

## Sustainability & Social Innovation in Infrastructure & Construction

Authors: Nathan Robertson-Ball & Richard Boele, Banarra

In March 2015 Hitachi Australia hosted a Stakeholder Dialogue, facilitated by Banarra. This dialogue provided an opportunity for sustainability and corporate responsibility professionals in the infrastructure and construction sectors to discuss their views and experiences in regards to the most pressing environmental, social and governance issues facing the industry today. The group was also able to project forward to consider how those issues could be solved, and what new challenges will have emerged in the next five years.

A summary of this half-day Stakeholder Dialogue follows.

### Background

The Stakeholder Dialogue was held against a background of several significant developments, including:

- The release of the Fourth Intergenerational Report by the Federal Government the previous week (in March 2015), which projected that Australia's population will grow to 39.7 million people by 2054-55<sup>1</sup>, meaning a significant amount of infrastructure and construction will be needed to accommodate this change;
- The 2013 State of the Cities<sup>2</sup> report, which outlines the challenges and opportunities for all of Australia's major cities. One such challenge discussed in this report is climate change and its range of impacts, including rising temperatures, changing rainfall patterns and the frequency and intensity of natural disasters. These will all have considerable impacts on the built environment, our infrastructure and how people interact with these; and
- The number of major infrastructure projects currently under development or proposed across Australia, including: the Barangaroo development, Sydney North-West rail link, second Sydney Harbour crossing, Melbourne cross-city expressway and the Perth airport train line, as well as the ongoing discussions about 'opening up' northern Australia to dams and other types of development.

In this context, the Dialogue's primary purpose was to discuss and understand current and future sustainability issues within the infrastructure and construction sectors, as well as potential solutions to help address these.

---

<sup>1</sup> 2015 Intergenerational Report, (2015, March 15). Retrieved from [http://www.treasury.gov.au/~media/Treasury/Publications%20and%20Media/Publications/2015/2015%20Intergenerational%20Report/Downloads/PDF/04\\_Chapter\\_1.ashx](http://www.treasury.gov.au/~media/Treasury/Publications%20and%20Media/Publications/2015/2015%20Intergenerational%20Report/Downloads/PDF/04_Chapter_1.ashx), page 3.

<sup>2</sup> State of Australian Cities, (2015, March 15). Retrieved from <http://www.infrastructure.gov.au/infrastructure/pab/soac/>.

## **Session 1: Common social and environmental issues facing the infrastructure and construction sectors today, and potential shared value solutions**

The first discussion kicked off with the question as to whether or not the infrastructure and construction sectors have reached a level of maturity in which they have identified, understood and responded to their most significant environmental issues. It was acknowledged that the efficient management of resources, including energy, waste and water, is generally embedded within design and development plans; but a broader understanding of the environmental impacts of large infrastructure projects is largely misunderstood, or not considered.

This led to an in-depth conversation about the role of language and definitions within companies and across the sectors more broadly, and how the terms 'sustainability', 'corporate responsibility', 'triple bottom line', 'environmental sustainability' and 'social responsibility' can be interchangeable when discussing these types of issues. This lack of a consistent understanding can lead to confusion and hinder progress towards improved sustainability. As well, this can lead to assumptions being made about what is commonly understood and can lead to frustration later in the project lifecycle. However, the group acknowledged that this is common in the sustainability profession and something that has occurred since the 1990s, with language evolving in that time from the use of 'triple bottom line' through to hot topics today like 'creating shared value', 'conscious capitalism' and the 'circular economy'.

When the group was asked to describe their views on how the sectors and their stakeholders consider social sustainability, it was generally agreed that the level of awareness and understanding of the potential meaning varied and the concept was not as well understood as environmental sustainability. However, the introduction and increasing use of sustainability frameworks, tools and certifications that include social considerations is helping to change this. These types of initiatives are increasingly ensuring that social considerations are more explicitly included in projects from design through to operations.

