EDG 81 GH • October 2014 (Edited 29.08.2018)
environmentdesignguide.com.au
Reviewed and approved for currency in August 2018

ISSN 1442-5017

Winning hearts and minds: the role of emotion and logic in sustainable design decision making

Gerard Healey

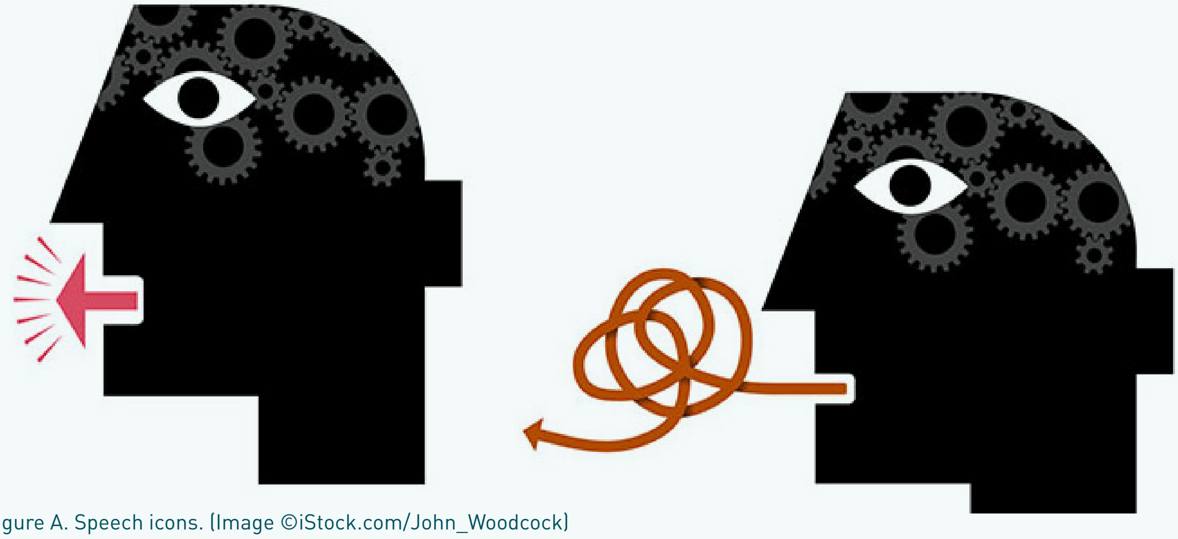

Figure A. Speech icons. (Image ©iStock.com/John_Woodcock)

ABSTRACT

Tougher economic times have led to an increasing scrutiny of sustainability initiatives. Despite this, the environmental imperatives for action are not diminishing, which means that designers must use all available tools to sell the sustainability of our designs. This paper summarises why the traditional economic, moralistic and information-based approaches can be inadequate to engage clients, and draws upon a literature review and the author's own experiences to propose a broader range of communication tools for pitching sustainability initiatives to decision makers.

Introduction

In this tough economic period, developers and owners are increasingly scrutinising what goes into their buildings. Even if there is initial interest, anything seen as not fundamental to a project is at risk of being 'value-managed' out on a tight budget. The environmental imperatives for action are not diminishing though, so how do we breathe new life into sustainability and motivate action?

Traditional approaches to motivate action around sustainability focus on information, economics or moral appeals (Nisbet 2009, Griskevicus et al. 2010). Limiting ourselves to these approaches may, at best, result in missed opportunities to foster support for more environmentally friendly buildings. At worst, the wrong approach can actually decrease uptake of environmental initiatives. The current focus within the green building community to increase uptake is based on economic arguments and information (Kats et al. 2003, GBCA 2008, Slaughter 2013, WGBC 2013). There remains an opportunity for designers and project sponsors to better equip themselves to build support for sustainability in projects. The aim of this paper is to win hearts and minds, not hearts or minds.

This paper draws upon a range of literature including behavioural economics, judgement and decision making, green buildings and sustainability communication, as well as my own experiences as an engineer and sustainable building practitioner of over 10 years, to suggest a number of communication techniques that may help designers and project sponsors more effectively sell the sustainability of their projects. Gonzale et al. (1988) illustrate the potential impact of drawing on psychology to better sell sustainability. They found that energy auditors trained to more effectively engage and motivate homeowners achieved a 30% greater uptake in energy efficiency actions than equally experienced auditors who did not receive the communication training. The techniques suggested in this paper should be viewed as informed starting points, rather than as sure-fire recipes for success (Kahan 2013). It will only be through learning-by-doing that you will come to understand what works for you and for the particular clients you work with.

This paper is not about using 'spin' to manipulate decision makers. Green wash must be avoided from both an ethical and legal standpoint (ACCC 2011, RAIA 2006, Engineers Australia 2010). This paper shares the position that 'Decision makers do not make choices in a vacuum. They make them in an environment where many features, noticed and unnoticed, can influence their decisions' (Thaler et al. 2010). In presenting information to decision makers to enable them to make a choice, you are inevitably framing the situation, and emphasising some aspects over others (Nisbet 2009). This paper shows how the decision making environment can affect outcomes and how you can use this, while being honest and ethical. The goal is similar to that of Thaler et al. (2010), which is to 'help nudge people to make better choices (as judged by themselves) without forcing certain outcomes upon anyone'.

The paper begins by showing why it is useful to have a toolbox of communication techniques, based on related literature and the author's personal experience. This is followed by a description of techniques to broaden the range of options for communicating the merits of a particular design.

Understanding sustainable design decision making

The notion of rational decision making is intuitively appealing because people are generally thought to be effective at learning from experience and pursuing their goals, and making good decisions increases our chances of success in a competitive environment (Tversky and Kahnmen 1986). However, a wide range of research shows that people do not always maximise value or utility, as the classical economic model implies. Arnott (1998) describes 37 different decision making biases.

The following phenomena will be discussed further because they can affect sustainability decision making:

- Double standards
- Preconceptions
- Framing choices in terms of losses or gains
- Framing and preconceptions
- Interpretation and filtering
- Equivocality and uncertainty
- The influence of social norms
- Mortality and fear as a motivator
- Status and reputation

The following review of decision making biases is offered to help you to reflect on your own experiences with regards to decision making and sustainability in projects.

DOUBLE STANDARDS

Cost and pay-back are commonly viewed as the key to the success or failure of sustainable building initiatives. However, building projects involve a wide range of complex decisions that are not all made using the same process or quantitative and qualitative criteria. If we can be aware of the diverse approaches to decision making, even within a project, we can better promote sustainability initiatives. Kinsley and DeLeon (2009 p.17) note that climate mitigation projects are generally subject to strict payback standards, whereas other building features (e.g. feature wood panelling) are not. I have seen decisions go against sustainability in this way and I have seen features that arguably contribute to sustainability included in buildings without any quantitative consideration.

