfort

Requirements for a successful futures project

Horizon scanning and futures work is not, generally, very comfortable. It takes people out of familiar disciplines and languages and forces them to explain themselves, to take on board new and awkward ideas, to revisit assumptions and to let go of cherished beliefs.

If it is to work properly, participants have to spend time they can't spare just on understanding other people and their ways of thinking. They have to submit to the unruly views of ground-level stakeholders and the obstinate authority of the steering group, and on top of all this they have to grapple with results that are themselves often distressing or unwelcome.

Futures work is also difficult because the risk of failure is high, and should be high. It's a new and still radical approach, its place in the policy making process is still being understood, and as one project manager put it, “horizon scanning and futures ought to be taking risks with projects. It ought to be doing things that otherwise wouldn't be funded within the mainstream. We should be having projects that fail.” Nobody wants to put their effort and reputation into a project that fails, but in the still-emerging world of futures and horizon scanning you cannot succeed unless you accept the risk of failure.

So what does futures work need?

It needs time for negotiation of the brief, both internally and with contractors. It needs time for people to come to a shared understanding of the question and a shared language with which to formulate an answer. It needs to allow for the possibility that a second wave of enquiry or a third might be needed before the answer is fully expressed. It needs permission to reshape the research programme as understanding grows, and time for the steering group and policy teams to understand what is being done and how it is being expressed, so that inappropriate challenge can be avoided and necessary challenge given space and weight.

It needs clear and sincere commitment up front from policy makers and steering group members as well as the futurists and managers. It needs to be very careful to avoid the ‘commission it and come back later’ approach common in more traditional scientific research. It needs to accept the possibility that the value of participation, mutual understanding and time spent thinking might just be greater than the usefulness of the end product. It needs to keep some energy and enthusiasm in reserve for the difficult task of translating its findings back into forms that will travel, survive by themselves and change people's minds. It needs to be clear, from the start, about what should be expected from it and what should not.

From its participants it needs generosity, tact, patience, insight, perseverance, an openness to new ideas and a willingness to share. It will reward them in kind.

Most of all, it needs purpose and relevance. It needs to be anchored to a policy question, or a strategic need to think ahead and around, or an institution-wide drive to anticipate the future. It needs people to be waiting for its completion, eager to grasp its conclusions and fold them back into the continuing formulation of policy.

It needs to be able to challenge in turn. Futures and horizon scanning work will throw up insights and warnings that should affect the consensus view of what is important, what needs to be addressed, what should be the subject of policy effort. Often those findings will emerge in unexpected places, byproducts of addressing other questions, and the discomfort will now be felt by policy makers and senior staff confronted with new and awkward challenges from unexpected directions.

Horizon scanning and futures work should be part of the Department's stream of consciousness: a continuous thread of research effort woven through every part of its thinking and action. It isn't easy or comfortable, but it will make for better, stronger, more resilient and more enduring policy.

Appendix 1: Glossary of futures methods

Quick definitions for some of the futures terms used in this document

Backcasting: Works backwards from a vision to the present, asking in increments: “if we really want to get there by that date, what steps will we have to take? What do we need to put in place 5, 10, 20 years in advance of that goal?”

Citizen Panels: a conference-type activity aimed to identify major public concerns on critical issues.

Creativity-based: e.g. Wild Cards or science fiction, gaming, scenarios writing.

Cross-Impact Analysis: a testing mechanism that uses systematic thinking to ask: ‘what are the key variables in this system?’ ‘What is the influence of a given variable on these trends?’ (e.g. positive or negative; none, low, medium or high). A square matrix is created to represent (quantitatively) the relationships among elements of a real or imagined system.

Delphi consultations: uses human judgement to generate forecasts. Tacit knowledge is collected from a group of experts by means of a series of questionnaires. People are asked: ‘what do you expect will happen in area X within the next five years, 10 years, 15 years, 20 years?’ Rigour is provided through indications of probability of occurrence, timeframes, inhibiting and enabling factors.

Evidence-based: e.g. Literature Review, Trend Extrapolation, Scanning.

Expertise-based: e.g. Roadmapping, Delphi.

Exploratory: Based on what we know today. Exploring possible futures, e.g. Delphi, Scenario Workshops, Cross-impact analysis and Trend extrapolation.

Interaction-based: e.g. conferences and seminars, Citizen Panels

Normative: based on what we want or desire for the future. Planning how to get there from today, e.g. Relevance trees, Morphological Analysis and Roadmapping.

Roadmapping: a sensemaking tool that helps chart the route to a desired future by identifying those things likely to inhibit or enable process.

Scenarios: imaginative pictures of the future, scenarios should be used as a means to an end not an end in themselves. They deal with extremes by looking creatively at unlikely possibilities with great impact. Done well, they cover the same dimensions as STEEP analysis, but this is among the most creative techniques: the outputs are supposed to be wild and wacky, and users should be very clear about what will make a scenario useful.