Participants discussed their efforts to engage with colleagues and clients on sustainability to get the environmental and social impacts more comprehensively and consistently considered through an asset's lifecycle. It was agreed that this is a time-intensive and challenging exercise that requires adaptability to the audience, story-telling expertise and a clear value proposition. This proposition should include a mix of hard business metrics as well as the non-financial performance indicators and associated value.

Another challenge is that infrastructure projects are often commissioned by government and delivered and operated using a range of partnership arrangements between the private and public sectors. The role of each party and tensions in achieving sustainability outcomes was discussed.

Two paradigms were presented: that government should lead; and that the private sector knows best. This creates a tension in how projects are tendered, awarded, built and operated where lowest cost is perceived, often correctly, to be the most important criteria for decision-making. Consequently the sustainability objectives and initiatives of the project can be compromised. In response, the group debated that both the public and private sectors need to re-consider their approach and test alternative ways of seeking tenders and awarding projects. This could potentially involve government considering sustainability during the tender process through the use of a broader set of value drivers. At the same time, the private sector needs to communicate and demonstrate these alternate types of value in a clearer and more effective way.

In light of this discussion, the group identified several potential drivers of change in achieving better sustainability outcomes, including:

- Demonstrating the benefits from sustainability to the project by measuring the business and social value;

- Seeking strong alignment of values between the proponent and contractors – in many participants' experiences their greatest successes occurred in these contexts as it created the space for collaboration and innovation;
- Using rating tools, such as those provided by the Infrastructure Sustainability Council of Australia (ISCA), and ultimately seeing their use informing project valuing processes. It was recognised that this has only been seen on a few occasions but a more wide-scale take-up could help place greater value on the environmental and social dimensions of a project;
- Capitalising on the rising interest from insurance companies to better understand the non-financial elements of projects, including the impact and value of these; and
- Capitalising on the growing interest of investors to understand the non-financial impacts of their investments. This is to both prevent issues from the negative impacts associated with their investments as well as to measure positive sustainability impacts; social bonds were mentioned in regard to the latter. In terms of negative impacts, the coal divestment movement was provided as an example of how rapidly an investments-focused campaign can gain traction.

This first session ended with participants examining the challenge of addressing the sustainability of existing infrastructure and assets, as these represent the bulk of what can be worked with today and for decades to come. It was asserted that if the focus is only on the sustainability performance of new developments, larger opportunities on existing assets will be missed. The group was in agreement that enhancing and refurbishing existing assets is a critical task, particularly in the context of climate change as it was noted that its impacts were already affecting the operations and performance of existing assets.

#### **Other key take-outs**

- Society is the key stakeholder, but is often not engaged or invited to participate in decision-making in regards to infrastructure planning. There has been progress on business to business (B2B) and on some on business to government (and vice versa) engagement. However with a shift to business or government to society (B2S) conversation, it's possible to raise the standards and expectations of the public on the sustainability attributes of a project and therefore support and drive change in the sectors. There is a strong understanding of many environmental and social issues relevant to infrastructure projects and the infrastructure and construction sectors themselves (such as climate change or housing affordability). However, there remains a significant challenge of creating change and aligning the values of stakeholders to better include sustainability principles within projects, or directly address these issues. For sustainability professionals there is the opportunity to better understand how to influence colleagues and others in their value chain to develop processes that deliver improved sustainability outcomes.
- Climate change is widely believed to be an imminent threat to infrastructure assets across the country, while the attitudes in all sectors lags behind the need to respond by at least adapting to the changes that will occur.

#### **Key questions**

- What is the most efficient and effective way to rapidly build the knowledge and skills of a sector in regards to sustainability and educate them on the potential untapped opportunities of their work?
- Who role is it is it to drive sustainability innovation in infrastructure and construction – the tenderer, the developer or the user?
- What will be the impact of valuers, insurance and finance institutions and investors in seeing the greater use of non-financial performance metrics in development?

## **Session 2: Future social and environmental issues facing the infrastructure and construction industry, and potential shared value solutions**

The second and final session encouraged participants to project their sectors five years into the future and consider what gains sustainability will have made, as well as to consider what the new challenges would be. The group were challenged to consider how they will work differently in this future context, and what future would they have created.