For example, developers often want more glazing despite the added expense compared to solid facades because they believe it will help them to lease an office tenancy more easily. Here the qualitative sense that glass facades are desirable trumps the quantitative cost consideration.

In another example, a hospital's finance director required a three-year payback period for all company investments. The project had outdoor break areas for all staff rooms not subject to any payback period analysis. Instead they were seen as a functional requirement related to attracting and retaining staff – a key issue on the project risk register, given skills shortages in key professions. In the hospital example, a key functional requirement overrides the payback period requirement. Similarly, on two high-rise office fit-outs, intra-tenancy stairs spanning six to seven levels were installed, costing about $1.5 million each. The stairs arguably have positive environmental, health, social and productivity benefits, yet no cost-benefit feasibility study was undertaken to justify their inclusion. Such examples begin to illustrate the diverse ways in which decisions are made and that payback is not always the driver.

PRECONCEPTIONS

Project stakeholders may bring preconceptions to the decision making process, such as views regarding particular terms, activities or objects. As Hoffman and Henn (2008) note, some people view the term 'green building' negatively because they associate it with the environmental movement. I have witnessed this in my own practice when I asked the following as an ice-breaking question for a workshop: 'Is ecologically sustainable design tree hugging or good business?' The designers in the room said 'good business', however the client's finance manager said 'tree hugging'.

Preconceptions can also manifest in other ways, such as in the assumption that 'green' products cost more and are of lower quality or less effective (Griskevicius et al. 2010). The washing machine manufacturer Whirlpool reportedly experienced this, and had to overcome consumers' perceptions that better water efficiency meant poorer washing performance (Hoffman 2006).

A persistent preconception for green buildings relates to cost, with design stage estimates and surveys suggesting cost premiums in the range of 0.9 to 29%, despite studies showing actual premiums in the range of -0.4 to 12.5% (World Green Building Council 2013). In part I believe this perception persists because the industry is highly aware of the expensive, complicated or risky sustainability features and is unaware of, or simply does not remember, the simple, cheap and reliable features. There is a psychological basis for this, with psychologists noting that the bad is stronger than good in forming lasting memories, and studies on recall of emotive events indicating that people tend to remember negative events in a ratio of four-to-one over positive (Baumeister et al. 2001). The World Green Building Council (2013) suggests that people may overestimate the costs of green buildings because they have trouble forgetting historical data and fail to account for price decreases (particularly relevant for photovoltaics in recent years), or they have become anchored by showcase buildings that are widely publicised with costly features and find it difficult to accurately adjust their thinking (see Ariely 2006 and Arnott 1998 for discussion on anchoring).

Preconceptions are not binary, with some people having positive and others having negative ones. It is also possible for people to be ambivalent, holding positive and negative opinions at the same time (Chang 2011). Chang notes that preconceptions might relate to aspects of the product (i.e. higher price, lower quality, lower effectiveness) or to the decision maker (i.e. ability to influence environmental issues, scepticism of green claims, and emotional benefits).

FRAMING IN TERMS OF LOSSES OR GAINS

How information is presented can affect how people respond (Nisbet 2009). This can occur even when people are presented with the same quantitative outcomes framed in different ways. Extensive research has shown that people tend to react differently to a choice depending on whether the options are framed as losses or gains. Choices where options are described in terms of gains usually result in conservative (risk averse) decisions, whereas the same choice framed in terms of losses often result in less conservative decisions (Tversky and Kahnman 1986).

A possible example of this for buildings was told to me by a large developer in Melbourne. They had an apartment project with a limited number of parking spaces, so some apartments needed to be sold without parking. They initially offered apartments at a set price, with a discount for having no parking; however, they received little interest in this option. They later tried a different approach of offering the apartments with a parking space charged as an optional extra. This time they had much greater interest in the no parking space option.

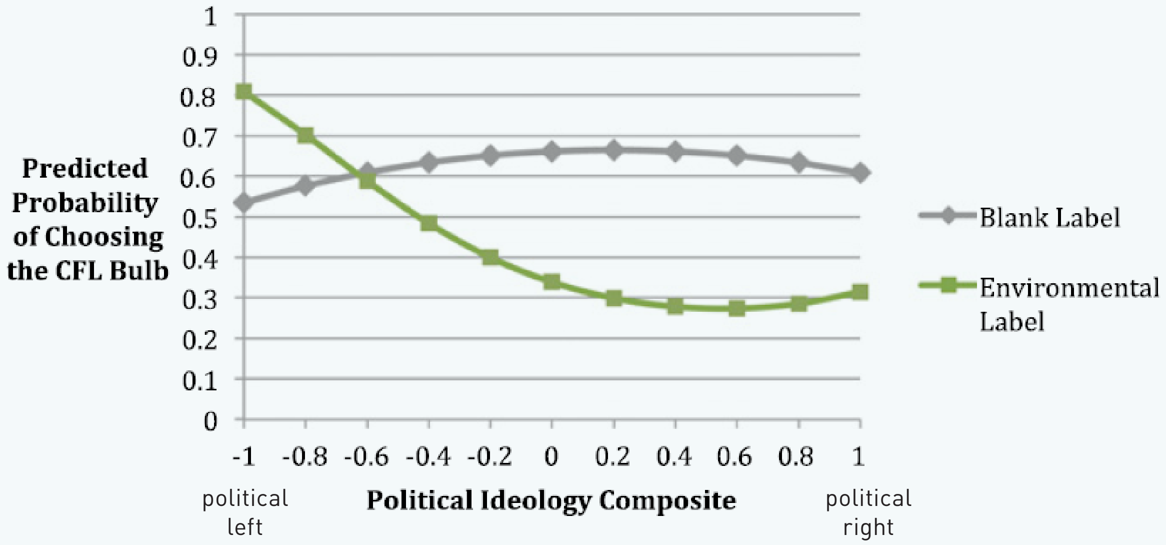

Figure 1. Uptake of compact fluorescent light globes with and without a 'save the environment' label (Gromet et al. 2013), reproduced with permission from PNAS and D Gromet.

An implication for sustainability is that focusing on the gains may not be as effective as talking about the losses due to inaction (note also the different implied defaults). For example, compare the difference between saving $350 per year by using energy conservation methods (which implies that the traditional approach is the default) versus losing $350 per year by not using energy conservation methods (which implies that the sustainable approach is the default); (Heinzle 2010). Dinner et al. (2010) identify three reasons why the default option may be chosen over alternatives: it takes the least time and effort, the default may be viewed as an implied recommendation, and because the default becomes the reference point for comparison.

