

Climate change and peak oil – responding to the big challenges

In the second of two articles examining the implications of environmental change for L&D practitioners, **Larry Reynolds** explains the importance of being able to meet the challenge through organisational change

In last month's *TJ*, I outlined two big challenges facing every organisation as we begin the second decade of the 21st century: climate change and peak oil.

Although the challenges are very different, the consequences will be the same: energy from carbon-based fossil fuels – coal, oil, gas – will become very expensive. We'll have to find new, low-carbon ways to produce and use energy. Successful organisations will be those that adapt most nimbly to the new, low-carbon economy.

Adapting to the low-carbon economy means three things: reducing energy costs, making



products and services low-carbon, and producing innovative products and services specifically for the low-carbon economy.

In this article, I'll explain what this means in practice and how to transform your organisation to make it come about.

First, energy costs. For the last 25 years, the UK has been largely self-sufficient in gas and oil from the North Sea and, with oil trading at around \$20-40 a barrel, we've got used to cheap energy. North Sea energy is now all but gone and the price of oil, around \$80 a barrel today, is set to rise to \$100 or more by the end of 2010.

You can add to this the increases in energy taxes intended to head off global warming. The UK government already charges a modest 'climate change levy' on all non-domestic energy bills. In April, it will introduce a 'cap and trade' scheme for large organisations in both the public and private sectors. Effectively, this means that organisations that use a lot of fossil fuel energy will have to pay extra for it.

As a result,

many organisations are taking steps to reduce their energy bills. In my last article, I mentioned that Tesco has reduced the energy bills in its stores by 50 per cent over seven years. Yorkshire Bank reduced energy costs by 68 per cent in one year in its new head office. Warren Evans, a small London-based bed manufacturer and retailer, found it could reduce its energy costs by improving the flow of work through the factory and also virtually eliminate heating bills by using waste sawdust and wood offcuts in a bio mass heating boiler.

The second impact of the low-carbon economy will be to create a powerful market for low-carbon products and services. What is the carbon footprint of the products and services your company currently offers? If you don't know, you are in good company – most organisations don't know because, until recently, no-one really cared. But as Daniel Goleman, best known for his work on emotional intelligence, points out in his new book *Ecological Intelligence*, organisations will soon start to care very much indeed because having a lower carbon footprint than your competitors will give you an advantage.

In the short term, this will be especially true if your organisation supplies a big supermarket or a local authority. Retail giant Walmart now requires its suppliers to state the carbon footprint of the products

they supply; Tesco is moving towards labelling all 50,000 of its products with their carbon footprint and requiring suppliers to provide that information.

All local authorities in the UK are now required to measure the reductions in their own carbon footprint (National Indicator 185) and in the carbon footprint of the area they serve (National Indicator 186). In the same way that suppliers to local authorities are required to meet certain standards for diversity and equal opportunities, so increasingly they will be obliging their suppliers to meet certain standards for their carbon footprint.

A phrase you will be hearing more of is 'life cycle assessment', also called 'life cycle analysis'. This refers to the carbon footprint of a product or service throughout its entire lifetime. For example, a packet of Walkers crisps has a carbon footprint of 80g (of CO₂). Of this 80g, around 28g was growing and harvesting the potatoes, 14g manufacture, 27g packaging, 8g transport and 3g disposal of empty packets.

As a result of this life cycle assessment, Walkers was able to identify opportunities to reduce both the carbon footprint and its costs. It did all sorts of things – buying local potatoes to reduce transport costs, installing low-energy lighting in its factories and offices and introducing better manufacturing techniques and lower-weight packaging – but my favourite example comes from its relationships with potato farmers.

Because potatoes are sold by weight, most farmers store them in relatively humid conditions to plump up the weight a bit, but this requires more energy in the manufacturing process to dry them out and fry them into crisps. Walkers



Change Ahead

simply agreed to pay the farmers more per tonne if they would store them in a dry and well-ventilated area to reduce the water content. Both sides gained – the farmers by earning higher prices, Walkers by reducing its energy costs.

The third and most effective way to succeed in the low-carbon economy is to produce innovative products and services specifically aimed at the low-carbon way of life. Any product or service that reduces energy costs, or helps people make better use of the energy they have, is a potential winner in the new economy.

Some new markets in the low-carbon economy are now obvious. When Toyota announced in 1992 that it intended to develop a low-emission mass-market car, General Motors, Ford and Chrysler, the big three auto makers, were scornful. Now that Americans buy almost half of the 1.2m Toyota Prius cars sold each year, car manufacturers are falling over themselves to introduce a mass-market all-electric car. Even if you power an electric car from fossil fuel-generated electricity, it still produces less than a quarter of the CO₂ emissions of the average car on the British roads today. And with many European countries committed to an electric car fleet – Germany wants a million on the road by 2020 – investing in electric car technology seems a no-brainer.

Other innovative products are more ingenious. Most local authorities switch on their street lighting at dusk, and leave it full-on until it clicks off again around dawn, even though no one uses it much from, say, two to four in the morning. What if you could dim selected streetlights at selected times? Leeds-based SME Harvard Engineering has designed the technology to do exactly that.

Kirklees Council, near where I live in Yorkshire, has saved £282,000 a year by using this technology. It's also made great

What is the carbon footprint of the products and services your company currently offers?

progress with its National Indicator 186 – reducing CO₂ in the local area.

