

Putting IT to green use

Green IT is about more than switching the computers off at night. Although that can help.

Page 1/2

While there is interest in making computing more energy-efficient and environmentally friendly, there is growing demand for using information technology to make businesses, and ultimately the planet, greener. And, if the sector wasn't busy enough, Australia is leading the way in developing software and systems ready for future carbon economies, last week's setback for the Carbon Pollution Reduction Scheme notwithstanding.

Connection Research is among the companies getting involved, and had representatives in Canberra last week to launch its new Green IT training courses with Excom Education. The company's research director, Graeme Philipson, says IT has a vital role to play in reducing emissions throughout all aspects of society. Much attention in Australia has been dedicated to producing software and tools to help businesses adapt to a more environmentally-conscious future. These largely involve gathering information about emissions, direct and otherwise, which then give greater insight into how they can be reduced.

"There's a new breed of software called carbon emissions management systems there's about 50 or 60, or 100 depending on how you count them, different packages out there," Philipson says. "About a quarter of which, interestingly, are of Australian origin. Australia's the world leader in this sort of software. This software ranges from comparatively simple spreadsheets to detailed ERP [enterprise resource planning]-type databases which allow you to measure, monitor and mitigate the three Ms of green."

Just as chief financial officers have been urged to be keenly aware of the potential changes under a cap-and-trade scheme or emissions tax, so should chief information officers keep an eye on the emerging software and systems that will be needed.

"All of these carbon emissions trading schemes, greenhouse gas reporting systems, all ultimately rely on information, on measurement. If you're a largish organisation, you can't measure all your carbon emissions without some sort of IT system."

While it may be pretty fundamental that computers need energy, being high-tech and green are not mutually exclusive, Philipson argues.

"IT is an important enabling technology. It helps people use energy more efficiently, it helps people design energy-efficient devices, it underpins so much of what we are talking about in a low-carbon economy," he says.

"Very few of the initiatives that are being talked about in terms of moving to a low-carbon economy are possible without the usage of IT as a key enabling technology.

"It's not a fad, this stuff. It's going to be a really big issue indefinitely."

Computers and other information technologies are thought to account for about 2 per cent of the world's emissions, which Philipson says is roughly the same as the airline industry. The difference is most airline emissions are direct what is called "scope one" under the National Greenhouse Energy Reporting System while IT's emissions are indirect, or scope two.

While 2 per cent may seem small, finding efficiencies in computing can make a difference. **Connection Research** is among the organisations investigating ways to find efficiencies for the end user, in corporate IT usage, non-data centre IT, printing and the lifecycle of hardware.

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Page 2/2

With each of these areas, and subgroups, Philipson says there are techniques and technologies already available to reduce the demand for energy. The technologies range from the fairly obvious switching to low-watt PCs and more efficient flat screens, to virtualisation of servers in data centres. Techniques can include switching computers off and more complex ways of storing data efficiently and using it properly to save energy.

"In terms of life-cycle, the main thing to do there is to buy computers that have been made efficiently, that have less embedded energy in their manufacture, and many manufacturers are now disclosing that data, right through to the disposal," he says.

"In Germany, for example, a condition of purchase is that the manufacturer must take it back when you've finished with it. That's an example of a policy or a technique, and one assumes that they would dispose of it more efficiently than an end user would."

Victoria has forged ahead with e-waste initiatives, ByteBack being a notable example, and at the weekend the ACT Government accepted used computers, laptops, monitors, printers, mobile phones and sundry for recycling. The Federal Government is considering taking such schemes nationwide.

Still, Philipson says finding efficiencies within the IT sector is marginal, and there is potential to have a greater impact.

"At the end of the day the consensus is IT is responsible for about 2 per cent of the world's carbon emissions, which is about the same as the airline industry," he says. "That means that if you halved the electricity used by IT you'd make a 1 per cent improvement. It all adds up but it's not a significant amount."

Instead, attention is turning to how IT can make "the other 98 per cent" more efficient. These could come from smart electricity grids, better metering, finding efficiencies in manufacturing supply chains, developing newer, efficient technologies and ideas that have not even been thought of. "That all adds up to, potentially, much, much more than the amount of energy that can be saved just by making the IT function greener."