FRAMING AND PRECONCEPTIONS

Preconceptions and framing can combine to affect decision making as the following example shows.

In a study in the US on energy efficiency, participants were given $2 to purchase a light bulb, and any money they did not spend on the light bulb they kept for themselves (Gromet et al. 2013). Their choice was between incandescent and compact fluorescent light (CFL) bulbs that produced equivalent brightness. Participants were split into four groups based on the relative cost of the globes and whether or not the CFL was labelled with a 'Protect the Environment' sticker. In one pair of tests the bulbs had the same price ($0.50), and in the other pair, the CFL bulb was more expensive ($1.50) than the incandescent bulb ($0.50). All participants were given the same technical information about the two light bulb options – the CFL bulb lasts for 9,000 more hours and reduces energy cost by 75%. Participants also completed a survey that ranked how politically conservative (right) or liberal (left) they were.

When the bulbs were the same price, the label had no effect. Almost all participants chose the CFL bulb, suggesting that long-term economic considerations dominated their choice. In contrast, when the CFL bulb was more expensive than the incandescent bulb, the sticker and political ideology had a significant effect. When the CFL was environmentally labelled, 30% of people who were politically conservative (right-leaning) chose the CFL. However, when the label was absent, 60% – twice as many conservative people – chose the CFL. Only the most politically left leaning showed a reduction when the label was absent – from 70 to 80% with the label to 50 to 60% uptake with no label (Gromet et al. 2013). This implies that highlighting sustainability initiatives on a project may, for some people, result in reduced uptake of initiatives. In situations like this there may be a case for 'sustainability smuggling', which I will discuss further in 'Frame the message to the audience'.

INTERPRETATION AND FILTERING

How people interpret facts can be affected by a cultural lens. For potentially polarizing issues such as climate change, personal opinions can signal political ideology or other cultural affiliations. This is quite apparent in Australian and American politics at present. Psychology and law researchers have found that for polarising issues, what people consider to be evidence and how they interpret it can be significantly affected by the accepted wisdom of their cultural group. In such situations, 'groups with opposing values often become more polarized, not less, when exposed to scientifically sound information' (Kahan 2010). This is not a simply a case of poorly educated people following the pack. Kahan et al. (2012) found that 'Members of the public with the highest degrees of science literacy and technical reasoning capacity were not the most concerned about climate change. Rather, they were the ones among whom cultural polarization was greatest.'

EQUIVOCALITY AND UNCERTAINTY

Levander (2011) notes that more information does not necessarily help make decisions because ambiguity in decision making can occur from equivocality as well as uncertainty. According to Levander, equivocality is related to knowing what questions to ask in order to make a decision, while uncertainty is related to having the information to answer the questions. One of the challenges with proposing something new, whether for sustainability or other reasons, is that it can challenge a client's frame of reference because they do not know what questions to ask. The result can be paralysis, with clients asking for more information, but still not able to decide (Levander 2011). In contrast, clients know how to evaluate familiar options and what information they need to do so.

I have experienced this on a hospital project, in response to an issue related to air quality. There were proposed approaches which, though common practice overseas, were unconventional in Australia. The decision making by the client group was a drawn out process, with repeated requests for more information, and reluctance to depart from the familiar conventional approach, despite that approach not solving the air quality issue. Eventually the innovative approach was installed (Healey 2011).

INFLUENCE OF SOCIAL NORMS

Research shows that we are not necessarily good at understanding the sources of our motivation. Nolan et al. (2008) surveyed Californians about their underlying beliefs and what the respondents thought motivated their own energy conservation behaviour, and then used the findings to design a campaign to encourage energy reduction. They found that the respondents thought, both before and after the campaign, that the financial, environmental or social benefits of saving energy would be more motivating than peer norms (i.e. what other people do). However, messages using descriptive peer norms (i.e. '99% of people in your community reported turning off unnecessary lights to save energy') resulted in the largest measured energy savings. Goldstein et al. (2008) similarly found that using descriptive norms was far more effective at motivating environmental behaviour (re-using hotel towels) than typical save-the-environment messages.

MORTALITY AND FEAR AS MOTIVATORS

Fear and guilt are sometimes used to try to motivate environmental action, such as with images of melting of ice caps, or the impact on future generations. The following two studies suggest that these sorts of approaches should be used with caution.

Fritsche and Hafner (2012) found that when study participants were prompted to reflect on their own mortality, people whose sense of self linked with the environment showed slightly increased environmental concern and motivation to protect the environment. However, for people who did not link their identity to the environment, reflecting on their own mortality decreased motivation and concern about the environment to a much greater extent than the increase in the pro-environment group.

Figure 2. An example image used to motivate environmental action. (Image adapted from Taymaz Valley via flickr, CC BY 2.0). Retrieved from <https://www.flickr.com/photos/taymazvalley/14253580252>.

O'Neill and Nicholson-Cole (2009) studied the impact that different representations of climate change had on people's engagement and motivation to act. They found that the shock and fear inducing images that 'made participants have the greatest sense of climate change being important were also dis-empowering at a personal level. These images were said to drive feelings of helplessness, remoteness, and lack of control.' Conversely, the researchers also found that the images 'making participants feel most able to do something about climate change did not hook their interest in the issue and were more likely to make people feel that climate change was unimportant' (O'Neill and Nicholson-Cole 2009).

STATUS AND REPUTATION

The importance of intangibles such as reputation has been highlighted by various people. Intangibles can represent significant corporate value; the former CEO of Westpac, David Morgan, reportedly said 'Net tangible assets typically explain only 30% of the market value [of an organisation], with intangibles accounting for the rest' (Stuart 2008).

Kiron et al. (2013) surveyed 2600 corporate executives and managers, asking respondents where they saw the greatest benefits to their organisation from sustainability; the top response was improved brand reputation, followed by better innovation of offerings and improved perception of how well the company is managed. They also noted that increasing brand value, for example through achieving high positions on sustainability rankings, can be sufficiently compelling to constitute the entire business case. Yet despite the clear impact of intangibles, the top obstacle reported in evaluating the business case for sustainability was the difficulty in quantifying intangibles (Kiron et al. 2013).

At an individual level, status motives can drive uptake of environmentally friendly products. Griskevicius et al. (2010) found in a lab experiment that people motivated by status showed increased preference for green products compared to people who were not status motivated. They posit that this is a form of competitive altruism that may occur within social groups that value environmental behaviour as community-spirited. In subsequent tests, they found that preference for the environmentally friendly products decreased for status motivated individuals when the purchasing was private rather than public, and even when the products were cheaper than non-green equivalents (Griskevicius et al. 2010).