More ingenious still is the concept of the smart grid. What if your fridge could turn itself off for a few minutes when the demand on the electricity network was at its peak? What if the rechargeable battery in your car, quietly recharging itself at night while demand for electricity is low and the price is cheap, could actually supply electricity to the grid in the daytime when demand was high (and you were not using your car)? High-tech start-up Alert Me, based in Cambridge, is working with Google to produce smart meters as the first step towards a truly smart grid.

If your organisation is going to be successful in the low-carbon economy, it's going to have to change. So how do you go about changing an organisation?

Much has been written about organisational change, and much of it begins with a statement along the lines of 'most organisational changes fail'. Some go even further – '42 per cent of all organisational changes fail' (or some such spurious statistic).

In my experience – and yours probably, if you are in any way involved with organisational change – very few organisational changes are clearly a success or a failure: most achieve something but they very rarely live up to the initial expectations.

Why is this and what can we learn from those organisational changes that are, if not rip-roaring successes, at least moderately pleasing in their results?

First, why organisational change tends to disappoint. Most organisational change is top-down. Although they try to dress it up in all kinds of fancy language, the people at the top say 'we want this organisation to be more efficient/customer-focused/cost effective/profitable'. The people at the bottom and in the middle of the organisation generally think that the change will involve them in more work and be of little benefit to them personally, at least in the short term. They are usually right. The motivation to change is therefore pretty low, and for this reason the changes may get implemented one way or another but usually without much enthusiasm. The end results generally disappoint.

To sum up, top-down change usually disappoints because the people who have to make it work aren't that engaged.

If there's a worse way to bring about organisational change than top-down, it has to be bottom-up. Although this very democratic approach has the merit of engaging people in a change process, it has one very severe drawback – the people at the bottom of the organisational hierarchy very rarely have a good insight into the overall business environment. Without this insight, any plans for change are likely to fail.

If bottom-up change really worked, most organisations would be co-operatives and collectives, not hierarchies and plcs.

So what's an organisational change leader to do? If top-down and bottom-up both don't work, what's left? The answer is to create a critical mass of people who will engage everyone else. It's not the people at the top of the organisation who have the most influence. It's not the people at the bottom. It's some – not all – of the people in the middle.

Think about your own experience. Who are the people who you really trust at work? →

Who are the people who most influence you? It's unlikely to be the CEO, the big cheese, the person at the very top (unless you happen to be in the top team and work very closely with that person). It's unlikely to be a person at the bottom of the hierarchy. It's almost certainly someone in the middle, maybe a few notches above or below you in the pay grades but somewhere in the middle.

These are the people you need to lead your organisational change initiatives. They are the people who have the best chance of both understanding the overall business environment and of influencing the people who actually make the change happen.

How do you engage these people? Projects. All the organisational changes I've experienced, or learned about, that have been in the 'moderately pleasing to very successful' category have involved project teams of some sort or another. Tesco, Walmart, Walkers, Toyota, Harvard Engineering and Alert Me have all used project teams to bring about lasting positive organisational change. Here are the steps they've used.

Step one is to raise awareness of the need for change. Most organisations forget to do this and jump straight in with 'here's the change we're going to make'. If you want people to want to change, you've got to tell them *why* before you tell them *what* or *how*. Just who you raise awareness with, and how, depends on your organisation. Most organisations find it useful to give all their people at least a basic understanding of the answers to these questions:

- What is the business environment we're operating in?
 - What are our competitors up to?
 - What do our customers want?
 - Why is this change necessary?
- Unlike other kinds of



If you want people to want to change, you've got to tell them *why* before you tell them *what* or *how*

organisational change, people at all levels in organisations find it easy to get engaged in discussions of climate change and peak oil, perhaps because they can see how it affects them outside work as well as in it.

Step two is to set the overall direction and the end goal, often called a vision.

- Where do we want to be in three, five, ten years' time?
- A good vision is clear, exciting and challenging yet achievable. Too many so-called visions are woolly, aspirational and dull – more hallucination than vision.

This is best done by a small group of people from the top of the organisation who have a good understanding of the long-term strategic issues facing it, though in small companies it may also be useful to involve people from the middle of the hierarchy too.

Step three is to decide what specific, time-limited projects are necessary to achieve the vision.

- A project is a specific, time-limited piece of work
- Projects are about implementation, not recommendation
- Who will be the project leader and team members?

A lot can go wrong at this stage. Choosing the right leader for each project is crucial. This is where you involve that critical mass of people from the middle of the organisation – people with both the credibility and the insight.

Step four is to support and monitor the project teams.

- What project discipline will we use?
- How will we support and monitor projects?

For some organisations, a project simply means a bunch of people working on something. For other organisations, a project is only a project if it uses a very specific project management discipline, such as PRINCE2.

If you take too laid-back an approach, the danger is that the project will simply never make any progress. If you take too rigid an approach, and insist that project leaders fill in all sorts of forms and follow all sorts of highly defined procedures, the danger is that the whole thing collapses under the weight of its own bureaucracy.

You need to have a project discipline that's robust enough to keep the project teams on track but not so bureaucratic that people lose the will to live.

The right choice depends on your organisation and the nature of the project.

Step five is to celebrate success. If you've set up the projects properly, not only will they deliver great results but the people involved in them – especially the project leader and team members – will also grow and develop. Celebrating and learning from this organisational change is a great way to lay the foundations for the next one.

Knowing that your organisation has to reduce its energy costs, reduce the carbon footprint of its products and services, and innovate for the low-carbon economy isn't enough – you also need to be able to change your organisation to deliver those commitments. Organisations need people who understand change more than ever. ■

Larry Reynolds is managing partner of 21st Century Leader. You can contact him on +44 (0)1535 645519 or via www.21stcenturyleader.co.uk