[Horizon] Scanning: detailed analysis of the main issues around a particular sector or theme of study. Scanning or environmental scanning is a process involving observation, examination, monitoring and systematic description of the environment. ‘Environment’ here means the socio-cultural, political, ecological and economic scene, or the community of the actor on which the events take place (i.e. region, country, organisation, etc). The word scanning refers to the mix of techniques used for searching through information on a subject (i.e. literature review, Web and database searching, bibliometric and patent databases examination, checking reports and workshop materials).

Simulation-gaming: a well-established practice in some political, economic and military atmospheres. A wide range of methods can be included in this category from: highly techno-driven virtual reality, computerized semi-quantitative simulations or policy/planning/analytical exercises based on complexity and game theory.

STEEP analysis: reviews the contextual environment and identifies societal, technological, environmental, economic and political drivers in operation.

Trend extrapolations: provides a rough idea of how past and present developments may look like in the future. Based on the assumption that the future is a continuation of observed past and present patterns.

Wild Cards: examining what could happen if certain low probability: high impact events actually occur. Dealing with surprising and unexpected possibilities, this technique is best used in small workshops with highly skilled, creative people.

Wind-tunnelling: regards scenarios as stories of the future and looks at the logic of the internal plot and whether the chain of events, actions and counteractions is plausible. Involves identifying what kind of economic, political, social, environmental and technical factors would need to exist for the scenario to be plausible. The Kees van der Heijden - professor of general and strategic management at the Graduate Business School of Strathclyde University, Glasgow – coined the phrase, referring to trying out a new aeroplane wing in a wind tunnel before letting it take off in the sky.

Appendix 2: Roles in Defra futures work

Qualities

Project manager

- Background in policy and project management but should have some futures knowledge.
- Knows Defra well. Astute at playing the system.
- Safe pair of hands. Sleeves rolled up. Patient, persevering.
- Well respected, able to command attention and commander resources.
- Good at repair and salvage work.
- Persuasive, networked, a good negotiator and influencer.
- Sound judgement for challenge and risk.
- Understands importance of delivery into action, not just into product.
- Ears and eyes open to opportunities that can add value.

Rewards

- Breaking new ground, gaining fresh insights and perspectives.
- Keeping people communicating and focused on the project's objectives despite complexity and uncertainty.
- Connecting across the organisation, bridging disciplines and taking a bird's eye view.
- Widening influence and deepening connections with stakeholders and the world "out there".
- Translating difficult findings into action.

Qualities

Steering Group Member

- The voice of governance for Defra.
- Committed to the intellectual content and to getting public value from the research.
- Comfortable working in multidisciplinary teams and at different levels.
- Reliable contributor. Turns up to meetings.
- Flexible and comfortable dealing with turbulence and uncertainty.
- Willing to ask naive or tough questions.
- Mounts challenge in a friendly but firm manner. Open to alternative points of view.
- Ears and eyes open to opportunities that could add value.
- Readiness to pull or help rescue projects in trouble.

Rewards

- Insights from transposing one's expertise into a new working context.
- Deepening connections - intellectual, organisational, interpersonal - through working in a multidisciplinary team.
- Widening field of vision for own area of expertise.
- Privileged glimpses into what the world might be like in years to come.
- Learning about unfamiliar and surprising methodologies.
- Satisfaction from keeping research on track, ensuring success and quality and mitigating risks.

Appendix 2: Roles in Defra futures work

Qualities

Contractor

- Enthusiasm for continuing the conversation beyond submission of final report.
- Honest about expertise on offer and any limitations.
- Comfortable working in a multidisciplinary team.
- Generous with own time, experience and networks.
- Attentive to the brief and the customer's needs.
- Fortright in challenging unhelpful assumptions, refining approach to ensure relevant and quality results.
- Patience when dealing with onerous or demanding institutional processes.
- Willing to be vulnerable, ask for help and show workings.
- Committed to working with Defra over the long-term to ensure the research makes a difference and gets used in all sorts of ways.

Qualities

Policy owner

- Dedicated to putting in time and energy before, during and after the research to ensure relevance.
- Curious and devoted to making connections between this and other work - past, present or future.
- Strong communicator. Able to articulate Defra's needs precisely and on a continual basis to ensure research is fit for purpose.
- Receptive to any training, support, challenge or advice that could result in better-informed decisions.
- Comfortable taking risks and dealing with uncertainty for example backing unpopular findings or approaches.
- Reliable and accessible to the contractors in case of need.
- Good at listening, giving feedback and asking useful questions.

Rewards

- Privilege doing research that could influence future government policy over the long-term.
- New knowledge and experience to be put to use elsewhere.
- Widening field of vision through working at a strategic level.
- Prestigious government contract for the portfolio.
- Access to wide range of experts and specialists with novel approaches.
- Sense of satisfaction when the research is picked up and used in decision-making.

Rewards

- Excitement from thinking beyond the ordinary time horizons of government policy or strategy making.
- Strengthened capacity - personal, team and Defra - to anticipate and plan for the future.
- Experimentation and serious play time.
- New knowledge and experience to be put to use elsewhere.
- Exposure to exciting and reusable ideas, information, insights, knowledge, evidence, experiences and networks.
- Refreshed relationships with extended network of stakeholders.
- Possibility to shift mindsets, empower and effect behavioural change at many levels.