SUMMARY

As these examples show, decision making related to sustainability is more nuanced than implied by approaches that rely simply on:

- Information – How information is framed and interpreted can have an impact, assuming that the information is answering the right questions in the first place.
- Classic economics – People may apply economic criteria to some decisions, but use qualitative criteria for others on the same project.
- Moral appeals – Social norms can be more powerful motivators than moral appeals.
- Fear – There is a risk that people may fail to engage with an issue unless they understand the local relevance and the potential for them to have an impact.

With this improved understanding of sustainability decision making, let us now explore some tools you can use to help sell the sustainability of your designs.

Tools

The following communication approaches may be able to help you better sell sustainability in your projects:

- Understand the decision makers, so that you know what is important to them
- Speak the language of the audience, so that they understand what you are saying
- Ask the right questions, to help them identify the decisions that should be made and how to evaluate options
- Be quantitative (and credible) where possible, to provide reassurance that a particular option is the right one
- Frame the message to the audience, so that your proposals resonate and foster audience engagement rather than distract or bore
- Make sustainability meaningful, so that project stakeholders become advocates of your sustainable design proposals

I use these tools on projects to help me be more effective in my role as an ESD consultant. As noted earlier, you should regard them as informed starting points from which to explore what works for you and the project stakeholders you work with. With practice you may find, as I do, that you vary how you use the tools with different stakeholders; for example being more overt or subtle, or even not using some of them at all. The key is to be mindful of how engaged project stakeholders seem and adjusting your approach accordingly.

UNDERSTAND THE DECISION MAKERS

In order to sell sustainability effectively, it is useful to understand the decision maker, their peers and the decision making context. Understanding the client's drivers should help designers to identify opportunities that are more likely to resonate. Corporate surveys provide some insight; Kiron et al. (2013) found that nearly 50% of companies reported having changed their business models as a result of sustainability opportunities, with the top four reasons being customer preferences, resource scarcity, competitors increasing commitment to sustainability and legislative or

Aspect	Prompting questions	Potential answers
Core reason for being	A building is a means to an end – what is the end for the client?	• Making money by leasing space • Research and education • Healing people • Help attract philanthropy • A home to raise a family • A personal sanctuary
Costs	What are the main capital costs for the project? Are there opportunities to avoid capital costs? What will be the main operating costs? How does the design affect each of these costs?	• Energy efficient façade leading to reduced chiller size, which in turn leads to a reduced substation size • Well-designed stairs reducing the number of lifts required • Cleaning and maintenance; also see Figure 2 for examples of other commercial building operating costs
Identity and reputation	Does the client place inherent value on the environment, or environmental stewardship? What do external and internal stakeholders think of the client? Who does the client consider as their peers or competition? How does the client compare to its peers or competition in terms of sustainability? How does the client want to be perceived?	• Some organisations and individuals may see it as their responsibility to protect the environment • Corporations may care about investors, potential customers, tenants and general public • Individuals may care about family and friends, leaving a legacy for their children etc.
Risk	What aspects of the future might be different to the present and affect the client's activities in a negative way?	• Climate change • Energy prices • Water availability • Customer demand

Table 2 – Questions to help understand the decision maker.

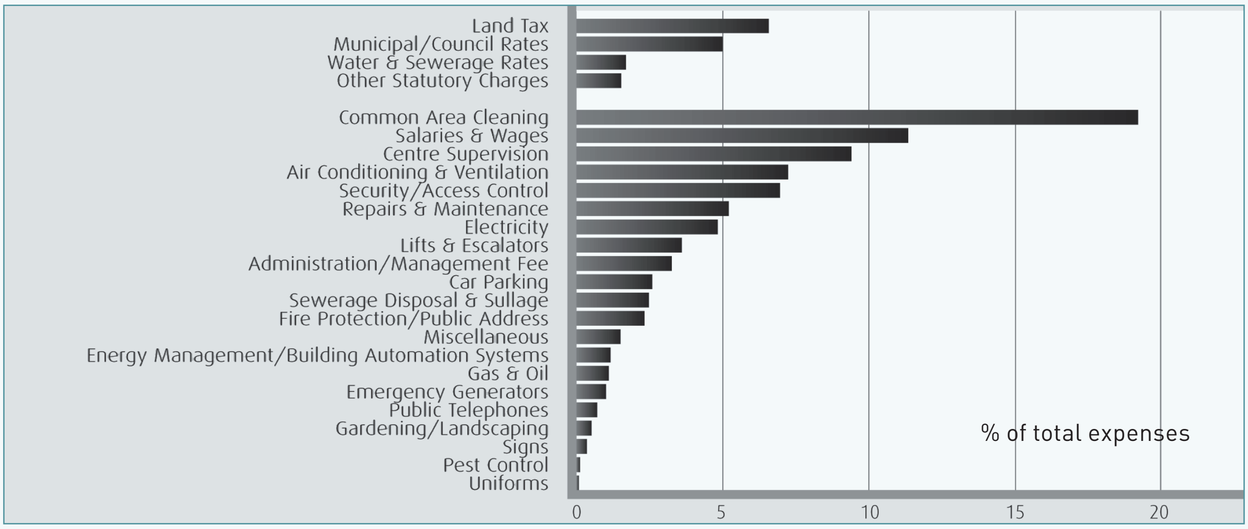

Figure 3 – Example of office building capital costs (PCA 2008).

political pressure (Kiron et al. 2013). General surveys such as this can be complemented by researching the client organisation (i.e. company reports) and simply asking key stakeholders. Table 2 provides some questions, which can help you structure your communication approach regarding sustainability.

The answers to the questions for understanding the decision maker (in Table 2) can provide direct indications of the client's appetite for sustainability. A developer's core reason for being may be to lease office space to tenants in the CBD. To be attractive to some types of tenants (i.e. Government, banks, large corporations), they may decide that the building has to achieve Property Council of Australia A-grade or premium status, which requires Green Star and NABERS ratings (PCA 2011). The core reason for being would therefore be a direct driver of sustainability in the project.

It is important to understand the significance of various costs to the project and ongoing operations and maintenance. This also provides an opportunity to identify low and no-cost initiatives, reminding stakeholders that sustainability does not have to be expensive.

Understanding how the client sees themselves, and how they want to be seen, can be very useful in helping to sell sustainability. Hillenbrand and Money (2007) note that there are a range of models used to measure reputation, all involving surveys of key stakeholders, with different models focusing on different topics. For buildings designed for lease, it is also important to distinguish between the reputation of the product and that of the company (Reed 2001), in our case the reputation of the building versus the owner or developer. Industry sustainability rankings or reviews (i.e. Sustainable Campus Group 2013, GPT 2013) and any associated media coverage, provide an opportunity for building owners to build a positive reputation (Ernst & Young 2013). If the company is less sustainable than its peers, this also provides an opportunity to use peer norms as a persuasion tool (Nolan et al. 2008, Goldstein et al. 2008) and to propose that the default is the industry benchmark, not the client's past history on building projects. Kiron et al. (2013) found that 'competitors increasing commitment to sustainability' was one of the top three reasons for companies to have changed their business models in relation to sustainability. Whether it is because they all think it is the right thing to do, or because they do not want to stand out in a negative way, most universities for example, have sustainability policies regarding their buildings. Note that if reputation is a key driver, then the sustainability approach may need to be more overt (Griskevicius et al. 2010) so that it effectively communicates the client's preferred image without the need for complex descriptions.