The discussion quickly turned to indicators and metrics and the role of these in better demonstrating performance, outcomes and impact over time. It was clear that many organisations are struggling to understand how to measure the impacts and outcomes of their initiatives, both in regards to social and environmental performance. However, it is increasingly common for companies to be discussing and commencing their impact measurement journey now. It was noted by an Executive in attendance that *"having non-financial indicators would be great to have and measure the progress and success of an entire organisation"*.

Participants then shared how some organisations are looking at understanding the social return on investment (SROI) of their initiatives, and using this methodology to measure social impact. There were assertions that a strength of the SROI methodology is that it monetises social impacts and can therefore be used as a way of presenting information and results that can be easily understood by senior decision-makers.

This was challenged by the group, and the example was presented of the Australian resources sector and their approach to occupational health and safety and how this had evolved rapidly in recent decades. In the resources sector, decisions were made to prioritise health and safety without monetising the life of an employee, and as a result, changes in how health and safety is managed across the industry have been significant and it is now the norm to strive for zero harm. The question was then raised, if the resources sector had tried to monetise the life of an employee and only made decisions made on that dollar value, where would the industry be now in terms of its safety performance?

In the context of the infrastructure and construction sectors, which have multiple and complex environmental and social impacts, both positive and negative, attempting to monetise these would be a time- and resource-intensive undertaking. It was seen as unlikely to deliver an accurate measurement due to the number of assumptions required to do so. Measuring the impacts and outcomes of a development is a growing and essential skill of a sustainability practitioner, and something that is likely to be increasingly required by valuers, insurance companies, financiers and investors. However, it is important to understand the balance between the desire of wanting to monetise these outcomes and impacts and the resources required to do this. The group discussed alternative value-based measurement frameworks that blend hard and soft metrics as a way forward.

The final discussion of this session saw all participants posed with the question of what change they envision will have occurred in their sector in five years' time. The responses included a discussion on the current power structure in many organisations that sees decision-making centralised and as a result a small group of people hold a great amount of information. Participants thought that this is likely to be replaced by a structure where more people have more information, largely due to new technologies and information sharing platforms that are based on emergent and diverse sources of knowledge (such as social media), and are therefore more engaged and able to be included in decision-making processes.

At the same time, there was a belief amongst participants that as younger generations progress through organisations the sustainability impacts will be more comprehensively and proactively considered and practically applied in projects due to the different value system they hold. It was believed by some

participants that this would result in more stringent sustainability requirements included in tendering and contract agreements, and therefore raise performance.

### **Other key take-outs**

- It was acknowledged that developing and piloting innovative practices and ideas is required, but can be held back by a level of uncertainty or risk. The Green Building Council of Australia (GBCA) innovation challenges in Green Star tools were discussed as one way of encouraging innovation.
- There is a role for financiers and insurers to play in regards to introducing alternative funding models such as green and social bonds that recognise sustainability, or environmental and social, performance.
- There is an ongoing conversation about how to measure and report impact and sustainability outcomes, as well as uncertainty as to how to do this beyond a social return on investment methodology.
- Internal communication and target setting are important to help drive change. The example of Mirvac and their 'This Changes Everything' sustainability strategy was discussed as a company who has set ambitious goals and have been courageous in doing so as they don't know yet how they will achieve all of them. If the outcome is change, then the vision needs to be out there.
- Setting clear targets internally and communicating these externally to drive accountability creates a sense of urgency, and encourages collaboration and innovation to help reach targets.

### **Key questions**

- Instead of trying to monetise all environmental and social impacts, is there the opportunity to educate decision-makers so they become more confident and comfortable using non-financial information instead of financial metrics only?
- Will the public and private sectors develop and establish a new way of working together that sees a closer alignment in values and a desire to deliver meaningful social and environmental outcomes through infrastructure that helps solve the issues important to stakeholders?