

# 13. Environmental Scanning Processes in Queensland's Department of Transport and Main Roads

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I write this chapter not as an expert in environmental scanning, but in my role as a user of the outputs of an environmental scanning approach implemented in the Department of Transport and Main Roads in Queensland.<sup>1</sup> This chapter will investigate the kinds of future influences that might shape the direction taken in delivering a transport system. It focuses on three key areas of environmental scanning and its relationship to transport strategy: how we use environmental scanning to inform policy development; how we build capability; and how we use it to build capability for scanning and future thinking.

The department's environmental scanning function focuses on the sigmoid curves of ideas and strategies as applied to transport. Sigmoid curves represent the natural growth and death of an idea, product, concept or system. So, for instance, think of the horse and cart, the most common form of transport in the 1800s. We started domesticating horses, we took them as far as we could go, got the most out of them and then something else came along: the automobile. The use of horses began to decline as the use of automobiles increased. We look at this phenomenon in terms of: 'Well, where are the things we do poised on the curve?' We ask: 'Are they part of the old way of things or are they a new idea that has come along?' We use a scanning process to help us fill the gap in the middle, first to examine where we are on the curve, and second to try to identify what has not yet gained our attention that we might need to respond to.

The environmental scanning processes were adapted to the structure of the department and our business model. Essentially, there are three main areas of our business: planning, programming and delivery. The department uses several key questions to guide its projects: what does the Government want to achieve from transport? What systems do we need? How do we manage the systems we already have? What planning do we need to do for future avenues? How do we choose the areas in which to invest? Program development is really about: 'OK, we made a choice. Now, when are we going to do it? How are we

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<sup>1</sup> The process described is the one that was in place within the Queensland Department of Transport and Main Roads leading up to the July 2012 ANZSOG annual conference. As such, this chapter reflects that point in time and may not reflect current practice or direction.

going to do it? How are we going to deliver and finalise it?’ Ultimately, our business model centres on our scanning process, which occurs in the short term (a process covering one to four years) and in the long term (a 10-year process).

Transport is a huge issue in Queensland, particularly in the south-east, but also in regional and rural areas. The State has a vast network of roads, many of which are remote, but they carry the heavy burden of handling the movement of produce, resources and tourism.

The journey of the Department of Transport and Main Roads towards environmental scanning began in 1999 when it was two separate departments: Queensland Transport and the Main Roads Department. The two directors-general agreed that the departments needed to look at the future of transport for Queensland and to envision the State’s changing transport needs between 2000 and 2025. The two departments coordinated a project called ‘4-seeable Futures’, released in 2000, which planned for the eventuality of four hypothetical scenarios.

The first scenario was that of the ‘Super City’: the transformation of the Gold Coast, Sunshine Coast and Brisbane into one conjoined mega-city. The second scenario was that of ‘Coastal Bloom’: the establishment of a series of medium-density urban centres up the State’s east coast. The third scenario was that of the ‘Carbon Crunch’, and the fourth, ‘Global Bust’. Since 1999 all four of these scenarios have transpired to some degree. They were literally foreseeable futures that were foreseen.

In the initial phases of environmental scanning we also examined unconventional approaches to transport. For example, the department examined research into flying cars. There was some incredibly good analysis done; however, the only attention this research received was a banner headline on the front page of *The Courier-Mail*: ‘The Transport Department Predicts Flying Cars in Brisbane.’ Of course, this resulted in some sensitivity about doing these sorts of exercises and caused a bit of pain for the senior management of that time.

The big question with this sort of analytical process is how to implement it and how to use it within the agency. Arguably this research did not end up being used that effectively in the agency because there was no real plan to do something meaningful with it.

Ten years later the Departments of Transport and Main Roads joined into one agency in recognition of overlapping roles and responsibilities, especially in relation to road building and transport network planning. The new, larger department adopted a wider lens in its approach; it no longer considered roads to be the only solution to a transport problem, and it had a more long-term strategic vision. As a result, the agency decided to have another look at the

forecasting environmental scanning process; rather than doing it in a stand-alone report, the agency built in some capacity to keep it on the agenda all the time in order to refresh thinking about it.

The first steps of the department's environmental scanning model focused on the influences on transport as a way of understanding the needs of the transport system. From there, the department formulated a transport system vision that implemented its strategies, specific plans, investment process, program, activities and evaluation. Environmental scanning was embedded in that process. It also incorporated the shorter-term, one to four-year corporate cycle. In effect, the agency said: 'We need to do environmental scanning. It needs to be embedded in the way the department works and thinks about its place in the world.'