It is useful to understand how future risks might negatively impact the client's activities and how the building's design can help mitigate these risks. There is increasing recognition of the need to design for future climate rather than the climate of the past upon which standards and codes are generally based (Arup 2012, Healey and Allan 2013, ABCB 2014). At the Property Council 2014 Sustainable Development Conference, a number of property portfolio owners noted impacts of climate change on their businesses including: the increasing difficultly to maintain high NABERS Energy ratings with hotter summers, lifts failing due to lift motor rooms overheating, and a shopping centre unexpectedly being designated as an emergency shelter by local authorities during Cyclone Yazi despite its lack of back-up power.

Answers to the prompting questions should give you a better idea about what your clients and their stakeholders care about; such information can help you frame the communication approach accordingly.

SPEAK THE LANGUAGE OF THE AUDIENCE

Because different people have different world views and tolerances for complexity and technical information, a critical part of selling sustainability is to speak the language of the decision makers and other stakeholders (Adler and Birkhoff 2002, Hes 2005, VOX Global et al. 2012). While this may seem self-evident, it is often poorly anticipated, even by high-level sustainability professionals. VOX Global et al. (2012) surveyed sustainability managers in many large American companies and asked them what they thought would be the most critical success factor in their role before and after they took the job. Before starting, most thought that subject matter expertise would be most important. However, once in their roles, all agreed that communication and interpersonal skills were the most important factor. VOX Global et al. (2012) give the analogy of a tourist in a foreign land and the contrast in effectiveness between speaking your own language slowly and loudly versus using a phrasebook of the local language. This requires concerted effort because it is very easy to over-estimate how effectively we communicate something that we are very familiar with (Heath 2003).

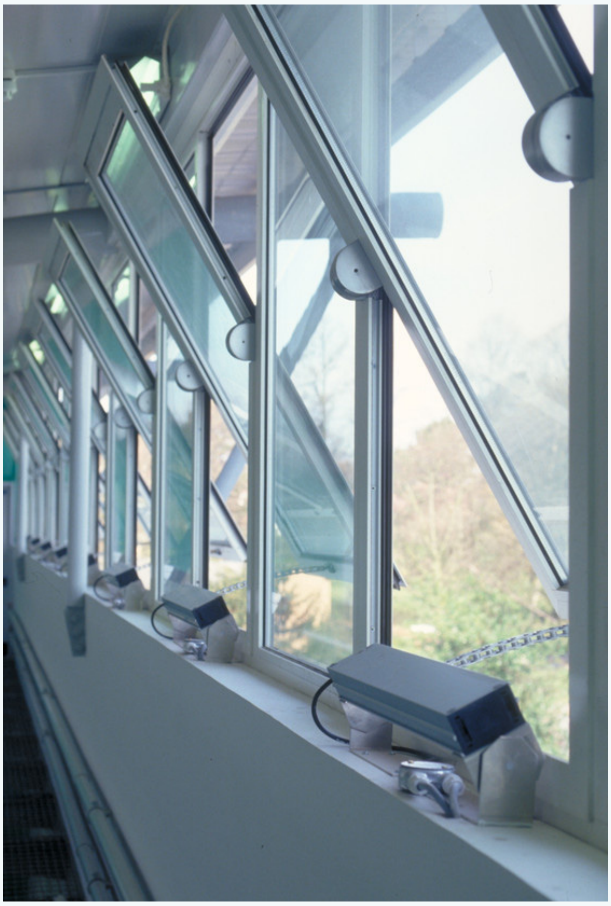

Figure 4. Open windows from Learning Resource Centre, Selley Oak Colleges (Image ©Arup).

ASK THE RIGHT QUESTIONS

As noted in relation to uncertainty and equivocality, one of the challenges with sustainability is that it can challenge a client's frame of reference. The result can be paralysis, with clients asking for more information, but still not being able to make a decision (Levander 2011). Tukey (1962) reminds us that an approximate answer to the right question is more valuable than a precise answer to the wrong question, so working with the client to identify what questions to ask is valuable.

The value of asking the right questions can be seen in the financial decision making context. A common answer as to why sustainability initiatives are not incorporated into projects is that the payback is too long. However this implies that the only question that matters is: what is the payback period? But if this is not the critical question, explicitly or implicitly, then your efforts can be better invested in identifying and answering the real question.

My experience on commercial new-build or refurbishment projects is that the opportunity cost is a bigger driver than the payback. Opportunity cost refers to the fact that spending money on a sustainability initiative means that the funds are not available for other items on the project. This is because budgets are allocated for these projects and very rarely is additional money found to fund something because it has a good payback. The right questions in these situations might be 'where does this initiative rank in the whole list of things that will cost money on the project? Does it come high enough on the list that it makes it into the project?' This is most obvious when a project is over budget and undergoing value management. It is also in these situations that the double standards in decision making can be quite obvious, as people try to compare an energy efficiency initiative and the quality of feature wood panelling for example. Helping the client to clearly articulate their approach to decision making can help you to advise them more effectively.

A hypothetical design example of asking the right questions is a where mixed-mode ventilation (i.e. natural ventilation during mild conditions and air-conditioning during extremes) is being considered for a client who has only ever had air-conditioned buildings. Their lack of experience with openable windows likely means that they do not know what questions to ask in order to confidently confirm whether it is the right solution for them.

Another example is an office developer whose design brief is based on their previous projects. In this situation, the right question might be: what features are your target tenant market now looking for in an office?

BE QUANTITATIVE (AND CREDIBLE) WHERE POSSIBLE

While using quantitative financial aspects for green buildings is not the only approach to sell sustainability, it is still an important one. Quite simply, people demand quantitative information (KPMG 2011). Kats et al. (2003) stated that the motivation for their research was recognition that uncertainty over costs and benefits was hindering the mainstreaming of green buildings. Over 10 years later, the World Green Building Council (2013 p.6) notes that 'one issue that has remained controversial is whether it is possible to attach a financial value to the benefits of green buildings – crucial information for real estate lenders and the investment community. Do green buildings attract a financial premium in terms of rental and sales value? Are they more attractive to tenants and occupiers? Are employees occupying greener buildings more productive?'

The amount of quantitative information available will depend on the type of project. The financial impacts of green building ratings for commercial offices are the most widely studied, and very detailed information from large data sets is available (e.g. Chegut et al. 2013, Eichholtz et al. 2013, Fuerst and McAllister 2009, Newell et al. 2011). Be careful in generalising findings from overseas studies without considering how the context of your project compares.

The challenge as a sustainability professional is to present the most appropriate quantitative information (i.e. answer the right questions) framed in the right way. As John Gardner, Chief Sustainability Officer of Novelis (an aluminium processor) states, 'Quantifiable data is essential in making the business case for any social or environmental issue the company integrates into its business operations' (VOX Global et al. 2012). And he cautions that 'You can have all of the quantifiable data that exists, but you must be able to frame the initiative in the language the business leaders understand.'

FRAME THE MESSAGES TO THE AUDIENCE

Framing is about helping the audience engage with the decision in a positive way: emphasising the aspects of the design proposal that will most resonate with them and not distracting them with things they do not care about (Nisbet 2009).

The answers to the get-to-know-the-decision-maker questions suggested earlier can help you to frame your communication. The goal is to give all stakeholders individually meaningful ways to engage with the sustainability of a project, not to get everyone to care about every sustainability initiative.

On a project I am working on, the university's facility managers care most about operating costs and maintainability, whereas indoor environment quality and creating a building that can also be a learning resource are more important for the faculty staff. At the domestic level, a discussion about double glazing with a home owner who does not care about the environment or their energy bills might be more persuasive if framed in terms of health (reducing condensation and mould) or amenity (reducing noise ingress).

The challenge, as noted earlier, is that preconceptions and our sense of self can all significantly affect how we respond to the same message (Gromet et al. 2013, Kahan 2010, Kahan et al. 2012, Fritsche and Hafner 2012). Projects with multiple stakeholders will often illicit a variety of views influenced by multiple sets of preconceptions and each individual's sense of self.

One approach is to use diverse communicators (e.g. gender, generation, political ideology etc.) with a focus on common ground (Kahan et al. 2012). This common ground might be in the form of universal drivers that make sense for your project and stakeholders, as illustrated by Gromet et al. (2013). In addition to their study regarding light globe choices, they also studied the value that people of different political ideologies placed on three reasons for pursuing energy efficiency: reducing carbon emissions, reducing dependency on foreign oil, and reducing energy cost. They found that people of all political ideologies assigned similar value to reducing dependency on foreign oil and energy costs, but conservatives assigned less value to reducing carbon emissions. The researchers suggested focusing on the more universally valued reasons for energy efficiency (i.e. operation cost savings), rather than the politically sensitive issue of climate change.

Framing is also important when trying to shock or scare people into action. In their study on the effect of fear-inducing climate change images, O'Neill and Nicholson-Cole (2009) noted: 'that dramatic representations must be partnered with those that enable a person to establish a sense of connection with the causes and consequences of climate change in a positive manner – so that they can see the relevance of climate change for their locality and life and see that there are ways in which they (and others) can positively respond.'

If you are working with a stakeholder group who do not care about or are hostile towards environmental issues (as illustrated under 'Framing and preconceptions'), there can be a legitimate case for 'sustainability smuggling' by designers. If a design approach meets the client's other project drivers (i.e. budget, aesthetics, amenity etc.) and also delivers better than mandatory environmental outcomes, the designer might make a decision about whether to emphasise the environmental initiative or not. But I caution you to not let this happen by default.

I have seen designers on many projects miss opportunities to boost their reputation by highlighting the significant improvements they have made at an acceptable cost. In one recent project for which I was the ESD consultant, the lighting designer submitted calculations to demonstrate that the lighting design complied with BCA Section J. The calculations showed that the design was actually about 40% better than Section J, but the designer made no attempt to highlight this to the client. Note that the client was not that interested in environmental sustainability, but was very interested in operating costs, so meaningfully framing the 40% improvement would have been a very simple exercise. Highlighting examples like this is also vital to helping to correct the misconceptions that sustainability is always expensive, complex and risky.

MAKE SUSTAINABILITY MEANINGFUL

A final suggestion is to focus on desirable outcomes rather than impacts. A review of the major environmental rating tools for buildings, as well as some Victorian planning scheme sustainability requirements, shows that such tools are based around categories of environmental impacts, i.e. energy, water, materials etc. (GBCA 2013, City of Melbourne c2013, City of Moreland 2014)

This has reinforced a tendency for sustainability professionals to present initiatives in terms of the environmental impacts rather than the value to the client, which in turn adds a layer of jargon between what can be done and why the client might decide to do it. And if we look at what drives companies in relation to sustainability, the environmental impacts are not on the top of the list, with branding, reputation, innovation and cost advantages being cited higher (Kiron et al. 2013).

In these situations, you can help sell sustainability by acting as the translator – converting impact-focused regulations and requirements into universal drivers that are relevant to the project. Help your clients to understand how environmental regulation could be used to help drive innovation or rethink conventional approaches. A comparison between early and more recent literature on the business case for green buildings illustrates the difference in communication effectiveness (Kats et al. 2003 versus World Green Building Council 2013).

An approach that I have often used to make sustainability meaningful is to identify the universal drivers relevant for that client, an approach also advocated by Ottman et al. (2006). The specific drivers vary by sector and client; I use the get-to-know-the-decision-maker questions to develop a list of specific drivers for each project. I have found that this approach forces me to think of sustainability initiatives in the decision maker's terms, and helps them see the connection between sustainability initiatives and the things that they care about. As VOX Global et al. (2012) note for AT&T, carbon footprinting was successfully sold inside the business as a way to better manage energy costs, rather than being a response to climate change or the 'right thing to do'.

Conclusion

This paper set out to provide designers with suggestions to build a cohesive and comprehensive business case for sustainability initiatives by highlighting the importance and characteristics of effective communication. Through a literature review and sharing the author's experiences, it highlights why the traditional economic, moralistic and information-based approaches can be inadequate, and provides a broader range of options. As noted earlier, these are informed points of departure, not guaranteed strategies. The hope is that this provides designers and project sponsors with practical tools that they can test and refine in their own design practice, leading to more successful and sustainable projects.

References

ABCB 2014, Resilience of Buildings to Extreme Weather Events – discussion paper, retrieved from <www.abcb.gov.au/~/media/Files/Download%20Documents/Major%20Initiatives/Draft%20ABCB%20Discussion%20Paper%20on%20Resilience%20to%20Extreme%20Weather%20Events.pdf>.

ACCC 2011, Green marketing and the Australian Consumer Law, retrieved from <http://www.accc.gov.au/system/files/Green%20marketing%20and%20the%20ACL.pdf>.