In 2009, when the new department completed its environmental scan, it analysed the greater environmental trends that had arisen over the past decade, such as world energy use. We also looked at various future time scales. We formulated objectives for the near term (up to 2020), the medium term and the long term (up to 2070). This initial scanning process was not about answering the questions or deciding what to look at. It was merely to highlight the issues. Some of the questions we looked at were quite useful: what are the most important infrastructure platforms of the twenty-first century? What does sustainable transport look like? What are the policies and strategies that support it? If our transport system is a product of the way we live how will we need to change to reflect the way we will live? How might our concepts and language change? For example, what does it mean when organisations like IBM talk about enterprise ecosystems? We considered the sorts of language and systems currently used, and which ideas, concepts and principles are at their use-by date. These were the kinds of questions that were in people's minds.

There are a few other tools we use: the environmental scan and the annual opportunities and challenges scan or 'scanning radar'. We do 'one-pagers', each of which is a very simple analysis. A small team in one of our branches finds interesting media snippets and does a 'one-pager'. This addresses questions such as: what's the issue? What's the time frame involved? What are the opportunities and impacts on the agency? Where do we think it might affect our various business groups? What are we doing? This is circulated to an email group within the agency. The 'one-pagers' are for departmental use only but we do have something called an 'eCompass' with a broader distribution. This is how we have embedded the process into our planning cycles. This also relates to the three areas I referred to at the beginning: how do we use environmental scanning to impact strategic planning? How do we impact policy development? How do we impact capability building?

When we undertake a ‘scanning radar’ exercise, we use a diagnostic methodology. It’s a simplistic representation of the key impacts in a particular area that we are interested in and lists the key issues according to seven scanned categories. We look for changes such as economic shifts and changes in technology and infrastructure. We then attribute them with a level of impact—high, medium or low. It’s a simple way of showing where things are going. They are then summarised onto a radar diagram, which lists the seven categories.

We did this scanning exercise recently with our senior leadership team: the director-general, the deputies and all the general managers of the different divisions. We highlighted what things are changing, where the shifts were and the opportunities and challenges the researchers saw as coming out of their analysis. We then asked the senior leadership team: ‘Where do you think these opportunities and challenges fit on the sigmoid curves? Are they a part of the old way of doing things? When do you think they will impact us? How well prepared do you think we are for responding to the challenges that might come?’ Similarly, we asked of the other changes that emerged: ‘If we haven’t started thinking about them, when are we going to and are we ready to respond? Are they a part of the new way of doing things?’ Using the old ‘post-it’ note process, the senior leadership team plotted the most important challenges and opportunities they saw. The direct output of this scanning process went into our corporate plan. Each of the business divisions is required to respond in their business planning process to the strategic challenges and opportunities.

Informing policy development is the next thing. The scanning radar identified some issues in terms of what is happening in the freight space. Online shopping and intelligent transport systems are really driving changes to the way logistics firms use their trucks, move their freight around, how they load and unload and what sort of freight there is. The scanning team went to the Queensland Transport Logistics Council, a private sector body, to work through some of the issues that have been identified in the scanning and to get some industry input into our Queensland Freight Strategy. This was based on the changes that were likely to occur in the future. This is just an example of how environmental scanning is informing a Statewide strategy and helping us to engage with our constituencies a little more closely. This was quite useful.

The main question the department faces with scanning is: how do we translate it into direct action? It can seem too blue-sky, too airy-fairy. How do we actually make it work for people? Part of the process of educating our own people is to work with industry to see the practicality, connections and implications for them.

The third aspect is about capability building. We have a voluntary scanning reference group across the agency so people from every division who are interested in future thinking can be kept up-to-date with all the developments.

We use them to shape the scanning process each year. We run staff workshops. When we have done the radar we present it to the staff workshops, saying: 'Here is the radar; this is what it's telling us; these are the things we need to look out for as they might impact on us over time.' We also present it to senior management workshops. We have also done presentations to different divisional teams as they go through their business planning process. We have run various master classes where we get the foresight consultant in to workshop ideas and findings from the environmental scanning with various groups in the organisation. We are really trying to build that constant level of interaction and interest within the agency.

Outside the agency we play a part in various external networks around scanning. There is the Queensland future scanning network and the national one. We are working with agencies like CSIRO and the National Transport Commission. CSIRO in particular was interested in what we thought about some of the transport implications of mega trends. We produce the eCompass, which is the public version of all the latest trends and tips. This is distributed across the public sector and to various private sector individuals who have expressed an interest.

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