Adler P S & Birkhoff J E c2002, Building Trust – When Knowledge From 'Here' Meets Knowledge From 'Away', The National Policy Consensus Centre, viewed October 22 2007, <www.resolv.org/pubs/buildingtrust/building_trust.pdf>.

Arup 2012, Streamlining Cogeneration for Victorian Councils, retrieved from <http://www.sustainability.mav.asn.au/built-environment/Streamlining_Cogeneration_for_Victorian_Councils-5129>.

Arup 2013, Climate Change Vulnerability Assessment of Selected Council Buildings, unpublished project report for the City of Whitehorse.

Royal Australian Institute of Architects 2006, Code of Professional Conduct. Retrieved from <http://www.architecture.com.au/docs/default-source/cpd/code-of-professional-conduct.pdf?sfvrsn=0>.

Ariely D 2008, Predictably irrational: the hidden forces that shape our decisions, New York, USA: HarperCollins.

Arnott D 1998, A Taxonomy of Decision Biases. Retrieved from <http://www.sims.monash.edu.au/staff/darnott/biastax.pdf>.

Baumeister R, Bratslavsky E, Finkenauer C & Vohs K 2001, Bad is Stronger than Good, Review of General Psychology, Vol 5, Issue 4, p.323-370.

Beamish T & Biggart N 2012, The role of social heuristics in project-centred production networks: insights from the commercial construction industry, Engineering Project Organization Journal, 2:1-2, 57-70.

Brooks H 1996, 'The Problem of Attention Management in Innovation for Sustainability', Technological Forecasting and Social Change, 53, 21-26.

Chegut A, Eichholtz P & Kok N 2013, Supply, Demand and the Value of Green Buildings, Urban Studies, 1-22.

Chang C 2011, Feeling Ambivalent About going green – Implications for Green Advertising Processing , Journal of Advertising, vol. 40, no. 4 (Winter 2011), pp. 19-31.

City of Melbourne c2013, Melbourne Planning Scheme Amendment C187 – energy, water and waste efficiency, retrieved from <https://www.melbourne.vic.gov.au/BuildingandPlanning/Planning/planningschemeamendments/Pages/AmendmentC187.aspx>.

City of Moreland 2014, Amendment C71: Environmentally efficient design local planning policy, retrieved from <http://www.moreland.vic.gov.au/building-and-planning/planning-scheme-amendments/amendment-c71.html>.

Dinner Isaac M, Johnson Eric J, Goldstein Daniel G & Liu Kaiya 2010, Partitioning Default Effects: Why People Choose Not to Choose (November 28), available at SSRN: http://ssrn.com/abstract=1352488 or http://dx.doi.org/10.2139/ssrn.1352488

Ernst & Young 2012 Six growing trends in corporate sustainability, retrieved from <http://www.greenbiz.com/sites/default/files/1112-1315117_CCaSS_SixTrends_FQ0029_lo%20res%20revised%203.7.2012.pdf>.

Ernst & Young 2013, How sustainability has expanded the CFO's role. Retrieved from <http://www.ey.com/Publication/vwLUAssets/How-sustainability_has_expanded_the_CFOs_role/$FILE/How_sustainability_has_expanded_the_CFOs_role.pdf>.

Eichholtz P, Kok N & Quigley J 2013, The Economics of Green Building, The Review of Economics and Statistics, March 2013, 95(1): 50-63.

Engineers Australia (2010) Code of ethics. Retrieved from <http://www.engineersaustralia.org.au//sites/default/files/shado/About%20Us/Overview/Governance/codeofethics2010.pdf>.

Fritsche I & Hafner K 2012, The malicious effects of existential threat on motivation to protect the natural environment and the role of environmental identify as a moderator. Environment and Behavior 2012 44: 570

Fuerst F & McAllister P 2009, An investigation of the effect of eco-labelling on office occupancy rates. Journal of Sustainable Real Estate, 1(1): 49-64.

Goldstein N, Cialdini R & Griskevicius V 2008, A room with a viewpoint: Using social norms to motivate environmental conservation in hotels. Journal of consumer research. Vol. 35.

Gonzale M, Aronson E & Costanzo M 1988, Using Social Cognition and Persuasion to Promote Energy Conservation: A Quasi-Experiment. Journal of Applied Social Psychology, 18, 12, pp. 1049-1066.

GPT 2013, GPT ranks in top 1% of global real estate companies in 2013 on Dow Jones Sustainability Index. Retrieved from <http://www.gpt.com.au/News-Media/Announcements-Media-Releases/GPT-ranks-in-top-1-of-global-real-estate-companies>

Green Building Council of Australia 2008, The dollars and sense of green buildings, retrieved from <http://www.gbca.org.au/secure/GBCA_dollars_sense08.pdf>.

Green Building Council of Australia 2013, Introducing Green Star, retrieved from <http://www.gbca.org.au/uploads/91/2139/Introducing_Green_Star.pdf>.

Griskevicius V, Tybur J & Van den Bergh B 2010, Going green to be seen: Status, reputation, and conspicuous conservation, Journal of Personality and Social Psychology, 2010, Vol. 98, No. 3, 392-404.

Gromet D, Kunreuther H & Larrick R 2013, Political ideology affects energy-efficiency attitudes and choices, Proceedings of the National Academy of Sciences, Volume 110, Issue 23, <http://www.pnas.org/content/early/2013/04/26/1218453110.full.pdf+html>.

Hardisty D, Johnson E & Weber E 2010, A Dirty Word or a Dirty World? Attribute Framing, Political Affiliation, and Query Theory, Psychological Science 21(1) 86-92.

Hayward R, Lee J, Keeble J, McNamara R., Hall C & Cruse S 2013, The UN Global Compact-Accenture CEO Study on Sustainability 2013. Retrieved from <http://www.accenture.com/Microsites/ungc-ceo-study/Documents/pdf/13-1739_UNGC%20report_Final_FSC3.pdf >.

Healey G 2011, ICU helps in building a healing environment, The Australian Hospital Engineer, September.

Healey G & Allan M 2013, Climate Resilient Assets, Property Victoria, April/May

Heath C 2003, Loud and clear, retrieved from <http://www.ssireview.org/articles/entry/loud_and_clear/>

Heinzle S 2010, Behavioural models of decision making and implications for green marketing, retrieved from <http://kooperationen.zew.de/fileadmin/user_upload/Redaktion/Seco@home/Ergebnisse/Werkstattbericht_14_Unternehmensstrategien.pdf>

Hes D 2005, Facilitating 'green' building: turning observation into practice, Doctoral dissertation, retrieved from <http://dtl.unimelb.edu.au/dtl_publish/research/24/67604.html>.

Hillenbrand C and Money K 2007, Corporate Responsibility and Corporate Reputation: Two Separate Concepts or Two Sides of the Same Coin? Corporate Reputation Review, Vol. 10, No. 4, pp. 261-277.

Hoffman A 2006, Getting Ahead of the Curve: Corporate Strategies That Address Climate Change, retrieved from <http://www.c2es.org/docUploads/PEW_CorpStrategies.pdf>.

Hoffman A & Henn, R 2008, Overcoming the Social and Psychological Barriers to Green Building. Organization Environment 2008 21: 390

Kahan D 2010, Fixing the Communications Failure, Nature 463, 296-297.

Kahan D, Peters E, Wittlin M, Slovic P, Ouellette LL, Braman D & Mandel G 2012, The polarizing impact of science literacy and numeracy on perceived climate change risks, Nature Climate Change 2, 732-735.

Kahan D 2013, Making Climate-Science Communication Evidence-Based — All the Way Down, Culture, Politics and Climate Change (eds. M. Boykoff & D. Crow, Routledge Press, 2014 Forthcoming). Available at SSRN: http://ssrn.com/abstract=2216469 or http://dx.doi.org/10.2139/ssrn.2216469

Kato H & Murugan A 2010, Performance and perceptions of green buildings – A study based on the experiences of working, renting and owning Green Star certified buildings, retrieved from <http://www.gbca.org.au/uploads/PERFORMANCE_AND_PERCEPTIONS_OF_GREEN_BUILDINGS.pdf>.

Kats G, Alevantis L, Berman A, Mills E, & Perlman J 2003, The Costs and Financial Benefits of Green Buildings - A report to California's sustainable building task force. Retrieved from <http://www.usgbc.org/sites/default/files/costsofgreen_0.pdf>.

Kinsley M & DeLeon S 2009, Accelerating campus climate initiatives, Rocky Mountain Institute and the Association for the Advancement of Sustainability in Higher Education, retrieved from <http://www.rmi.org/Content/Files/RMI_AcceleratingCampusClimateInitiatives.pdf>.

Kiron D, Kruschwitz N, Haanaes K, Reeves M & Goh E, 2013, The Innovation Bottom Line. Retrieved from <https://www.bcgperspectives.com/Images/MITSMR-BCG-Sustainability-Report-2013.pdf>.

KPMG 2011, Corporate Sustainability – A progress report, retrieved from <http://www.kpmg.com/Global/en/IssuesAndInsights/ArticlesPublications/Documents/corporate-sustainability-v2.pdf>.

Levander E, Engström S, Sardén Y & Stehn L 2011, Construction clients' ability to manage uncertainty and equivocality, Construction Management and Economics, 29(7), pp. 753-764.

Newell G, MacFarlane J & Kok N 2011, Building Better Returns – A study of the financial performance of green office buildings in Australia, retrieved from <http://www.api.org.au/assets/media_library/000/000/219/original.pdf?1315793106>.

Nisbet M 2009, Communicating Climate Change – why frames matter for public engagement, Environment, VOLUME 51 NUMBER 2.

Nolan J, Schultz P, Cialdini R, Goldstein N & Griskevicius G 2008, Normative social influence is underdetected, Personality and Social Psychology Bulletin, 34; 913.

O'Neill S & Nicholson-Cole S 2009, 'Fear Won't Do It' Promoting Positive Engagement With Climate Change Through Visual and Iconic Representations, Science Communication, Volume 30 Number 3,March 2009 355-379.

Ottman J, Stafford E & Hartman C 2006, 'Avoiding Green Marketing Myopia: Ways to Improve Consumer Appeal for Environmentally Preferable Products,' Environment, 48 (June), 22-36.

PCA 2008, Survey of operating costs – NSW Shopping Centres, retrieved from <http://www.propertyoz.com.au/library/NSW_Retail_Demo_0.pdf>.

PCA 2011, A Guide to Office Building Quality, Property Council of Australia.

Reed, D. (2001) Stalking the elusive business case for corporate sustainability, retrieved from <http://www.greenbiz.com/sites/default/files/document/O16F24459.pdf>.

Slaughter S 2013, Making the Case – Presenting sustainability investments to the C-suite. Facility Management Journal. November/December. p.18. Retrieved from <http://www.ifma.org/publications/facility-management-journal>.

Stuart D 2008, Measuring the immeasurable, retrieved from <http://www.companydirectors.com.au/Director-Resource-Centre/Publications/Company-Director-magazine/2000-to-2009-back-editions/2008/June/Feature--Measuring-the-immeasurable-Jun-08>.

Sustainable Campus Group 2013 Tertiary Education Sector Sustainability Report 2012. Retrieved from <http://www.monash.edu/research/sustainability-institute/assets/documents/scg-report-2012_web.pdf>.

Thaler Richard H, Sunstein Cass R & Balz John P 2010, Choice Architecture (April 2), available at SSRN: http://ssrn.com/abstract=1583509 or http://dx.doi.org/10.2139/ssrn.1583509.

Tukey J 1962, The future of data analysis. Annals of Mathematical Statistics 33 (1)

Tversky A & Kahneman D 1986, Rational Choice and the Framing of Decisions, Journal of Business, 1986, vol. 59, no. 4, pt. 2.

VOX Global, Weinreb Group & Net Impact 2012, Making the pitch: selling sustainability from inside corporate America, retrieved from <http://voxglobal.com/wp-content/uploads/VOX-Global-2012-Sustainability-Leaders-Survey-Full-Report.pdf>.

World Green Building Council 2013, The business case for green building – a review of the costs and benefits for developers, investors and occupants. Retrieved from <http://www.worldgbc.org/files/1513/6608/0674/Business_Case_For_Green_Building_Report_WEB_2013-04-11.pdf>.

About the Author

Dr **Gerard Healey** is a sustainable building designer whose formal training includes mechanical engineering and a PhD that used social sciences and innovation studies to understand how we can more effectively implement sustainable technologies. For the past 8 years, Gerard has worked at international design firm Arup. Both his PhD and an International Building and Construction fellowship from the ISS Institute have fostered in Gerard a people-centred approach to analysis and design. Gerard has worked on a range of projects including strategy, feasibility and design for offices, laboratories, healthcare, performing arts, education, a brewery and a rail tunnel. In all his projects, Gerard's mantra is to make sustainability meaningful for the project stakeholders.

DISCLAIMER

The views expressed in this paper are the views of the author(s) only and not necessarily those of the Australian Institute of Architects (the Institute) or any other person or entity.

This paper is published by the Institute and provides information regarding the subject matter covered only, without the assumption of a duty of care by the Institute or any other person or entity.

This paper is not intended to be, nor should be, relied upon as a substitute for specific professional advice.

Copyright in this paper is owned by the Australian Institute of Architects.

Australian
Institute of
Architects